9.0 CONDUCT OF OPERATIONS

9.1 INTRODUCTION

General Electric Company has established a GE-MO organization such that administrative controls are in place to ensure decisions are made at the proper level of responsibility, with appropriate technical advice, and in a timely manner. The record of safety and regulatory compliance established by GE-MO throughout its operation has been excellent.

9.2 CORPORATE ORGANIZATION

Principal organizational levels of General Electric Company in effect as of January 2004 are shown in Figure 9-1.

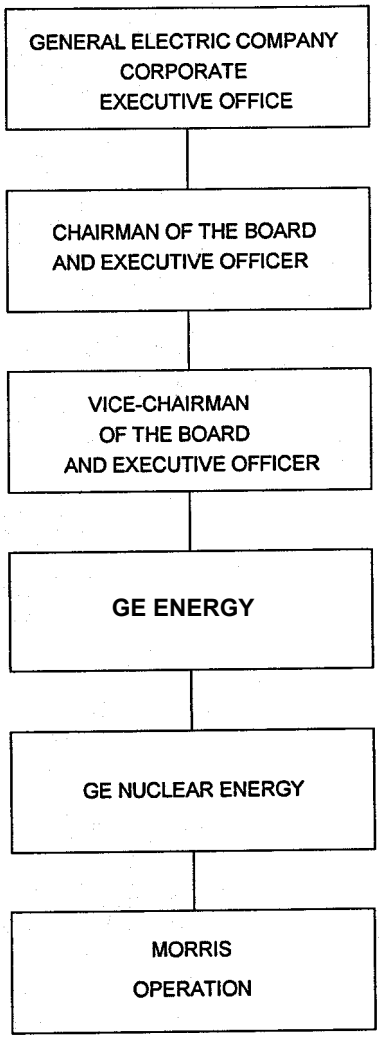

Figure 9-1. GE Morris Operation relationship to the GE Corporate Offices.

9.2.1 Organization Functions, Responsibilities, and Authorities

Formal policies are established at Corporate, Sector, Operations, Division and Operation levels of GE's organization to ensure safety and quality of products and services and compliance with requirements of government agencies. These policies are applicable to GE-MO as summarized in the following paragraphs.

9.2.1.1 Company Policies

Formal, Company-level policies are documented in two forms: Company Policy Statements and Company Management Policies. These company policies are a definition of common purposes for organization components of the Company as a whole where it is desirable to foster a uniform course of action.

9.2.1.2 Nuclear Energy Policies

GE Nuclear Energy (GENE) uses a system of documented policy guides and instructions to establish requirements and implement Company policies regarding safety and quality as related to nuclear energy business activities.

9.2.1.3 Operation Policies

Morris Operation (GE-MO) focuses Company and GENE policies to specifically address the Operation's requirements.

9.2.1.4 Irradiation Processing Operation

GENE and MO activities are governed by procedures and instructions established in accordance with Company and Operations policy requirements.

9.2.2 GENE Components

Morris Operation is a sub-section of the GENE EHS organizationO.

9.2.2.1 Morris Operation

The GE-MO sub-section is responsible for operation of GE-MO as an Independent Spent Fuel Storage Installation (ISFSI). This organization and its function are discussed in Section 9.2.3.

9.2.2.2 Regulatory Compliance

GE-MO Regulatory Compliance is responsible for directing and coordinating activities related to obtaining and support of licenses and permits including developing practices and procedures and compliance verification in accordance with applicable Company and Government requirements.

9.2.3 Morris Operation Organization

The GE-MO organization (Figure 9-2) is designed to be relatively self-sufficient in ensuring public, personnel, and facility safety. Senior positions and responsibilities within the organization are described in the following paragraphs:

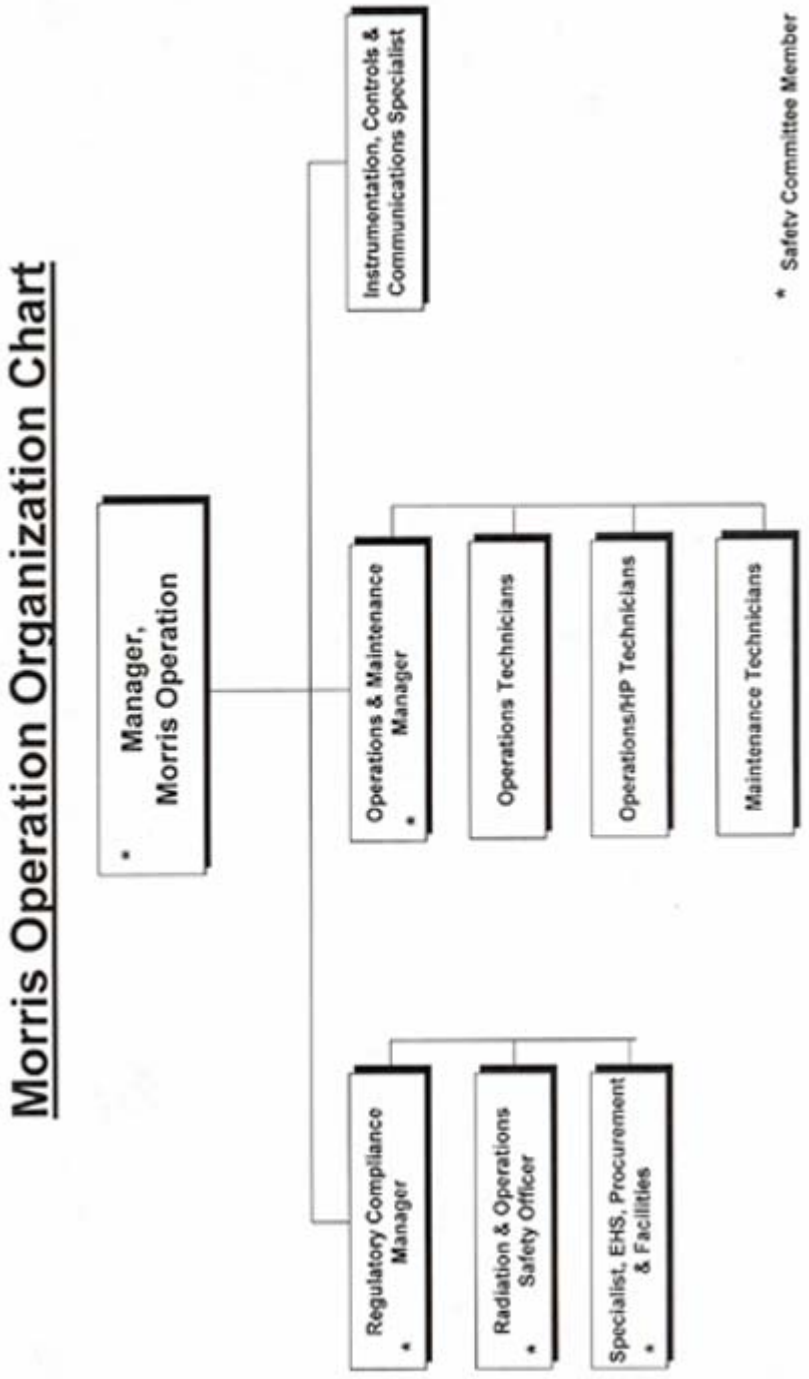

Figure 9-2. GE Morris Operation Organization Chart.

9.2.3.1 Manager - Morris Operation

The Manager - MO is responsible for safe operation and maintenance of facilities, including compliance with license conditions and applicable Federal, State, and local regulations to ensure protection of health and safety of public and plant personnel.

9.2.3.2 Operations and Maintenance Manager

The O&MM is responsible to the Manager - MO for maintaining plant facilities and equipment in safe and operable condition and conducting site operations in compliance with established safety and license requirements and operating procedures.

9.2.3.3 Regulatory Compliance Manager

The Regulatory Compliance Manager (RCM) is responsible to the Manager - MO for licensing compliance activities including special nuclear material accountability and plant physical security. In addition, the RCM is responsible for providing industrial and radiological safety support, coordinating site regulatory matters with local, State, and Federal regulatory agencies, and directing site environmental activities. The RCM reviews facility and operating procedure changes to determine need for nuclear safety review and reviews fuel data to ensure conformance with criteria for fuel storage.

9.2.4 Safety Committee

In addition to the organization shown in Figure 9-2, a facility Safety Committee (SC) is established within GE-MO. The SC will consist of members (shown in Figure 9-2) as determined by the Manager - Morris Operation and described in a SC operating procedure. Three members must be present to conduct business. Other individuals may participate in SC meetings. The Manager - Morris Operation serves as committee chairperson when items of particular significance are being considered (e.g., in the evaluation of major operational safety matters, and development of recommended changes in facilities or procedures affecting safety margins).

The SC exercises jurisdiction over those matters having radiological or nuclear safety implications, with review and approval authority.

9.3 TRAINING PROGRAMS

To provide and maintain a flexible, well-qualified work force for safe and efficient operation, a comprehensive training program has been implemented. Training includes:

a. Orientation and Indoctrination

b. Radiation and Industrial Safety

c. Security/Safeguards

d. Emergency Response

e. Quality Assurance

f. Basic Plant Facilities and organization

g. Fuel Shipping and Storage Operations

h. Utilities and Operating Systems

The amount of training and retraining each individual receives is directly related to his function. Personnel are provided general orientation that includes description of GE-MO and its functions, facility safety, security, emergency plans and general procedures.

9.3.1 Operator Qualification, Training, and Certification

Personnel assigned duties involving operation of systems and equipment directly related to cask movement or loading, movement of fuel, operation of basin water cooling or cleanup systems, radioactive waste management operations, and other activities in the cask handling and fuel storage areas are trained, tested, and certified as qualified to perform specified duties.

9.3.2 Trained and Certified Personnel

GE-MO maintains an adequate complement of trained and certified personnel to operate the facility.

9.4 NORMAL OPERATIONS

9.4.1 Facility Procedures

Facility procedures are discussed by category in following paragraphs. Systems and equipment requiring certified personnel may be operated by noncertified personnel only if under direct visual direction of an individual trained and certified for the specific operation.

9.4.1.1 Morris Operation Instructions (MOIs)

MOIs are a system of task specific written instructions that provide guidance and direction for performance of GE-MO activities. The instructions provide for proper safety, quality, and functional considerations in planning and implementation of plant activities, including administration, licensing, engineering and maintenance, materials, operations, quality assurance, safeguards, safety field services and transportation.

9.4.1.2 Standard Operating Procedures (SOPs)

Operation of GE-MO facilities is directed by a system of SOPs that provide detailed guidance and control for anticipated conditions. Individual procedures are prepared by Operations and Maintenance and approved by the SC before being implemented. Operations personnel are authorized to modify standard procedures on an interim basis as required to cover specific conditions arising during operations. SOPs are modified only after due consideration of safety implications of the change. Operating activities are monitored on a shift-by-shift basis by supervisory staff for compliance with SOPs.

9.4.1.3 Environmental Health and Safety Plan (EHSP)

Control of work involving ionization radiation and radioactive materials is provided by a system of radiation protection and standards developed and documented in the Environmental Health and Safety Plan (EHSP). Deviation from established requirements may be required from time to time either on a planned basis under special operating conditions or by emergencies. Planned deviations must have prior approval. Emergency deviations must be reported promptly to the Operations Technician on duty who, in turn, notifies the ROSO or the RCM.

9.4.1.4 Special Work Permits (SWPs)

Special Work Permits (SWPs) address activities involving nonstandard conditions not addressed by routine implementing procedures. They are prepared for interim use on a controlled basis and are based on specific evaluation of safety implications. Definite time limits are set for SWPs during which off-standard conditions are to be corrected or established requirements revised. SWPs are approved by HP, EHS Operations personnel - usually the ROSO, O&MM and RCM.

9.4.1.5 Regulated Work Permits (RWPs)

Regulated Work Permits (RWPs) are essentially time extended SWPs that address safety requirements for mundane facility activities in potentially hazardous areas. The RWP system is designed to ensure that such work is accomplished in accordance with standards and requirements required by the EHSP.

Responsibility for the procedural system is assigned to the RCM including provisions for shift-by-shift monitoring of activities for compliance with control requirements and maintenance of necessary records of such activities. RWPs are approved by the SC and reviewed annually.

9.4.1.6 Equipment Maintenance Programs

A Work Request (WR) system is employed at GE-MO for initiating requests for maintenance, repairs, modifications, alterations and new installations. WRs are reviewed by the Operations & Maintenance Manager (O&MM) or delegate and Quality Assurance for conformance to facility procedures and instructions. Equipment maintenance is performed in accordance with manufacturer's recommended practices and operating experience. Overall responsibility for equipment maintenance is assigned to the O&MM. Assistance is provided by other

components, as required, to ensure safety and operability criteria are correctly interpreted and performance capability maintained.

9.4.2 Records and Reports

Files of activities relating to safety are maintained to demonstrate adequacy of design safety considerations and to ensure consistent application of safety principles and objectives to plant operation and maintenance.

9.4.2.1 Record Retention

Documented records of facility activities are maintained to demonstrate control requirements have been met, including procedural system documentation and compliance records noted in preceding paragraphs; environmental monitoring program reports; personnel exposure data and regulatory activity files.

9.4.3 Facility Modification

GE-MO employs a formal design review program in accordance with QA requirements. Minor modifications and tests and experiments may be performed under provisions of Section 9.4.4.

9.4.3.1 Project Design Activity

Design activity includes establishing functional classifications, specifications, drawings, and other documentation - all subject to safety committee review. Independent overview is required for design verification. Design activities are performed in accordance with QA program requirements.

9.4.3.2 Licensing Activity

It is the responsibility of the RCM to determine if a facility modification requires a formal safety analysis review. A "Changes, Tests, and Experiments" (10 CFR 72.48) report is written with guidance from the RCM and approved by the SC. Licensing action is initiated by the RCM with approval by the Manager, MO. Other GE-MO personnel may be enlisted to provide licensing activity support.

9.4.3.3 Project Implementation

The Manager, MO, may at his discretion, designate a Project Manager who is assigned responsibility for construction, installation, testing, startup, and related activities. The Manager - MO retains full responsibility for project safety and normal concurrent activities involving operation of the facility during modification.

Responsibility for liaison with regulatory bodies remains with GE-MO - usually the Manager, MO or the RCM. Project management personnel coordinate with the safety committee during

project execution to achieve stated project and operation goals. Procedures for the new facility or function are developed and implemented as described in Section 9.4.

Upon completion of startup and turnover operations, project documentation is completed and filed, and responsibility for operations of the new facility or function is assumed by GE-MO.

9.4.3.5 Audits and Reviews

Policies and resulting requirements established for GE-MO require periodic audit and review of various aspects of fuel storage activities. General topics for audit include:

Design and Maintenance
Nuclear criticality safety
Radiation protection
Physical security
Emergency plan
Environmental protection
Quality Assurance
Facility Operation

Internal audits are conducted by GE-MO Management. Formal audits and reviews are conducted by other GENE components in accordance with established policies and procedures.

9.4.4 Changes, Tests, and Experiments

Facility alterations, personnel changes, and methods and procedures are changed/revised without prior U.S. Nuclear Regulatory Commission (NRC) approval if the SC deems no lessening of safety or security shall occur. This policy is consistent with 10 CFR 72.48 requirements.

Implementation of such changes, tests, and experiments is accomplished as directed by applicable procedures. In general, implementing procedures requires appropriate analysis and evaluation, with concurrence and license amendment activity when appropriate.

9.4.4.1 Unreviewed Safety and Environmental Issues Criteria

Changes in facility or procedures described in this report and tests and experiments (hereafter referred to as "action") are reviewed for safety and environmental issues previously unreviewed by the NRC under the following criteria:

a. Proposed action shall be deemed to involve an unreviewed safety issue if the probability or consequences of an accident or malfunction of equipment important to safety would exceed technical specification limits or other conditions of the facility license, established by regulations, or if a significant possibility of an accident or malfunction of a type different than previously evaluated would be created.

b. Proposed action shall be deemed to involve an unresolved safety issue if the margin of safety defined in any Technical Specification is significantly reduced.

c. Proposed action shall be deemed to involve an unreviewed safety issue if occupational radiation exposure, either individually or collectively, is significantly increased over that experienced in routine operations involving receipt, storage, and transfer of spent fuel.

d. Proposed action shall be deemed to involve an unreviewed environmental issue if the impact of that action would have a significant environmental effect not considered previously.

9.4.4.2 Records and Reports for Changes, Tests and Experiments

The following special records and reports are required regarding changes, tests and experiments:

a. Records of facility changes shall be made and maintained until termination of license, and shall include bases for determining that changes did not involve unreviewed safety and environmental issues. Changes of a long-term or permanent nature will be recorded by issuing revisions to appropriate sections of this report.

b. Records of temporary facility changes, tests and experiments shall be prepared and maintained until termination of license. These records shall include safety evaluations to document bases for determining that subject changes, tests and experiments did not involve unreviewed safety and environmental issues.

c. An annual report of actions under Section 9.4.4 shall be furnished to the NRC regional office and other addresses required by applicable regulations. The annual report shall contain a brief description of changes, tests and experiments and include a summary of the safety and environmental evaluation of each action.

9.5 EMERGENCY PLAN

9.5.1 Purpose and Scope

An emergency plan is established and personnel are trained in emergency procedures so effective actions can be taken under the stress of emergency conditions.

GE-MO emergency planning is related to overall emergency planning of GENE, and to applicable regulatory requirements. Emergency assistance arrangements are established with law enforcement, medical, and other local agencies and services.

9.5.2 Responsibilities

Establishment of an emergency plan is the responsibility of the Manager - MO. Responsibility for preparation of emergency procedures and instructions has been delegated to the RCM.

Assistance and concurrence of engineering and operation components of GE-MO are required in developing and approving emergency procedures. Independent review for adequacy and effectiveness is included in SC review activities previously described. Implementation of emergency response procedures is the responsibility of the Emergency Coordinator (EC).

Responsibilities for training, equipping, testing and other preparatory activities necessary to ensure maximum effectiveness when an actual emergency occurs are assigned to appropriate line organization positions.

9.5.3 Action Procedures

An emergency is defined as any set of conditions which requires immediate corrective actions beyond those specified in facility procedures and authorized supplementary instructions to protect health and safety of public and plant personnel.

9.5.3.1 Emergency Classification

Classes of emergencies for which specific action procedures are prepared include:

a. Criticality Incidents: Defined as existence of a local neutron multiplication factor greater than 1.0 anywhere in the plant.

b. Contamination Accidents: Defined as unanticipated appearance of significant quantities of radioactive materials beyond prescribed bounds. Radiation monitors and air samplers are provided in areas of potential contamination to provide continuous assessment of conditions. Local and CAS/SAS alarm systems are provided for strategically located monitors in fuel storage areas.

c. Fire: Detection and alarm systems are provided for areas of concern and are supplemented by manual alarm provision and response procedures.

d. Major Equipment Failures or Operational Accidents: Defined as any component failure or malfunction having significant potential for personnel injury or major damage to plant facilities. Detection systems are provided for certain conditions; detection of others will be by direct observation or by indication that operating characteristics have changed. All such incidents are reported immediately to the EC on duty for prompt assessment and initiation of corrective procedures.

e. Other: Specific action plans exist for external conditions having potential to affect GE-MO safety such as earthquake, windstorm, accidents at adjacent facilities, etc. Where applicable, provisions are made for advance warning of such conditions so actions can be taken to minimize potential effects (e.g., evacuation of vulnerable areas when a tornado is imminent).

9.5.4 Activation of Emergency Organization

The GE-MO emergency organization is activated by the EC to the extent appropriate to the emergency. Details are documented in NEDO-31955, "Morris Operation Emergency Plan".

9.5.4.1 Communication Methods

Activation of on-site and off-site emergency personnel, organizations, and support functions depends upon normal communication channels. The facility is equipped with telephone and public address systems and the emergency alarm system. These systems are augmented by radio communications established between GE-MO and selected law enforcement, fire fighting, and other emergency services.

9.5.4.2 Notification of Off-Site Agencies

The EC shall (without prior management approval) request off-site agency response to an emergency situation. This includes fire department, local law enforcement and hospital/ambulance services. Procedures are established to provide direction for obtaining emergency assistance.

Notification to other agencies is made in accordance with assistance agreements, appropriate governmental regulations, and established GE company policies and operating instructions.

9.6 DECOMMISSIONING

During GE-MO design and construction, specific attention was directed to control and confinement of radioactive materials and to provide features that would facilitate decontamination and decommissioning. A decontamination and decommissioning plan is contained in Appendix A.7.