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2.0 ORGANIZATION AND ADMINISTRATION

This chapter describes the management system and administrative procedures for the effective implementation of Health, Safety, and Environmental functions at the Eagle Rock Enrichment Facility (EREF). The chapter presents the organizations responsible for managing the design, construction, operation, and decommissioning of the facility. The key management and supervisory positions and functions are described including the personnel qualifications for each key position at the facility.

Areva Enrichment Services (AES), LLC, a wholly owned subsidiary of Areva NC, has been formed to provide uranium enrichment services for nuclear power plants and to design, construct and operate EREF. The AES policy is to maintain a safe work place for its employees and to assure operational compliance within the terms and conditions of the license and applicable regulations. The AES President has overall responsibility for safety and compliance to this policy. In particular, AES employs the principle of keeping radiation and chemical exposures to employees and the general public as low as reasonably achievable (ALARA).

The facility organization, technical qualifications, procedures, and management controls in this license application are similar to those submitted for Nuclear Regulatory Commission (NRC) review in the LES license application for the National Enrichment Facility (NEF) (LES, 2005). The staff reviewed the NEF plans and commitments and concluded in the Safety Evaluation Report (SER) (NRC, 2005) that they provided reasonable assurance that an acceptable organization, administrative policies, and sufficient competent resources were established or committed, to satisfy the applicant's commitments for the design, construction, and operation of the facility per 10 CFR 30.33, 10 CFR 40.32, 10 CFR 70.22, 10 CFR 70.23, and 10 CFR 70.62(d). (NRC, 2005). The differences between the EREF and NEF organizations reflect AREVA's experience in operating fuel cycle facilities. Although some titles and scope of responsibility have been changed, the functions to be performed remain the same. The key differences in the EREF and NEF organization as described in the license application reviewed by the NRC in the referenced SER are as follows:

- Organization charts are provided in the Quality Assurance Program Description (QAPD) for the engineering, procurement and construction (EPC) phase and for the operations phase. During engineering, procurement and construction, the scope and size of the staff reporting to the Project Director will be consistent with his overall responsibility for the engineering, construction and startup of the facility. Engineering and construction personnel will be integrated into the Operations organization to provide technical support during initial startup of the facility and transition into the operational phase. As the facility nears completion, systems will undergo acceptance testing as required by procedure, followed by turnover from the construction organization to the operations organization. Once operational, the Project Manager will be responsible for the engineering, procurement, construction and startup of any facility modifications and expansion.
- The Quality Assurance Manager and the Safety Review Committee report directly to the AES President rather than the Plant Manager.
- The position of Radiation Protection/Chemistry Manager reporting to the Environmental, Health, Safety and Licensing Manager is established at the EREF with the overall responsibility for the implementation of EREF programs designed to ensure the protection of workers and the public from radiological and non-radiological chemical exposures.

The information provided in this chapter, the corresponding regulatory requirement, and the section of NUREG-1520 (NRC, 2002), Chapter 2 in which the NRC acceptance criteria are presented is summarized below.

Information Category and Requirement	10 CFR 70 Citation (CFR, 2008a)	NUREG-1520 Chapter 2 Reference
Section 2.1 Organizational Structure		
Functional description of specific organization groups responsible for managing the design, construction, and operation of the facility	70.22(a)(6)	2.4.3(1) & 2.4.3(7)
Management controls and communications among organizational units	70.22(a)(8)	2.4.3(2)
Startup and transition to operations	70.22(a)(6)	2.4.3(4)
Section 2.2 Key Management Positions		
Qualifications, responsibilities, and authorities for key management personnel	70.22(a)(6)	2.4.3(3) & 2.4.3(4)
Section 2.3 Administration		
Effective implementation of HS&E functions using written procedures	70.22(a)(8)	2.4.3(5)
Reporting of unsafe conditions or activities	70.62(a)	2.4.3(6)
Commitment to establish formal management measures to ensure availability of IROFS	70.62(d)	2.4.3(8)
Written agreements with offsite emergency resources	70.22(i)	2.4.3(9)

2.1 ORGANIZATIONAL STRUCTURE

The AES organizational structure is described in the following sections. The organizational structure indicates the lines of communication and management control of activities associated with the engineering, procurement, construction, operation, and decommissioning of the facility.

2.1.1 Corporate Functions, Responsibilities, and Authorities

AREVA Enrichment Services (AES), LLC is a Delaware limited liability corporation. It has been formed solely to provide uranium enrichment services for commercial nuclear power plants. AES is a wholly owned subsidiary of AREVA NC Inc. AES is further described in Chapter 1, Section 1.2.

AES is responsible for the design, quality assurance, construction, operation, and decommissioning of the enrichment facility. The AES President has overall responsibility for these functions of the enrichment facility. Reporting to the President during the engineering, procurement and construction phase are the Project Director, Plant Operations Manager, and the Quality Assurance (QA) Manager as shown in Figure 1-2 of the Quality Assurance Program Description (QAPD). Reporting to the President during the operating phase are the Plant Manager, the QA Manager, and the Safety Review Committee. Figure 1-1 of the QAPD, Eagle Rock Enrichment Facility Organizational Chart, shows the authority and lines of communication for the operating phase.

2.1.2 Engineering, Procurement and Construction Organization

AES has contracted Enrichment Technology Company Limited (ETC) to design the core process technology while an architect/engineering firm will be contracted to further specify, design, and build the supporting structures and systems of the facility. AREVA NP conducted the site characterization and performed the Integrated Safety Analysis in support of the license application.

During the construction phase, preparation of construction documents and construction itself are contracted to qualified contractors. The Project Director is responsible for managing the engineering, construction, and procurement activities. The Control & Planning Manager may assist the Project Director in planning and implementation of the EPC activities. Contractor QA Programs will be reviewed by AES QA and must be approved before work can start. The Plant Operations Manager is responsible for the initial startup of the facility.

ETC will design, manufacture, and deliver to the site the centrifuges necessary for facility operation. In addition, ETC is supplying technical assistance and consultation for the facility. ETC has extensive experience in the gas centrifuge uranium enrichment process since it has supplied gas centrifuge technology to both URENCO and AREVA for enrichment plants in Europe and the United States. ETC is also conducting technical reviews of the design activities of the supporting structures and systems as appropriate to ensure that they are in accordance with ETC core process design requirements.

For procurement involving the use of vendors located outside the U.S., AES selects vendors only after a determination that their quality assurance programs meet the AES requirements. Any components supplied to AES are designed to meet applicable domestic industry code requirements or their equivalents as stated by the equipment specifications.

The Project Director is responsible for managing the work and contracts with ETC. Also reporting to the Project Director are the individuals responsible for the areas of procurement, construction, engineering and design, licensing, safety systems, and planning. The lines of communication of key management positions within the engineering, procurement and construction organization are shown in Figure 1-2 of the QAPD.

Position descriptions of key management personnel in the engineering, procurement and construction organization will be accessible to all affected personnel and the NRC.

2.1.3 Operating Organization

In addition to design and construction, preoperational testing and initial start-up, AES has direct responsibility for operation and maintenance of the facility.

The AES president has overall responsibility for the operation of the enrichment facility. He is also responsible for the QA Program. In the discharge of these responsibilities, he directs the activities of the following groups:

- Plant Management
- Quality Assurance
- Safety Review Committee
- Human Resources

The Plant Manager reports to the AES President and is responsible for the operation and maintenance of the EREF. In the discharge of these responsibilities, he directs the activities of the following groups:

- Operations
- Environmental, Health, Safety and Licensing
- Uranium Management
- Project Management (including Engineering, Procurement, Construction, Startup and the Technology Supplier)

The responsibilities, authorities, and lines of communication of key management positions within the operating organization are discussed in Section 2.2, Key Management Positions.

The QA Manager has the authority and responsibility to contact directly the AES President with any Quality Assurance concerns during operation.

Position descriptions for key management personnel in the operating organization will be accessible to all affected personnel and to the NRC.

2.1.4 Transition from Engineering, Procurement and Construction to Operations

AES is responsible for the design, quality assurance, construction, testing, initial startup, operation, and decommissioning of the facility.

Towards the end of construction, the focus of the organization will shift from design and construction to initial startup and operation of the facility. As the facility nears completion, AES will staff the AES EREF operating organization to ensure a smooth transition from construction

to operational activities. ETC will have personnel integrated into the AES organization to provide technical support during startup of the facility and transition into the operations phase.

As the construction of systems is completed, the systems will undergo acceptance testing as required by procedure, followed by turnover from the construction organization to the operations organization by means of a detailed transition plan. The turnover will include the physical systems and corresponding design information and records. Following turnover, the operating organization will be responsible for system maintenance and configuration management. The design basis for the facility is maintained during the transition from construction to operations through the configuration management system described in Chapter 11, Management Measures.

2.2 KEY MANAGEMENT POSITIONS

This section describes the functional positions responsible for managing the operation of the facility. The facility is staffed at sufficient levels prior to operation to allow for training, procedure development, and other pre-operational activities.

The responsibilities, authorities, and lines of communication for each key management position are provided in this section. Responsible managers have the authority to delegate tasks to other individuals; however, the responsible manager retains the ultimate responsibility and accountability for implementing the applicable requirements. Management responsibilities, supervisory responsibilities, and the criticality safety engineering staff responsibilities related to nuclear criticality safety are in accordance with ANSI/ANS-8.19-1996, Administrative Practices for Nuclear Criticality Safety (ANSI, 1996).

The AES Corporate Organization and lines of communication are shown in Figure 1-1 of the QAPD.

2.2.1 Operating Organization

The functions and responsibilities of key facility management are described in the following paragraphs. Additional detailed responsibilities related to nuclear criticality safety for key management positions and remaining supervisory and criticality safety staffs are in accordance with ANSI/ANS-8.19-1996 (ANSI, 1996).

A. AES President

The AES president has overall responsibility for the design, construction, startup, and operation of the EREF. He is also responsible for the QA Program and for determining the status, adequacy, and effectiveness of its implementation.

B. Plant Manager

The Plant Manager shall be appointed by, and report to, the AES President. The Plant Manager has direct responsibility for operation of the facility in a safe, reliable, and efficient manner. The Plant Manager is responsible for the protection of the facility staff and the general public from radiation and chemical exposure and/or any other consequences of an accident at the facility and also bears the responsibility for compliance with the facility license (as illustrated by the dashed line on Figure 1-1 of the QAPD). The Plant Manager or designee(s) have the authority to approve and issue procedures.

C. Quality Assurance Manager

The Quality Assurance Manager is appointed by and reports to the President and has overall responsibility for development, management, implementation, and independent oversight of the AES QA Program. The facility line managers and their staff who are responsible for performing quality-affecting work are responsible for ensuring implementation of and compliance with the QA Program. The QA Manager position is independent from other management positions at the facility to ensure the QA Manager has direct access to the AES President for matters affecting quality.

D. Environmental, Health, Safety and Licensing Manager

The Environmental, Health, Safety and Licensing (EHS&L) Manager reports to the Plant Manager and has the overall responsibility for the development and implementation of programs addressing worker health and safety; environmental protection; and licensing and permitting. The EHS&L Manager is also responsible for maintaining compliance with safeguards; appropriate rules, regulations, and codes; and implementation and control of the Fundamental Nuclear Material Control Plan (FNMCP), the Physical Security Plan (PSP), and the Standard Practices Procedure Plan for the Protection of Classified Matter (SPPP). This includes EHS&L activities associated with nuclear criticality safety, radiation protection, chemical safety, environmental protection, emergency preparedness, industrial safety, and development and implementation of security programs for nuclear material control and accountability, physical protection of the facility, and protection of classified matter. The EHS&L Manager works with the other facility managers to ensure consistent interpretations of EHS&L requirements, performs independent reviews, and supports facility and operations change control reviews.

This position is independent from other operations management positions at the facility to ensure objective EHS&L audit, review, and control activities. The EHS&L Manager has the authority to order the shut down of operations if they appear to be unsafe or non-compliant with applicable regulatory requirements and must consult with the Plant Manager with respect to restart of shutdown operations after the deficiency, or unsatisfactory condition, has been resolved.

E. Project Manager

The Project Manager reports to the Plant Manager and has overall responsibility for managing the engineering, procurement, construction, and startup of facility modifications and expansion. This includes managing the work and contracts with the Technology Supplier (i.e., ETC).

F. Human Resources Manager

The Human Resource Manager reports to the AES President and has the responsibility for community relations, ensuring adequate staffing, and providing administrative support services to the facility including document control.

G. Operations Manager

The Operations Manager reports to the Plant Manager and has the responsibility of directing the day-to-day operation of the facility. Inherent in this responsibility is the assurance that the operations are conducted safely and in compliance with license conditions. This includes such activities as ensuring the correct and safe operation of UF_6 processes, proper handling of UF_6, and the identification and mitigation of any off normal operating conditions. The Operations Manager is also responsible for the plant maintenance function, which includes activities to assure that Items Relied on for Safety (IROFS) are reliable and available when needed. In the event of the absence of the Plant Manager, the Operations Manager may assume the responsibilities and authorities of the Plant Manager.

H. Uranium Management Manager

The Uranium Management Manager reports to the Plant Manager and has the responsibility for UF_6 cylinder management (including compliance with transportation requirements) and directing the scheduling of enrichment operations to ensure smooth production. This includes activities such as ensuring proper feed material and maintenance equipment are available for the facility. In the event of the absence of the Plant Manager, the Uranium Management Manager may assume the responsibilities and authorities of the Plant Manager.

I. Training Manager

The Training Manager reports to the Plant Manager and has the responsibility for the development, implementation, and administration of the plant training programs, including maintenance of the plant training database. The training programs provided and/or coordinated by the Training Manager address qualifications of workers to perform work as well as required safety training.

J. Nuclear Criticality Safety Manager

The Nuclear Criticality Safety Manager reports to the EHS&L Manager. The Nuclear Criticality Safety Manager is responsible for the development and implementation of the nuclear criticality safety program. Key responsibilities include the performance of nuclear criticality safety analyses and evaluations of applicable operations involving special nuclear material and changes to those operations; establishing limits and controls based on those analyses and evaluations; assuring the proper incorporation of limits and controls into applicable procedures and instructions; and monitoring plant compliance with nuclear criticality safety requirements.

K. Radiation Protection/Chemistry Manager

The Radiation Protection/Chemistry Manager reports to the EHS&L Manager and has the responsibility for developing and implementing programs to limit personnel radiological exposures and environmental impacts associated with facility operations, including the As Low as Reasonably Achievable (ALARA) program. These duties include the training of personnel in use of equipment, control of radiation exposure of personnel, continuous determination of the radiological status of the facility, and conducting the radiological environmental monitoring program.

During emergency conditions the Radiation Protection/Chemistry Manager's duties may also include:

- Providing Emergency Operations Center personnel information and recommendations concerning chemical and radiation levels at the facility
- Gathering and compiling onsite and offsite radiological and chemical monitoring data
- Making recommendations concerning actions at the facility and offsite deemed necessary for limiting exposures to facility personnel and members of the general public
- Taking prime responsibility for decontamination activities.

In matters involving radiological protection, the Radiation Protection/Chemistry Manager has direct access to the Plant Manager.

The Radiation Protection/Chemistry Manager is also responsible for the implementation of chemistry analysis programs and procedures for the facility. This includes effluent sample collection, chemical analysis of effluents, comparison of effluent analysis results to limits, and reporting of chemical analysis of effluents to appropriate regulatory agencies.

L. Safety, Security and Emergency Preparedness Manager

The Safety, Security, and Emergency Preparedness Manager reports to the EHS&L Manager. The Safety, Security, and Emergency Preparedness Manager is responsible for implementation and maintenance of the integrated safety analysis, industrial hygiene and safety, chemical safety, fire protection, security, and emergency preparedness including the responsibility for ensuring the facility remains prepared to react and respond to any emergency situation that may arise. This includes emergency preparedness training of facility personnel, facility support personnel, the training of, and coordination with, offsite emergency response organizations (EROs), and conducting periodic drills to ensure facility personnel and offsite response organization personnel training is maintained up to date.

The Safety, Security and Emergency Preparedness Manager is also responsible for the protection of classified matter at the facility and obtaining security clearances for facility personnel and support personnel. In matters involving physical protection of the facility or classified matter, the Safety, Security and Emergency Preparedness Manager has direct access to the Plant Manager.

M. Licensing and Compliance Manager

The Licensing and Compliance Manager reports to the EHS&L Manager. The Licensing and Compliance Manager is responsible for regulatory oversight functions, regulatory and environmental compliance, facility change process, and commitment management. The Licensing and Compliance Manager is also responsible for ensuring abnormal events are reported to the NRC in accordance with NRC regulations.

N. Safeguards Manager

The Safeguards Manager reports to the EHS&L Manager and has the responsibility for ensuring the proper implementation of the FNMCP. This position is separate from and independent of other departments to ensure a definite division between the safeguards group and the other departments. In matters involving safeguards, the Safeguards Manager has direct access to the Plant Manager.

O. Measurement Control Program Manager

The Measurement Control Program Manager reports to the Safeguards Manager and has the responsibility for the EREF Measurement Control Program. The EREF Measurement Control Program is provided to ensure adequate calibration frequencies, sufficient control of biases, and sufficient measurement precisions for nuclear material control and accounting.

P. Industrial Safety Manager

The Industrial Safety Manager reports to the EHS&L Manager and has the responsibility for implementation of industrial safety programs and procedures. This shall include programs and procedures for training individuals in safety and maintaining the performance of the facility fire protection systems.

Q. Engineering Manager

The Engineering Manager reports to the Project Manager. The Engineering Manager is responsible for site characterization; facility design and the design control process; configuration management; engineering; and acceptance test coordination, including test control of facility modifications and expansion. The Engineering Manager is also responsible for records management and document control, and approving disposition of nonconforming items when dispositioned as “repair” or “use-as-is” during operations.

R. Procurement Manager

The Procurement Manager reports to the Project Manager. The Procurement Manager is responsible for procurement; providing procurement material control services (including supplier qualification coordination, purchasing, contracting, receiving and control of nonconforming items); and material control (including handling, storage and shipping). The Procurement Manager is also responsible for supply strategy and development of qualified long-lead-time and complex-system suppliers.

S. Construction Manager

The Construction Manager reports to the Project Manager. The Construction Manager is responsible for managing the construction of facility modifications and expansion to the Eagle Rock Enrichment Facility. This responsibility includes managing the activities of qualified contractors who are tasked with the preparation of construction documents and the construction of facility modifications and expansion.

T. Startup Manager

The Startup Manager reports to the Project Manager. The Startup Manager is responsible for the overall preoperational and startup test program of facility modifications and expansion. This individual is responsible for the development of preoperational and startup test procedures, providing technical advice to personnel conducting the tests, briefing personnel responsible for operation of the plant during the tests, ensuring that the tests are performed in accordance with the applicable procedures, and generating test reports.

U. Information Technology (IT) Manager

The IT Manager reports to the Project Manager and is responsible for maintaining all computer software programs related to the nuclear material accounting at EREF. This individual is also responsible for EREF computer database for generation of nuclear material control charts.

V. Cylinder Management Manager

The Cylinder Management Manager reports to the Uranium Management Manager and has the responsibility for ensuring that cylinders of uranium hexafluoride are received and routed correctly at the facility, and is responsible for all transportation licensing.

W. Production Scheduling Manager

The Production Scheduling Manager reports to the Uranium Management Manager and has the responsibility for developing and maintaining production schedules for enrichment services.

X. Warehouse and Materials Manager

The Warehouse and Materials Manager reports to the Uranium Management Manager and has the responsibility for ensuring spare parts and other materials needed for operation of the facility are ordered, received, inspected, and stored properly.

Y. Production Managers

The Production Managers report to the Operations Manager. The Production Managers are responsible for enrichment operations, feed and withdrawal operations, utilities, shift operations, packaging, and transportation.

Z. Maintenance Manager

The Maintenance Manager reports to the Operations Manager and has the responsibility of directing and scheduling maintenance activities to ensure proper operation of the facility, including preparation and implementation of maintenance procedures. This includes activities such as repair and preventive maintenance of facility equipment. The Maintenance Manager is also responsible for safe and reliable performance of preventive and corrective maintenance and support services on buildings/facilities and equipment (including IROFS), and for integrated planning and scheduling. In addition, the Maintenance Manager coordinates and maintains testing programs for the facility. This includes testing of systems and components to ensure the systems and components are functioning as specified in design documents.

AA. Production Supervisors

The Production Supervisors report to their respective Production Managers. The Production Supervisors are directly responsible for control of materials, personnel, equipment, and activities in specific areas. These responsibilities include assuring that formal approved procedures are available and adhered to by operators and other applicable personnel.

BB. Quality Assurance Inspectors

The Quality Assurance Inspectors report to the Quality Assurance Manager (via a designated supervisory position, if applicable) and have the responsibility for performing inspections related to the implementation of the AES QA Program.

CC. Quality Assurance Auditors

The Quality Assurance Auditors report to the Quality Assurance Manager (via a designated supervisory position, if applicable) and have the responsibility for performing audits related to the implementation of the AES QA Program.

DD. Quality Assurance Technical Support

The Quality Assurance Technical Support personnel report to the Quality Assurance Manager (via a designated supervisory position, if applicable) and have the responsibility for providing technical support related to the implementation of the AES QA Program.

EE. Criticality Safety Engineer

Criticality Safety Engineers report to the Nuclear Criticality Safety Manager (via a designated supervisory position, if applicable) and are responsible for the preparation and/or review of nuclear criticality safety evaluations and analyses, and conducting and reporting periodic nuclear criticality safety assessments. Nuclear criticality safety evaluations and analyses require independent reviews by a Criticality Safety Engineer.

FF. Chemical Safety Engineer

The Chemical Safety Engineer reports to the Radiation Protection/Chemistry Manager (via a designated supervisory position, if applicable) and is responsible for the preparation and/or review of chemical safety programs and procedures for the facility.

GG. Administration Manager

The Administration Manager reports to the Human Resources Manager and has the responsibility for ensuring support functions such as accounting, word processing, and general office management are provided for the facility.

HH. Communications, Community Affairs Manager

The Communications, Community Affairs Manager reports to the Human Resources Manager and has the responsibility for providing information about the facility and AES to the public and media. During an abnormal event at the facility, the Communications, Community Affairs Manager ensures that the public and media receive accurate and up-to-date information.

II. Document Control Manager

The Document Control Manager reports to the Human Resources Manager and has the responsibility for adequately controlling documents at the facility.

2.2.2 Shift Crew Composition

The minimum operating shift crew consists of a Production Supervisor (or Deputy Production Supervisor in the absence of the Production Supervisor), one Control Room operator, one Radiation Protection technician, one operator for each Cascade Hall and associated UF_6 handling systems, and security personnel. When only one Cascade Hall is in operation, a minimum of two operators is required.

At least one criticality safety engineer will be available, with appropriate ability to be contacted by the Production Supervisor, to respond to any routine request or emergency condition. This availability may be offsite if adequate communication ability is provided to allow response as needed.

2.2.3 Safety Review Committee

The facility maintains a Safety Review Committee (SRC) to assist with the safe operation of the facility. The SRC shall report to the AES President and shall provide technical and administrative review and audit of operations that could impact plant worker, public safety, and environmental impacts. The scope of activities reviewed and audited by the SRC shall, as a minimum, include the following:

- Radiation protection
- Nuclear criticality safety
- Hazardous chemical safety
- Industrial safety including fire protection
- Environmental protection
- ALARA policy implementation
- Changes in facility design or operations.

The SRC shall conduct at least one facility audit per year for the above areas.

The Safety Review Committee shall be composed of at least five members, including the Chairman. Members of the SRC may be from the AES corporate or technical staff. The five members shall include experts on operations and all safety disciplines (criticality, radiological, chemical, and industrial). The Chairman, members and alternate members of the Safety Review Committee shall be formally appointed by the AES President, shall have an academic degree in an engineering or physical science field; and, in addition, shall have a minimum of five years of technical experience, of which a minimum of three years shall relate directly to one or more of the safety disciplines (criticality, radiological, chemical, industrial).

The Safety Review Committee shall meet at least once per calendar quarter.

Review meetings shall be held within 30 days of any incident that is reportable to the NRC. These meetings may be combined with regular meetings. Following a reportable incident, the SRC shall review the incident's causes, the responses, and both specific and generic corrective actions to ensure resolution of the problem is implemented.

A written report of each SRC meeting and audit shall be forwarded to the AES President, the Plant Manager, and other appropriate Managers within 30 days and be retained in accordance with the records management system.

2.2.4 Personnel Qualification Requirements

The minimum qualification requirements for the facility functions that are directly responsible for its safe operation shall be as outlined below.

The nuclear experience of each individual shall be determined to be acceptable by the AES President. "Responsible nuclear experience" for these positions shall include (a) responsibility for and contributions towards support of facility(ies) in the nuclear fuel cycle (e.g., design, construction, operation, and/or decommissioning), and (b) experience with chemical materials and/or processes. The AES President may approve different experience requirements for key positions. Approval of different requirements shall be done in writing and only on a case-by-case basis.

The assignment of individuals to the Manager positions reporting directly to the AES President, and to positions on the SRC shall be approved by the AES President. Assignments to all other staff positions shall be made within the normal administrative practices of the facility.

The actual qualifications of the individuals assigned to the key facility positions described in Section 2.2.1, Operating Organization will be maintained in the employee personnel files or other appropriate file at the facility. Development and maintenance of qualification records and training programs are the responsibility of the Human Resources Manager.

A. Plant Manager

The AES President shall appoint the Plant Manager as the manager of the facility. This appointment reflects confidence in the individual's ability as an effective programs and business manager. The Plant Manager shall be knowledgeable of the enrichment process, enrichment process controls and ancillary processes, criticality safety control, chemical safety, industrial safety, and radiation protection program concepts as they apply to the overall safety of a nuclear facility. The Plant Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and ten years of responsible nuclear experience.

B. Quality Assurance Manager

The Quality Assurance Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and at least six years of responsible nuclear experience in the implementation of a quality assurance program. The QA Manager shall have at least four years experience in a QA organization at a nuclear facility.

C. Environmental, Health, Safety, and Licensing Manager

The Environmental, Health, Safety, and Licensing (EHS&L) Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and at least five years of responsible nuclear experience in EHS&L or related disciplines. The EHS&L Manager shall

also have at least one year of direct experience in the administration of nuclear criticality safety evaluations and analyses.

D. Project Manager

The Project Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and four years of responsible nuclear experience.

E. Human Resources Manager

The Human Resources Manager shall have as a minimum, a bachelor's degree in Personnel Management, Business Administration or related field, and three years of appropriate, responsible experience in implementing and supervising human resource responsibilities at an industrial facility.

F. Operations Manager

The Operations Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and four years of responsible nuclear experience.

G. Uranium Management Manager

The Uranium Management Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and four years of responsible nuclear experience.

H. Training Manager

The Training Manager shall have a minimum of five years of appropriate, responsible experience in implementing and supervising a training program.

I. Nuclear Criticality Safety Manager

The Nuclear Criticality Safety Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and four years of responsible nuclear experience. The Nuclear Criticality Safety Manager shall also have at least one year of direct experience in the administration of nuclear criticality safety evaluations and analyses.

J. Radiation Protection/Chemistry Manager

The Radiation Protection/Chemistry Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and four years of responsible nuclear experience.

K. Safety, Security, and Emergency Preparedness Manager

The Safety, Security and Emergency Preparedness Manager shall have as a minimum, a bachelor's degree in an engineering or scientific field, and five years of experience in the responsible management of physical security at a facility requiring security capability similar to that required for the facility. No credit for academic training may be taken toward fulfilling this experience requirement.

L. Licensing and Compliance Manager

The Licensing and Compliance Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and four years of responsible nuclear experience.

M. Safeguards Manager

The Safeguards Manager shall have as a minimum, a bachelor's degree in an engineering or scientific field, and five years of experience in the management of a safeguards program for

Special Nuclear Material, including responsibilities for material control and accounting. No credit for academic training may be taken toward fulfilling this experience requirement.

N. Measurement Control Program Manager

The Measurement Control Program Manager shall have, as a minimum, a bachelor's degree in an engineering or scientific field, and five years of experience in the management control program.

O. Industrial Safety Manager

The Industrial Safety Manager shall have, as a minimum, a bachelor's degree (or equivalent).

P. Engineering Manager

The Engineering Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and have a minimum of five years of appropriate, responsible experience in implementing and supervising a nuclear engineering program.

Q Procurement Manager

The Procurement Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or business field and have a minimum of five years of responsible experience in purchasing and supply chain management.

R. Construction Manager

The Construction Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and have a minimum of five years of appropriate, responsible experience in implementing and supervising a nuclear construction program.

S. Startup Manager

The Startup Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and have a minimum of five years of responsible experience in nuclear plant operations and maintenance.

T. Information technology Manager

The IT Manager shall have, as a minimum, a bachelor's degree (or equivalent) in computer science, and five years of experience in the computer related field.

U. Cylinder Management Manager

The Cylinder Management Manager shall have a minimum of three years of appropriate, responsible experience in implementing and supervising a continuous production scheduling program.

V. Production Scheduling Manager

The Production Scheduling Manager shall have a minimum of three years of appropriate, responsible experience in implementing and supervising a continuous production scheduling program.

W. Warehouse and Materials Manager

The Warehouse and Materials Manager shall have a minimum of three years of appropriate, responsible experience in implementing and supervising a purchasing and inventory program.

X. Production Managers

Production Managers shall have a minimum of five years of appropriate, responsible experience in implementing and supervising a nuclear operations program.

Y. Maintenance Manager

The Maintenance Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and four years of responsible nuclear experience.

Z. Production Supervisors

Production Supervisors shall have a minimum of three years of appropriate, responsible experience in implementing and supervising a nuclear operations program.

AA. Criticality Safety Engineer

Criticality Safety Engineers shall have a minimum of two years experience in the implementation of a criticality safety program. These individuals shall hold a Bachelor of Science or Bachelor of Arts degree in an engineering or scientific field and have successfully completed a training program, applicable to the scope of operations, in the physics of criticality and in associated safety practices.

Should a change to the facility require a nuclear criticality safety evaluation or analysis, an individual who, as a minimum, possesses the equivalent qualifications of the Criticality Safety Engineer shall perform the evaluation or analysis. In addition, this individual shall have at least two years of experience performing criticality safety analyses and implementing criticality safety programs. An independent review of the evaluation or analysis shall be performed by a qualified Criticality Safety Engineer.

BB. Chemical Safety Engineer

The Chemical Safety Engineer shall have a minimum of two years experience in the preparation and/or review of chemical safety programs and procedures. This individual shall hold a bachelor's degree (or equivalent) in an engineering or scientific field and have successfully completed a training program, applicable to the scope of operations, in chemistry and in associated safety practices.

CC. Administration Manager

The Administration Manager shall have a minimum of three years of appropriate, responsible experience in implementing and supervising administrative responsibilities at an industrial facility.

DD. Communications, Community Affairs Manager

The Communications, Community Affairs Manager shall have as a minimum, a bachelor's degree in Public Relations, Political Science or Business Administration and three years of appropriate, responsible experience in implementing and supervising a community relations program.

EE. Document Control Manager

The Document Control Manager shall have a minimum of three years of appropriate, responsible experience in implementing and supervising a document control program.

2.3 ADMINISTRATION

This section summarizes how the activities that are essential for implementation of the management measures and other EHS&L functions are documented in formally approved, written procedures, prepared in compliance with a formal document control program. The mechanism for reporting potentially unsafe conditions or activities to the EHS&L organization and facility management is also summarized. Details of the management measures are provided in Chapter 11, Management Measures.

2.3.1 Configuration Management

Configuration management is provided for Items Relied on for Safety (IROFS) throughout facility design, construction, testing, and operation. Configuration management provides the means to establish and maintain a technical baseline for the facility based on clearly defined requirements. During design and construction, the Vice President Engineering and Licensing has responsibility for configuration management through the design control process. Selected documentation is controlled under the configuration management system in accordance with appropriate QA program required procedures associated with design control, document control, and records management. Design changes to IROFS undergo formal review, including interdisciplinary reviews as appropriate, in accordance with these procedures.

Configuration management provides the means to establish and maintain the essential features of the design basis of IROFS. As the project progresses from design and construction to operation, configuration management is maintained by the facility engineering organization as the overall focus of activities changes.

Additional details on Configuration Management are provided in Chapter 11, Management Measures.

2.3.2 Maintenance

The maintenance program will be implemented for the operations phase of the facility. Preventive maintenance activities, surveillance, and performance trending provide reasonable and continuing assurance that IROFS will be available and reliable to perform their safety functions.

The purpose of planned and scheduled maintenance for IROFS is to ensure that the equipment and controls are kept in a condition of readiness to perform the planned and designed functions when required. Appropriate plant management is responsible for ensuring the operational readiness of IROFS under this control. For this reason, the maintenance function is administratively closely coupled to operations. The maintenance organization plans, schedules, tracks, and maintains records for maintenance activities.

Maintenance activities generally fall into the following categories:

- Corrective maintenance
- Preventive maintenance
- Surveillance/monitoring
- Functional testing.

These maintenance categories are discussed in detail in Chapter 11, Management Measures.

2.3.3 Training and Qualifications

Formal planned training programs shall be established for facility employees. Indoctrination training shall be provided to employees within 30 days of reporting to work, and shall address safety preparedness for all safety disciplines (criticality, radiological, chemical, and industrial); ALARA practices; and emergency procedures. In-depth training programs shall be provided to individuals depending on job requirements in the areas of radiological safety (for all personnel with access to the Restricted Area) and in criticality safety control. Nuclear criticality safety training shall satisfy the recommendations of ANSI/ANS-8.20 - 1991, Nuclear Criticality Safety Training (ANSI, 1991). Retraining of personnel previously trained shall be performed for radiological and criticality safety at least annually, and shall include updating and changes in required skills. The training program shall include methods for verifying training effectiveness, such as written tests, actual demonstration of skills, and where required by regulation, maintaining a current and valid license demonstrating qualification. Changes to training shall be implemented if indicated due to incidents potentially compromising safety, or if changes are made to facilities or processes.

The training programs and maintenance of the training program records at the facility are the responsibility of the Human Resources Manager. Accurate records are maintained on each employee's qualifications, experience, training, and retraining. The employee training file shall include records of all general employee training, technical training, and employee development training conducted at the facility. The employee training file shall also contain records of special company sponsored training conducted by others. The training records for each individual are maintained so that they are accurate and retrievable. Training records are retained in accordance with the records management system.

Additional details on the facility training program are provided in Chapter 11, Management Measures.

2.3.4 Procedures

Activities involving licensed materials will be conducted through the use of approved, written procedures. Applicable procedure and training requirements will be satisfied before use of the procedure. Procedures will be used to control activities in order to ensure the activities are carried out in a safe manner.

Generally, four types of plant procedures are used to control activities: operating procedures, administrative procedures, maintenance procedures, and emergency procedures. Operating procedures, developed for workstation and control room operators, are used to directly control process operations. Administrative procedures are written by each department as necessary to control activities that support process operations, including management measures (e.g. configuration management, training and record-keeping). Maintenance procedures address preventive and corrective maintenance, surveillance (includes calibration, inspection, and other surveillance testing), functional testing following maintenance, and requirements for pre-maintenance activity involving reviews of the work to be performed and reviews of procedures. Emergency procedures address the preplanned actions of operators and other plant personnel in the event of an emergency.

Policies and procedures will be developed to ensure that there are ties between major plant safety functions such as the ISA, management measures for items relied on for safety (IROFS), radiation safety, nuclear criticality safety, fire safety, chemical safety, environmental monitoring, and emergency planning.

Chapter 11 details the use of procedures, including development, revision, and distribution and control.

2.3.5 Audits and Assessments

The AES QA Program requires periodic audits to confirm that activities affecting quality comply with the QA Program and that the QA Program is being implemented effectively. The assessment function includes audits and other independent assessments to verify performance. These assessments provide a comprehensive independent evaluation of activities, including activities delegated to others under the AES QA Program, and procedures. Personnel who do not have direct responsibility in the area being assessed conduct these assessments.

An assessment and audit program for operational quality assurance of the enrichment facility is established, and periodically reviewed by management, to:

- verify that the configuration and operation of the facility are consistent with AES company policy, approved procedures and license provisions
- review important proposed facility modifications, tests and procedures
- verify that reportable occurrences are investigated and corrected in a manner which reduces the probability of recurrence of such events
- detect trends which may not be apparent to a day-to-day observer.

The organizational structure for conducting the operational reviews and audit program includes:

- The Safety Review Committee appointed by the AES President.
- Regular audits conducted by the Quality Assurance Department.

Each of the above shall have the authority necessary to discharge its responsibilities adequately. Implicit in this authority shall be access to facility records and personnel as required in order to perform reviews and audits properly.

Additional details on audits and assessments are provided in Chapter 11, Management Measures.

2.3.5.1 Safety Review Committee

The Safety Review Committee (SRC) provides technical and administrative review of facility operations that could impact plant worker and public safety. Details on the SRC and the scope of activities reviewed by the SRC are provided in Section 2.2.3, Safety Review Committee.

2.3.5.2 Quality Assurance Department

The Quality Assurance Department conducts periodic audits of activities associated with the facility, in order to verify the facility's compliance with established procedures. Audits are conducted in accordance with the Quality Assurance Program Description and as required by Chapter 11, Management Measures.

2.3.5.3 Facility Operating Organization

The facility operating organization shall provide, as part of the normal duties of supervisory personnel, timely and continuing monitoring of operating activities to assist the Plant Manager in

keeping abreast of general facility conditions and to verify that the day-to-day operating activities are conducted safely and in accordance with applicable administrative controls.

These continuing monitoring activities are considered to be an integral part of the routine supervisory function and are important to the safety of the facility operation.

2.3.5.4 Audited Organizations

Audited organizations shall assure that deficiencies identified are corrected in a timely manner.

Audited organizations shall transmit a response to each audit report within the time period specified in the audit. For each identified deficiency, the response shall identify the corrective action taken or to be taken. For each identified deficiency, the response shall also address whether or not the deficiency is considered to be indicative of other problems (e.g., a specific audit finding may indicate a generic problem) and the corrective action taken or to be taken for any such problems determined.

Copies of audit reports and responses are maintained in accordance with the records management system.

2.3.6 Incident Investigations

Abnormal events that potentially threaten or lessen the effectiveness of health, safety, or environmental protection are identified and reported to the EHS&L Manager or designee through the Corrective Action Program (CAP) which is described in more detail in Chapter 11, Management Measures. Each event is considered in terms of its requirements for reporting in accordance with regulations and is evaluated to determine the level of investigation required. These evaluations and investigations are conducted in accordance with approved CAP procedures. The depth of the investigation depends upon the severity of the incident in terms of the levels of uranium released and/or the degree of potential for exposure of workers, the public, or the environment.

The EHS&L Manager or designee is responsible for:

- maintaining a list of agencies to be notified
- determining if a report to an agency is required
- notifying the agency when required.

The licensing function has the responsibility for continuing communications with government agencies and tracking corrective actions to completion.

The process of incident identification, investigation, root cause analysis, environmental protection analysis, recording, reporting, and follow-up shall be addressed in and performed in accordance with written procedures. Radiological, criticality, hazardous chemical, and industrial safety requirements shall be addressed. Guidance for classifying incidents shall be contained in facility procedures, including a list of threshold off-normal incidents.

The EHS&L Manager or designee shall, through implementation of the CAP, maintain a record of corrective actions to be implemented as a result of off-normal investigations. These corrective actions shall include documenting lessons learned, and implementing worker training where indicated, and shall be tracked to completion by the EHS&L Manager or designee within the CAP.

Additional details on incident investigations are provided in Chapter 11, Management Measures.

2.3.7 Employee Concerns

Employees who feel that safety or quality is being compromised have the right and responsibility to initiate the "stop work" process in accordance with the applicable project or facility procedures to ensure the work environment is placed in a safe condition.

Employees also have access to various resources to ensure their safety or quality concerns are addressed, including:

- line management or other facility management (e.g., EHS&L Manager, Plant Manager, QA Manager)
- the facility safety organization (i.e., any of the safety engineers or managers)
- NRC's requirements under 10 CFR 19, Notices, Instructions and Reports to Workers: Inspection and Investigations (CFR, 2008b)
- AES CAP - a simple mechanism available for use by any person at the EREF site for reporting unusual events and potentially unsafe conditions or activities.

2.3.8 Records Management

Procedures are established which control the preparation and issuance of documents such as manuals, instructions, drawings, procedures, specifications, and supplier-supplied documents, including any changes thereto. Measures are established to ensure documents, including revisions, are adequately reviewed, approved, and released for use by authorized personnel.

Document control procedures require documents to be transmitted and received in a timely manner at appropriate locations including the location where the prescribed activity is to be performed. Controlled copies of these documents and their revisions are distributed to and used by the persons performing the activity.

Superseded documents are destroyed or are retained only when they have been properly labeled. Indexes of current documents are maintained and controlled.

The QA Program assigns responsibility for verifying QA record retention to the QA Manager. Applicable design specifications, procurement documents, or other documents specify the QA records to be generated by, supplied to, or held, in accordance with approved procedures. QA records are not considered valid until they are authenticated and dated by authorized personnel.

Additional details on the records management program are provided in Chapter 11, Management Measures.

2.3.9 Written Agreements with Offsite Emergency Resources

The plans for coping with emergencies at the facility are presented in detail in the Emergency Plan. The Emergency Plan includes a description of the facility emergency response organization and interfaces with off-site EROs. Written agreements between the facility and offsite EROs, including the local fire department, the local law enforcement agency, ambulance/rescue units, and medical services and facilities have been established.

Coordination with participating government agencies (State, Counties) is vital to the safety and health of plant personnel and the general public. The principal state and local

agencies/organizations having responsibilities for radiological or other hazardous material emergencies for the facility are:

- Idaho Bureau of Homeland Security
- Bonneville County Emergency Management Services

Details of the interfaces with these agencies are provided in Section 4 of the Emergency Plan.

2.4 REFERENCES

ANSI, 1991. Nuclear Criticality Safety Training, ANSI/ANS-8.20-1991, American National Standards Institute/American Nuclear Society, 1991.

ANSI, 1996. Administrative Practices for Nuclear Criticality Safety, ANSI/ANS-8.19-1996, American National Standards Institute/American Nuclear Society, 1996.

CFR, 2008a. Title 10, Code of Federal Regulations, Part 70, Domestic Licensing of Special Nuclear Material, 2008.

CFR, 2008b. Title 10, Code of Federal Regulations, Part 19, Notices, Instructions and Reports to Workers: Inspection and Investigations, 2008.

LES, 2005. National Enrichment Facility Safety Analysis Report, Revision 7, June 2005.

NRC, 2002. Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility, NUREG-1520, U.S. Nuclear Regulatory Commission, March 2002.

NRC, 2005. Safety Evaluation Report for the National Enrichment Facility in Lea County, New Mexico, June 2005.