GE NUCLEAR ENERGY
WILMINGTON, NORTH CAROLINA

DECOMMISSIONING

AND CLOSURE PLAN

December 18, 1996

NRC LICENSE SNM-1097
DOCKET 70-1113

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CHAPTER 1.0
INTRODUCTION

General Electric's nuclear energy business, known as GE Nuclear Energy, is headquartered in San Jose, California, with the manufacturing facility located in Wilmington, North Carolina. For the purpose of this document, the Wilmington facility, currently known as Nuclear Energy Production facility, is identified as GE-Wilmington. The manufacturing of nuclear fuel, and reactor components is conducted at GE-Wilmington. In addition, the GE-Wilmington site also includes a plant for manufacturing GE aircraft engine parts that are shipped to other sites for assembly.

The Decommissioning and Closure Plan is prepared and submitted as evidence of GE-Wimington's compliance with Chapter 7 of Special Nuclear Materials License SNM-1097. It is written in conformance to the "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," (NRC, August 1987), and 10 CFR 70, and to demonstrate financial capability to support decommissioning and closure activities. The Decommissioning and Closure Plan also addresses site closure requirements as specified in the Resources Conservation and Recovery Act (RCRA). 40 CFR 265, Subpart G.

Decommissioning and closure activities will include the cleaning and removal of radioactive and hazardous waste contamination which may be present on materials, equipment and structures. Cleaning effectiveness will be assured by verification.

The Decommissioning and Closure Plan provides information concerning the plant, the types of items to be decontaminated, the disposition of facilities used for hazardous materials, the assumptions upon which the cost of decommissioning and closure is derived, and an estimated schedule of time it will take for decommissioning and closing the facility. Financial considerations are also included.

Currently there are several studies and programs in progress to terminate the use of process lagoons and to recover the waste from these lagoons. The Decommissioning and Closure Plan for GE-Wilmington is predicated upon removal of lagoon sludges and other slightly contaminated materials (e.g., calcium fluoride) from the site prior to initiating decommissioning and closure activities.

It is the intent of GE-Wilmington to decommission and close the facility so as to reduce the level of radioactivity remaining in the facility to residual levels acceptable for release of the facility for unrestricted usage and for NRC license termination.

It is important to recognize that GE-Wilmington has been in operation since 1969. This facility has procedures, personnel, instrumentation, equipment, and funding to assure nuclear and industrial safety. The plant is experienced in techniques for decontaminating discrete items and areas, and in verifying the degree to which cleaning has been accomplished. The technology is available to decontaminate the facility; people know-how is present; and management has developed safe practices through years of experience. GE-Wilmington is capable and competent to decommission and close the plant in accordance with the Decommissioning and Closure Plan.

CHAPTER 2.0
FACILITY DESCRIPTION

2.1 SITE LOCATION AND LAYOUT

GE's plant at Wilmington, North Carolina, is situated on a 1,664-acre site in New Hanover County, approximately 6 miles north of the City of Wilmington. (Refer to maps, Figures 2-1 through 2-3.) New Hanover County is located in the southeastern corner of the state, in the coastal plains region. New Hanover County is bounded by the Atlantic Ocean and by Pender and Brunswick Counties. The region around the site is sparsely settled, and the land is characterized by heavily timbered tracts occasionally penetrated by short roads. Farms, single-family dwellings, and light commercial activities are located chiefly along the highways.

The major portion of the site is bordered on the east by U.S. Highway 117 and on the west by the Northeast Cape Fear River. Fourteen acres lie to the east of U.S. 117 and are undeveloped except for water wells, an employee park, and a leased portion of the property used as a transportation terminal. The northern and southern boundaries, marked by fences, are surveyed lines through undeveloped forest and marsh lands.

Of the total 1,664 acres, only 345 acres have been developed. The developed portion is used as shown in Table 2.1.

FIGURE 2.1
PLANT SITE - STATE AND COUNTY LOCATIONS

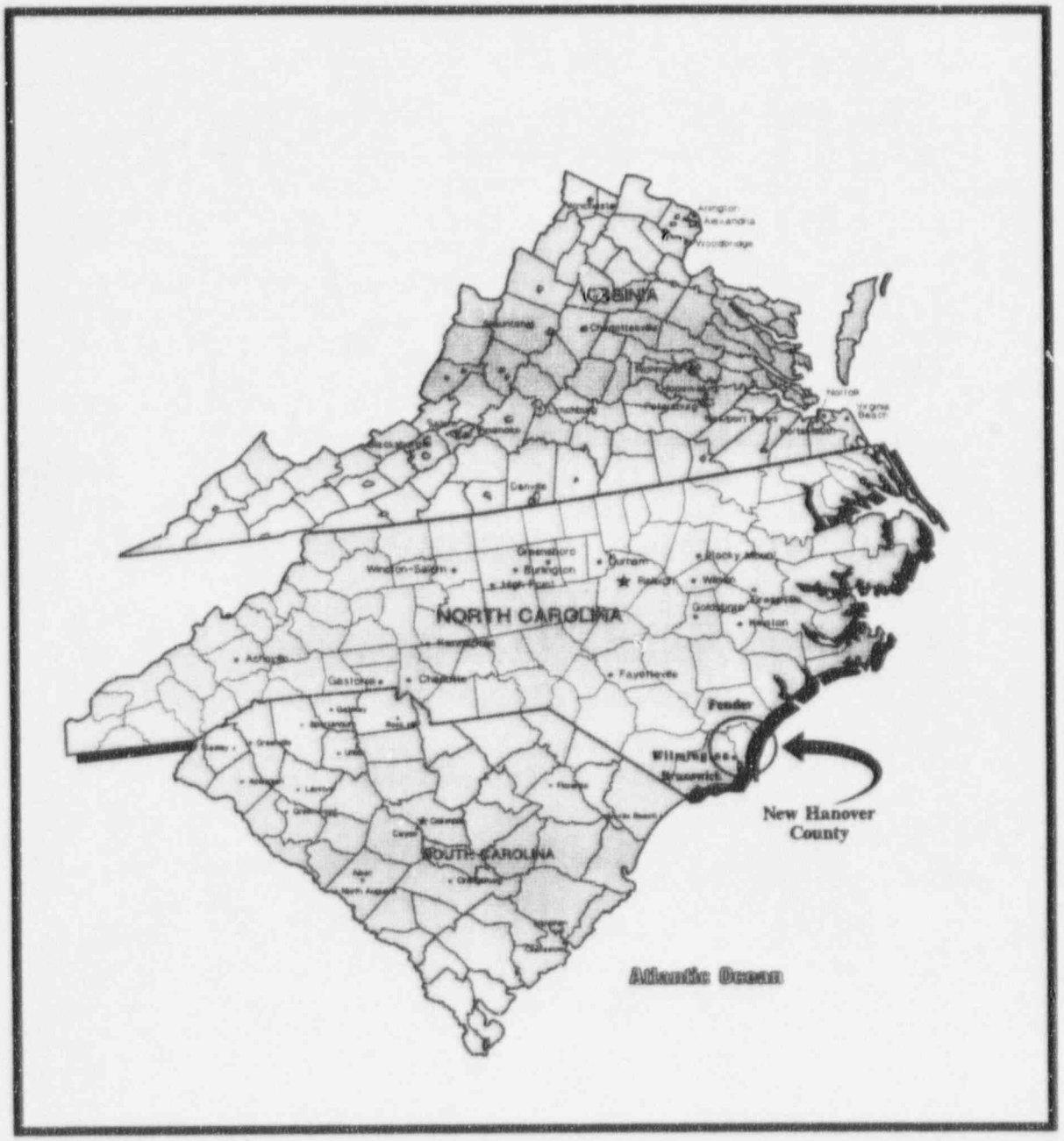

FIGURE 2.2
NEW HANOVER COUNTY AND ADJACENT COUNTIES

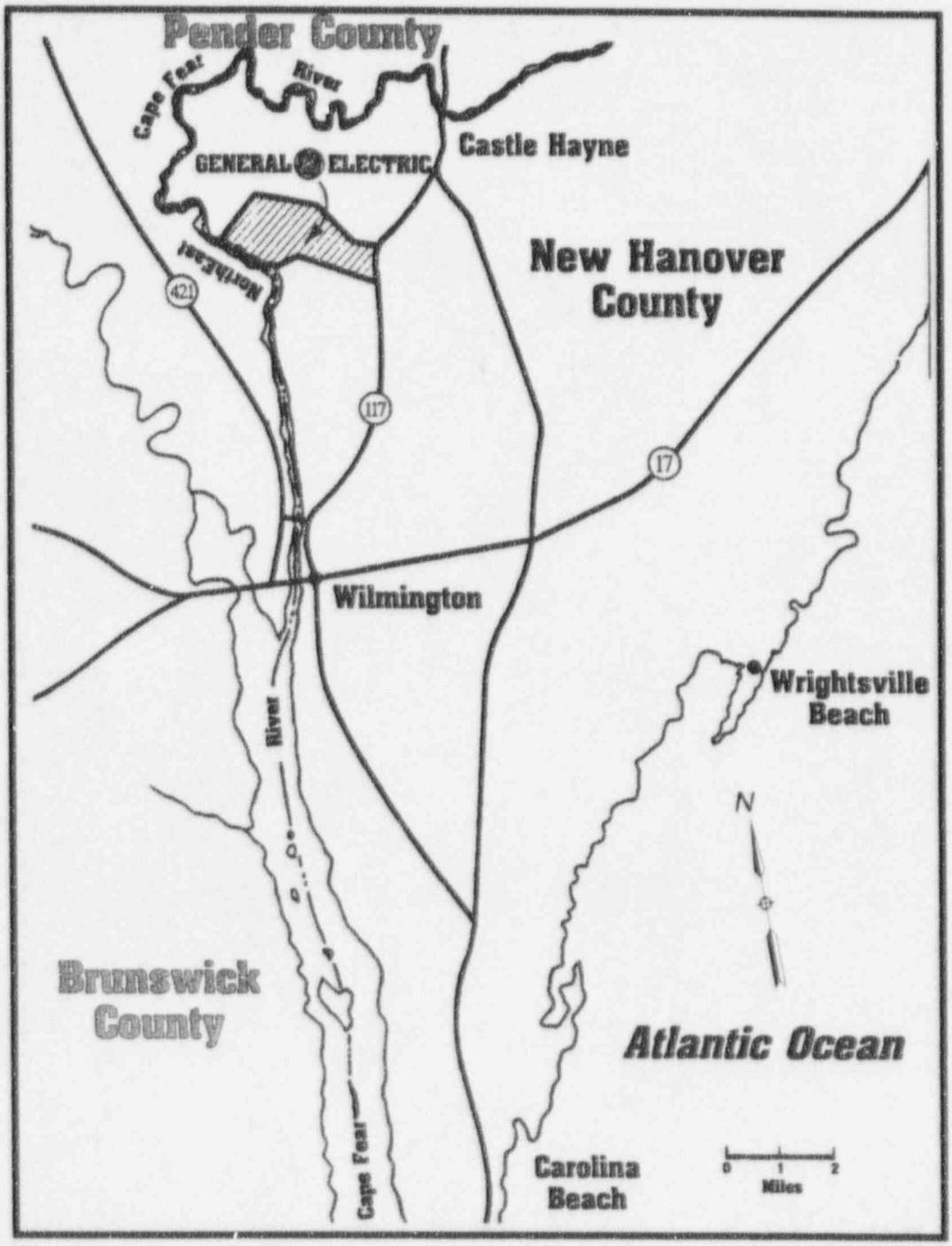

FIGURE 2.3
PLANT SITE (HEAVY OUTLINE) AND ENVIRONS

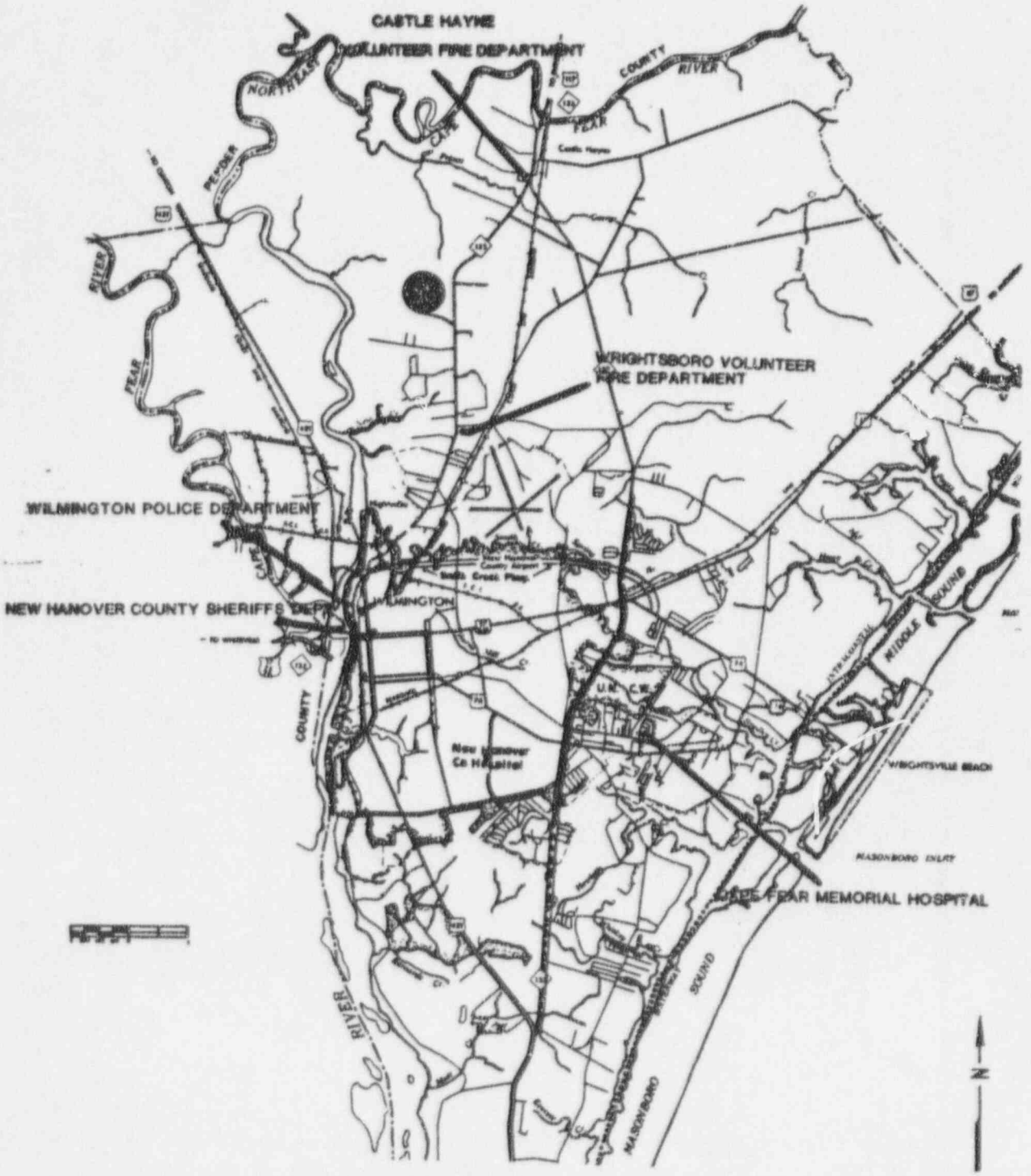

TABLE 2.1

USES OF DEVELOPED AREAS OF THE PLANT SITE

DEVELOPED AREA	ACRES
Manufacturing Buildings	25
Support Buildings	4
Waste Treatment Facilities	26
Paved Roads, Outside Storage Areas and Parking	47
Landscaped Areas	231
Employee Recreation Area	12
Total	345

2.2 PLANT OPERATIONS

2.2.1 EXTERNAL APPEARANCE

Figure 2.4 is the GE-Wilmington site plan showing principal buildings and facilities of the developed plant area. During site development, particular attention was given to building orientation and arrangement and to landscaping. Large trees have been left standing and supplemented with more than 9,000 new tree plantings, understructure plantings, and ground cover. Parking lots and roadways are designed to minimize adverse effects and to complement the aesthetic value of the area. Entrances to the plant have been cleared of foliage only as necessary to provide safe entrance to and from the highway (Figure 2.5); much of the natural and woods ground cover were retained.

2.2.2 NUCLEAR OPERATIONS

The fuel manufacturing process produces fuel for nuclear reactors. The process begins with the receipt of low enriched uranium hexafluoride (UF_6). Conversion of UF_6 to uranium dioxide (UO_2) powder utilizes a wet process and/or a dry direct conversion process. The UO_2 is pressed into pellets which are sintered, ground to size and loaded into tubes. Loaded tubes are welded with end cap closures and assembled into bundles. The fuel fabrication process is outlined in the process flow diagram shown in Figures 2.6.1 through 2.6.4.

FIGURE 2.4
PRINCIPLE BUILDINGS AND

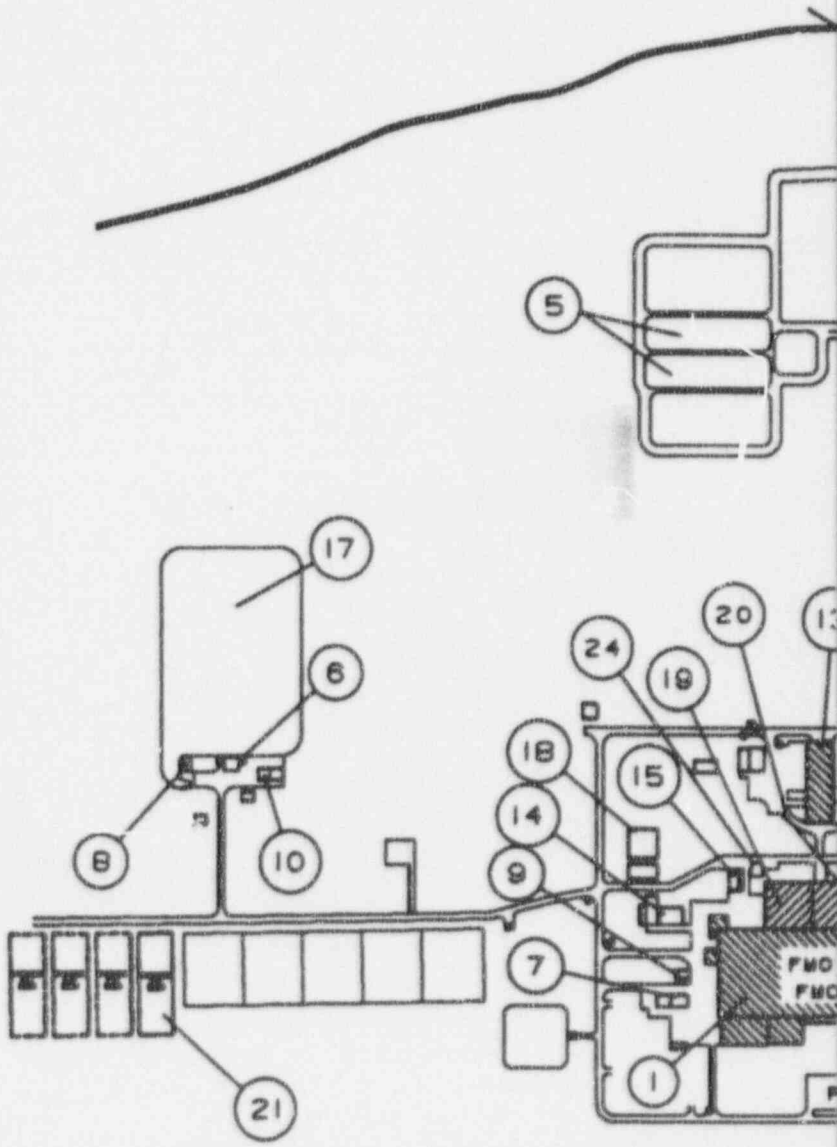

FIGURE 1.3

FACILITIES

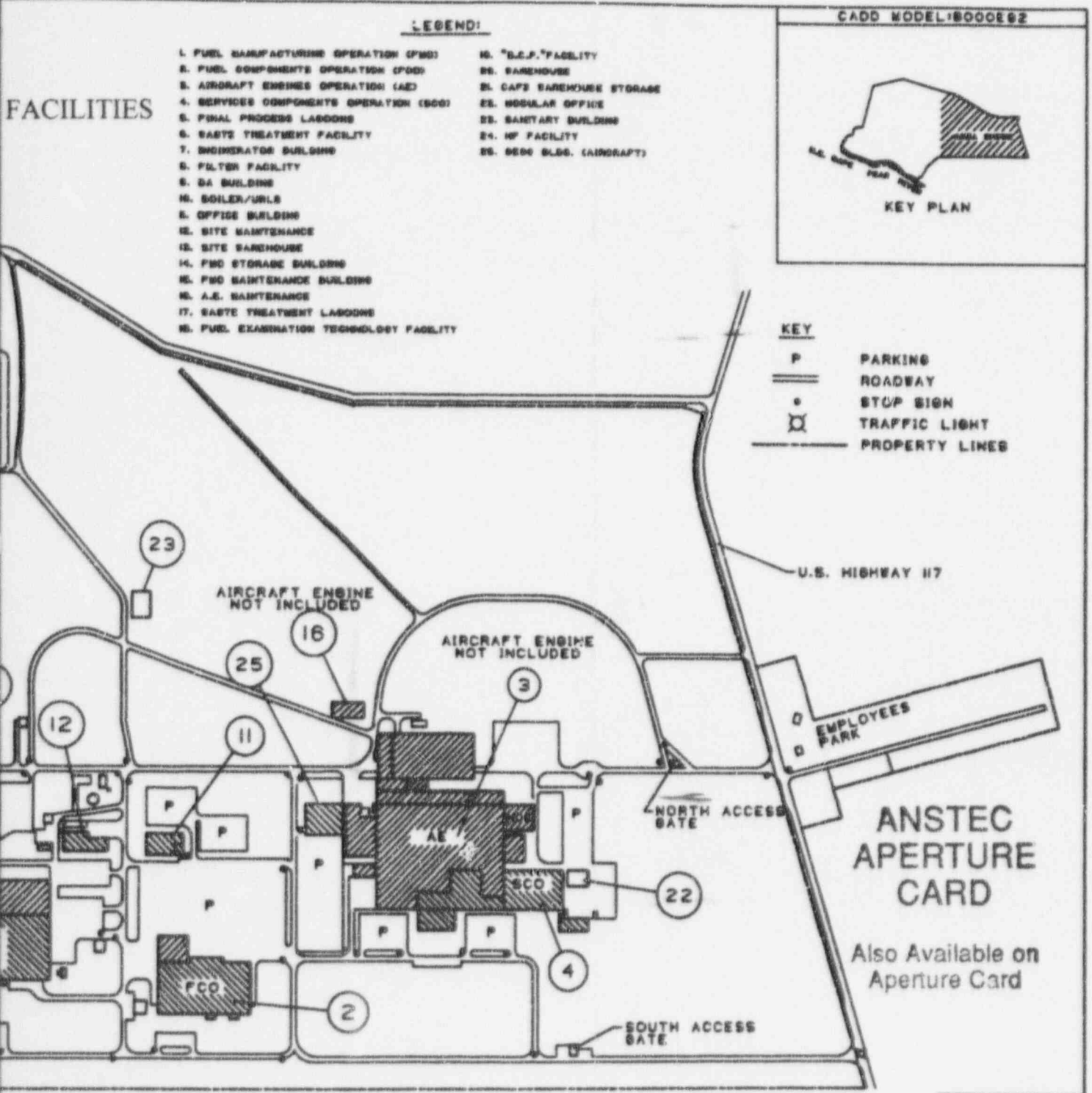

FIGURE 1.3

GE - WILMINGTON SITE PLAN

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FIGURE 2.5
PLANT ENTRANCE

NORTH ENTRANCE

SOUTH ENTRANCE

FIGURE 2.6.1
POWDER PRODUCTION/BUNDLE ASSEMBLY

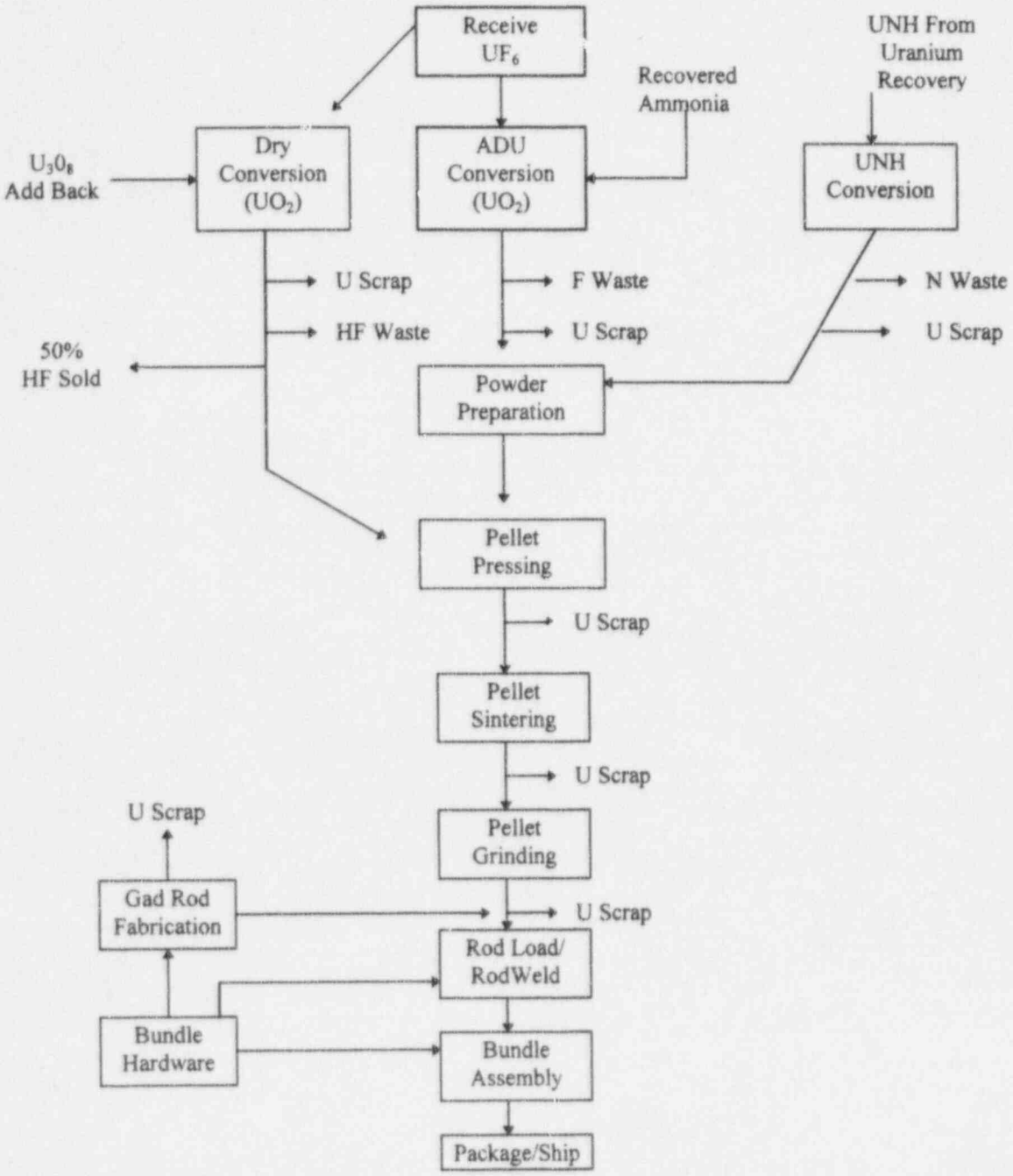


FIGURE 2.6.2
URANIUM RECOVERY

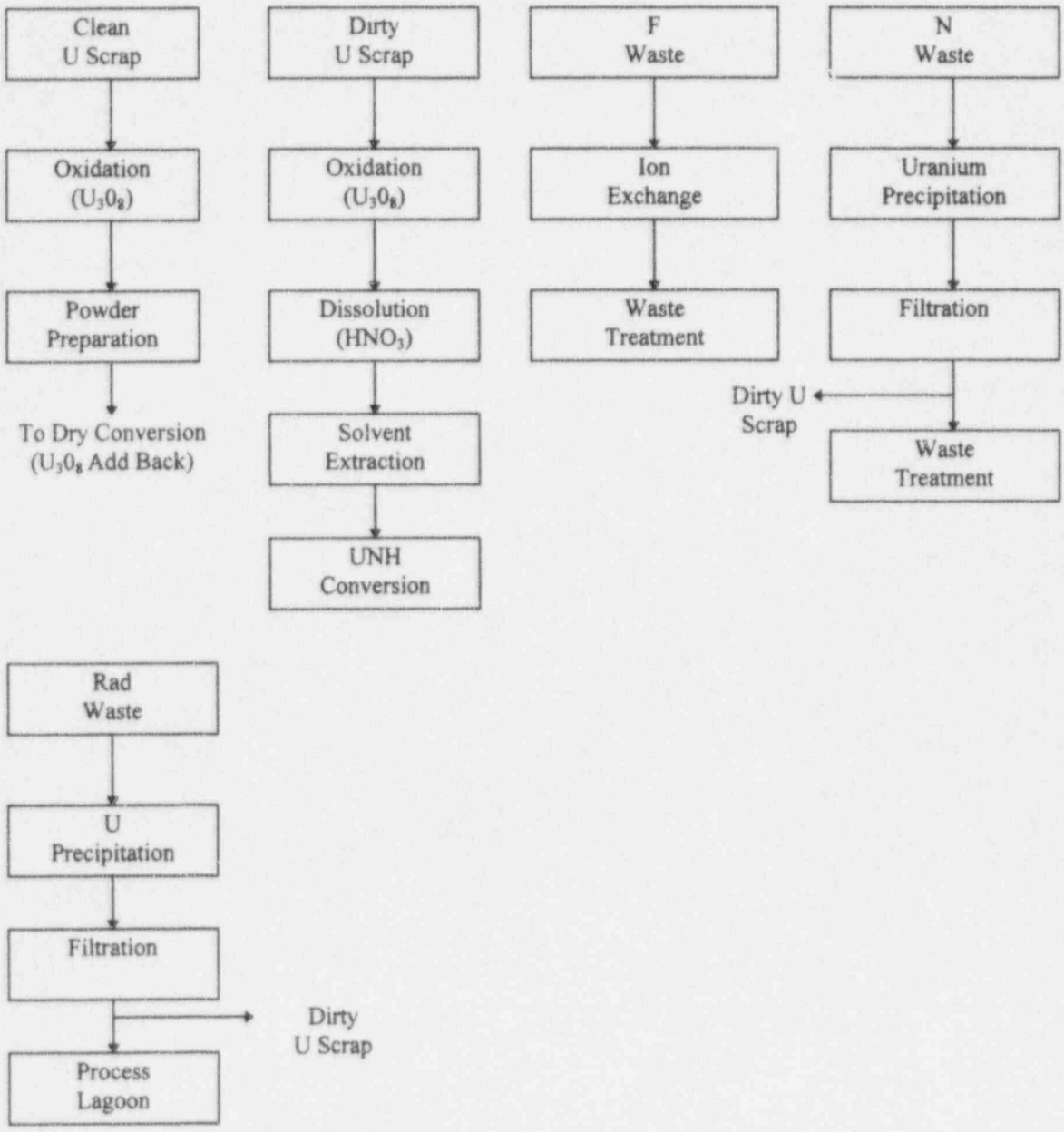


FIGURE 2.6.3
WASTE TREATMENT

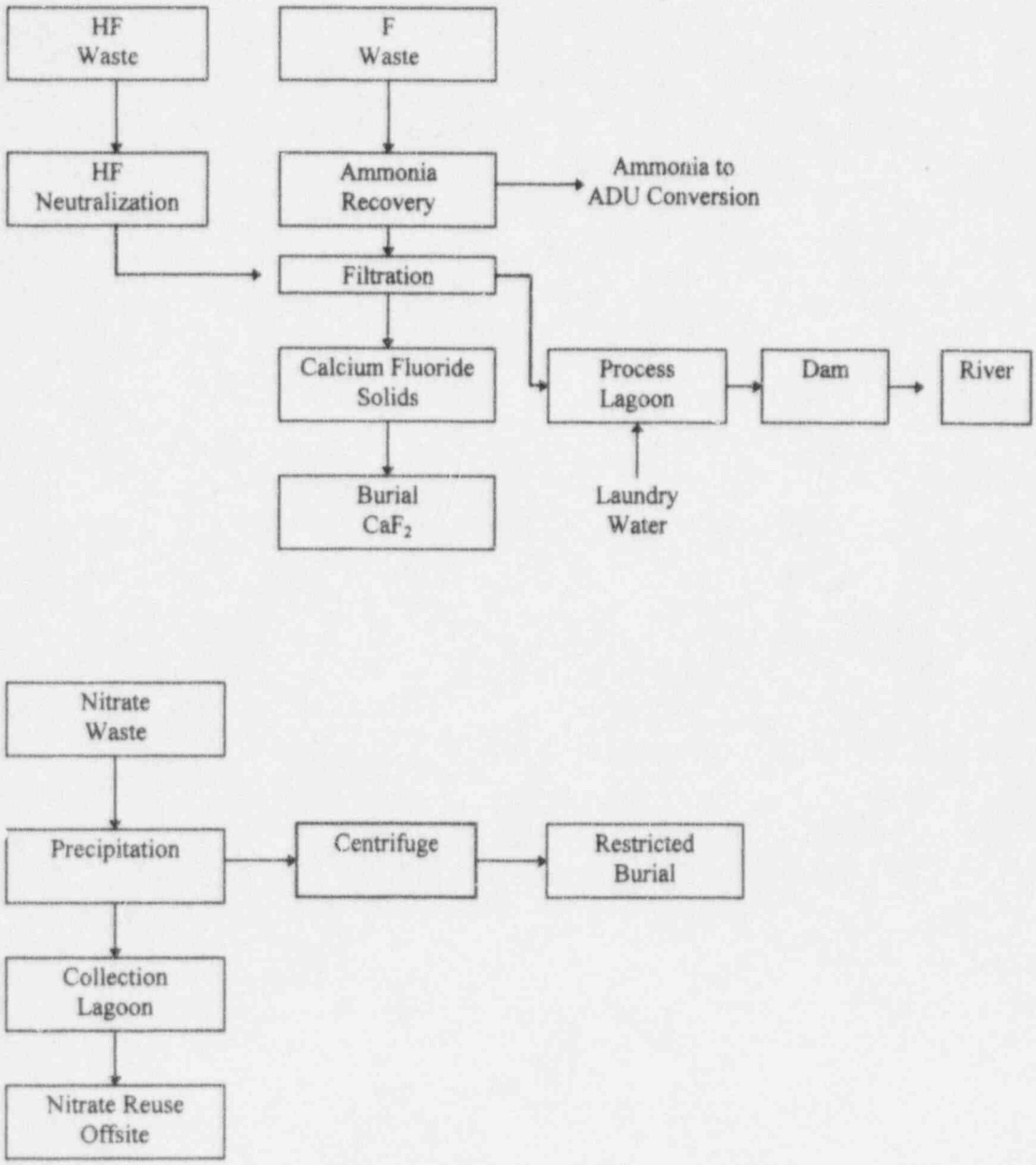
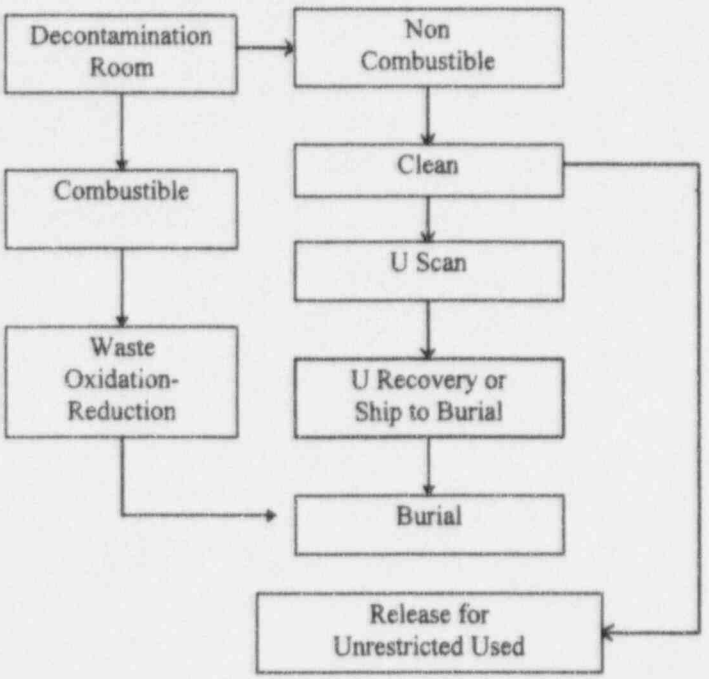


FIGURE 2.6.4
SOLID WASTE



2.2.3 NON-NUCLEAR OPERATIONS

In addition to the fuel manufacturing operations described above, other activities at the site include the manufacture of auxiliary equipment for nuclear reactors, the fabrication of zirconium components for fuel assemblies, and the machining of aircraft engine rotating parts. These activities are typical of conventional metalworking plants and are performed in facilities physically separate from the fuel manufacturing building.

2.2.4 EFFLUENT AND WASTE HANDLING SYSTEMS

2.2.4.1 Storm Waters

A surface drainage system controls storm water runoff. This storm system drains runoff from the site via a natural channel creek, which empties into the Northeast Cape Fear River. This creek lies entirely within the site property.

2.2.4.2 Sanitary Wastes

Wastes originating in washrooms and sanitary facilities are routed to a sanitary waste treatment system. The treated effluent from the system is discharged into the Northeast Cape Fear River.

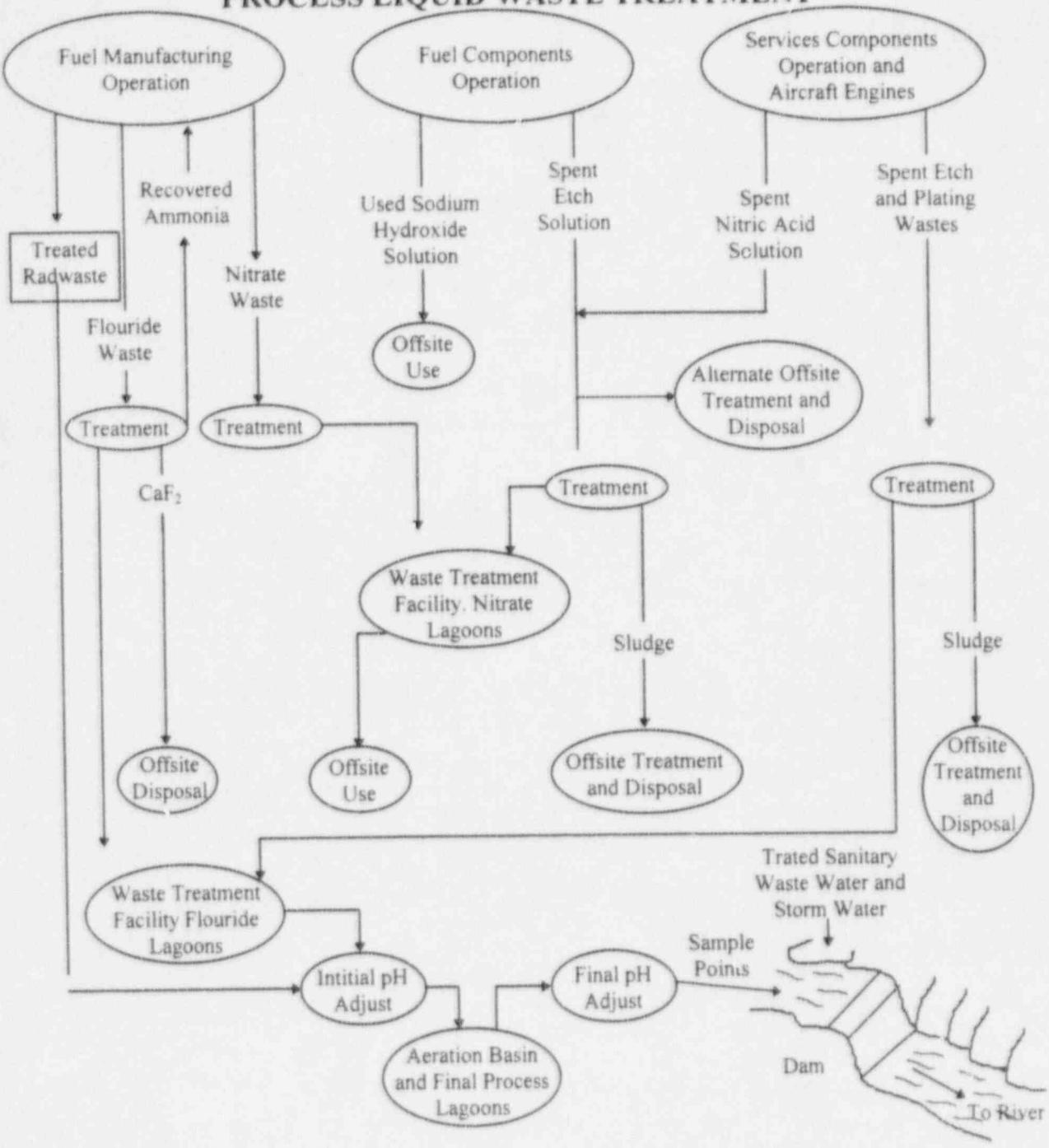
In addition to the main sanitary treatment system, seven small septic tank systems handle sanitary wastes at facilities which are remote from the main buildings.

2.2.4.3 Process Liquid Wastes

Process liquid wastes originating from the site operations are collected and then either treated in the process waste treatment systems prior to release so that the resultant combined discharge to the river meets government regulatory requirements or are sent to a licensed or permitted off-site disposal site. A flow diagram of the process liquid waste treatment is shown in Figure 2.7.

FIGURE 2.7

PROCESS LIQUID WASTE TREATMENT



The waste collection systems are designed to collect chemically compatible wastes for the subsequent treatment processes and to prevent entry of incompatible wastes into these systems.

2.2.5 SOLID WASTES

Waste materials include packaging, used shop clothing, tools, scrap material, and process equipment. Waste material is collected (and stored pending disposal) according to two primary classifications: (1) contaminated with uranium or (2) not contaminated with uranium. The contaminated material is further segregated between combustible and noncombustible.

Contaminated noncombustible wastes (includes filters from the air cleaning system, pumps, motors, valves, metal containers, segments of process piping, various filter and centrifuge sludges) are either decontaminated or collected in boxes for ultimate burial off-site at a low-level radioactive waste disposal facility.

Contaminated combustible items such as wood, paper, cloth, and plastic are reduced to ash in a specially designed and licensed waste oxidation-reduction facility. The offgas is treated by water scrubbing and filtration. The ash is sampled and analyzed for uranium and either reprocessed or buried off-site in a low-level, radioactive waste disposal facility.

Noncontaminated waste materials that are not hazardous are removed by a local waste disposal contractor to an approved sanitary landfill. Non-radioactive waste materials that are hazardous (RCRA) are disposed of by burial in an off-site landfill permitted for handling these wastes.

2.3 OPERATIONAL FEATURES RELEVANT TO DECOMMISSIONING AND CLOSURE

2.3.1 PROCEDURES

Since startup in 1969, GE-Wilmington has established effective operational controls for safety in normal and abnormal situations, many of which could have application to decommissioning activities. Controlled document systems are in place to integrate operational organizations with those responsible for nuclear safety and radiation protection. Administrative procedures and operating instructions constitute a

communication hierarchy which assures that management directives are communicated to individuals at all levels. Procedures provide for personnel, environmental, and nuclear material monitoring for routine and nonroutine operations.

In addition, numerous major facility modifications made since plant startup have resulted in the establishment of procedures and controls for proper conduct of contractor personnel in nuclear activities.

Abnormal operations, not covered by routine procedures, require Radiation Work Permits which specify the special safety requirements for the specific unique work to be done.

2.3.2 ORGANIZATION

Nuclear safety responsibilities are assigned to an organization whose charter includes the engineering and evaluation of criticality and radiological controls for all aspects of the GE-Wilmington business. Ongoing radiation protection activities are carried out by an organization, independent of production, which routinely monitors and reports radiological conditions for all operations in the facility. A traffic/ transportation organization routinely arranges for the safe transportation of nuclear material to customers and disposal sites. Each of the above functions has established operating routines to govern the conduct of work at the plant site to assure safe and compliant operations in routine and nonroutine situations and would be applicable to decommissioning activities.

2.3.3 EQUIPMENT

Air sampling systems and criticality/radiation alarm systems are available to provide information concerning airborne uranium concentration and radiation levels. These systems provide data for radiation exposure evaluations of personnel working inside radiation control areas and continuously monitor the site for a criticality incident.

The fuel manufacturing building air filtration system which consists of HEPA filters and scrubbers provides a high degree of environmental safety and control during plant operations. Stack sampling systems provide continuous monitoring for assurance that no contamination above regulatory limits are released to the environment. These systems will remain operational during decommissioning and closure.

The on-site laundry facility will be maintained to provide cleaning facilities for protective clothing and respirators used during decommissioning and closure activities. Equipment in the laundry also provide the capability for recertifying respiratory protection equipment and filters prior to use as a part of the respiratory protection program.

Radiation protection equipment currently used to measure and evaluate radiological samples will be available during decommissioning and closure.

The GE-Wilmington fire protection system will be available throughout the decommissioning and closure operations. This consists of fire alarm boxes, sprinkler systems, hoses, extinguishers, pumps, and a water supply provided through the site water tower or the emergency fire water pond. Personnel fire protection equipment such as self-contained breathing apparatus (SCBA) equipment and rain gear will be maintained and available. Additionally, fire response capability by outside agencies is available as needed.

The in-plant communication systems consisting of public address, telephone, and radio will be maintained during decommissioning and closure.

CHAPTER 3.0

GENERAL DECOMMISSIONING AND CLOSURE GUIDELINES

The design basis surface contamination levels, which will be used as standards in the decontamination and survey of surfaces of premises and equipment prior to disposal or release for unrestricted use, are listed in Table 3.1. General guidelines for the decommissioning and closure effort will be:

- A reasonable effort will be made to eliminate residual contamination.
- Radioactivity on equipment or surfaces shall not be covered by paint, plating, or other covering material unless contamination levels are below the limits specified in Table 3.1 prior to applying the covering.
- The radioactivity on the interior surfaces of pipes, drain lines, and ductwork shall be determined by making measurements at all traps, and other appropriate access points, provided that contamination at these locations is likely to be representative of contamination on the interior of the pipes, drain lines, or ductwork. Surfaces of premises, equipment, or scrap which are likely to be contaminated but are of such size, construction, or location that the surfaces are inaccessible for purposes of measurement shall be presumed to be contaminated in excess of the limits.
- Special requests may be made to the NRC to authorize the release of premises, equipment, or scrap having surfaces contaminated with materials in excess of the limits specified. This may include, but may not be limited to, special circumstances such as razing of buildings or transferring of premises or equipment to another organization continuing work with radioactive materials.

TABLE 3.1

ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDES[a]	AVERAGE[bcf]	MAXIMUM[bdf]	REMOVABLE[bef]
U-nat, U-235, U-238, and associated decay products	5,000 dpm α/100 cm^2	15,000 dpm α/100 cm^2	1,000 dpm α/100 cm^2
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm^2	300 dpm/100 cm^2	20 dpm/100 cm^2
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm^2	3000 dpm/100 cm^2	200 dpm/100 cm^2
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	5,000 dpm $\beta\gamma$/100 cm^2	15,000 dpm $\beta\gamma$/ 100 cm^2	1,000 dpm $\beta\gamma$/100 cm^2

[a]Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

[b]As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

[c]Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

[d]The maximum contamination level applies to an area of not more than 100 cm^2.

[e]The amount of removable radioactive material per 100 cm^2 of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

[f]The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.

Ref: Guidelines for Decontamination of facilities and Equipment prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material." (NRC, August 1987).

- Special requests may be made to the NRC to authorize special disposal methods pursuant to 10 CFR 20. Such methods may include, but are not limited to, on-site disposal of soil which may contain licensed material in acceptable levels.
- Radiation exposure limits shall be consistent with allowable limits specified in 10 CFR 20, "Standards for Protection Against Radiation."
- Shipments of radioactive materials associated with decommissioning and closure shall conform with the regulations of Title 49 Codes of Federal Regulation for transporting hazardous materials.
- Prior to release for unrestricted use, a comprehensive radiation survey will establish that contamination is within the limits specified in Table 3.1. A copy of the survey report shall be filed with the Director, Division of Low-Level Waste Management and Decommissioning, Office of Nuclear Material Safety & Safeguards, NRC, Washington, D.C. 20555, and the Director of the Regional Office of the Office of Inspection and Enforcement, NRC.
- The site will be closed in a manner that minimizes the need for further maintenance and controls to the extent necessary to protect human health and the environment.
- Independent reviews of the premises will be made to verify that hazardous waste and radioactive contamination have been removed to acceptable levels and that the premises meet regulatory release limits.

CHAPTER 4.0

PLANT-SPECIFIC DECOMMISSIONING AND CLOSURE ASSUMPTIONS

The on-site waste oxidation-reduction facility, the decontamination facility, and the waste uranium recovery operation will significantly decrease the amount of material required for off-site burial at the time of decommissioning and closure. The availability of these facilities and other assumptions which contribute to the decommissioning and closure activities are as follows:

- The plant will have had normal operations in the interim prior to decommissioning and closure, i.e., no unplanned events have occurred to perturbate the condition of the facility at the time of decommissioning and closure.
- All in-process production uranium will have been removed from the site prior to the initiation of decommissioning and closure activities.
- By the time decommissioning and closure of the plant will take place, the NRC will have established by regulation de minimus levels of special nuclear material (low-enriched uranium, specifically) authorized for transfer to recipients not specifically licensed by the NRC and acceptable residual levels of SNM in soil.
- An off-site facility will be available to accept uranium during decommissioning and closure.
- Off-site, low-level radioactive waste burial facilities will be available.
- Decommissioning and closure activities will be performed by personnel familiar with plant operations and radiation protection procedures.
- Safety control practices in place for plant operations will be utilized for decommissioning and closure activities.
- Non-contaminated equipment and facilities will be disposed of by standard corporate practices.
- Dismantling will be programmed and time phased to maintain waste oxidation-reduction, decontamination and uranium recovery capabilities for as long as required.

- Uranium-bearing sludges which are incompatible with the uranium recovery process will have been removed or handled prior to the commencement of decommissioning and closure activities.
- A11 hazardous waste will be removed to eliminate the need for long-term monitoring.
- Decommissioning and closure activities will result in NRC and EPA approval to use the site for unrestricted, non-nuclear purposes.
- Decommission and closure activities will include reevaluating the latest technology for decontamination techniques and equipment in order to utilize those features that are the most cost effective and efficient.

CHAPTER 5.0

DECOMMISSIONING AND CLOSURE ORGANIZATIONAL STRUCTURE

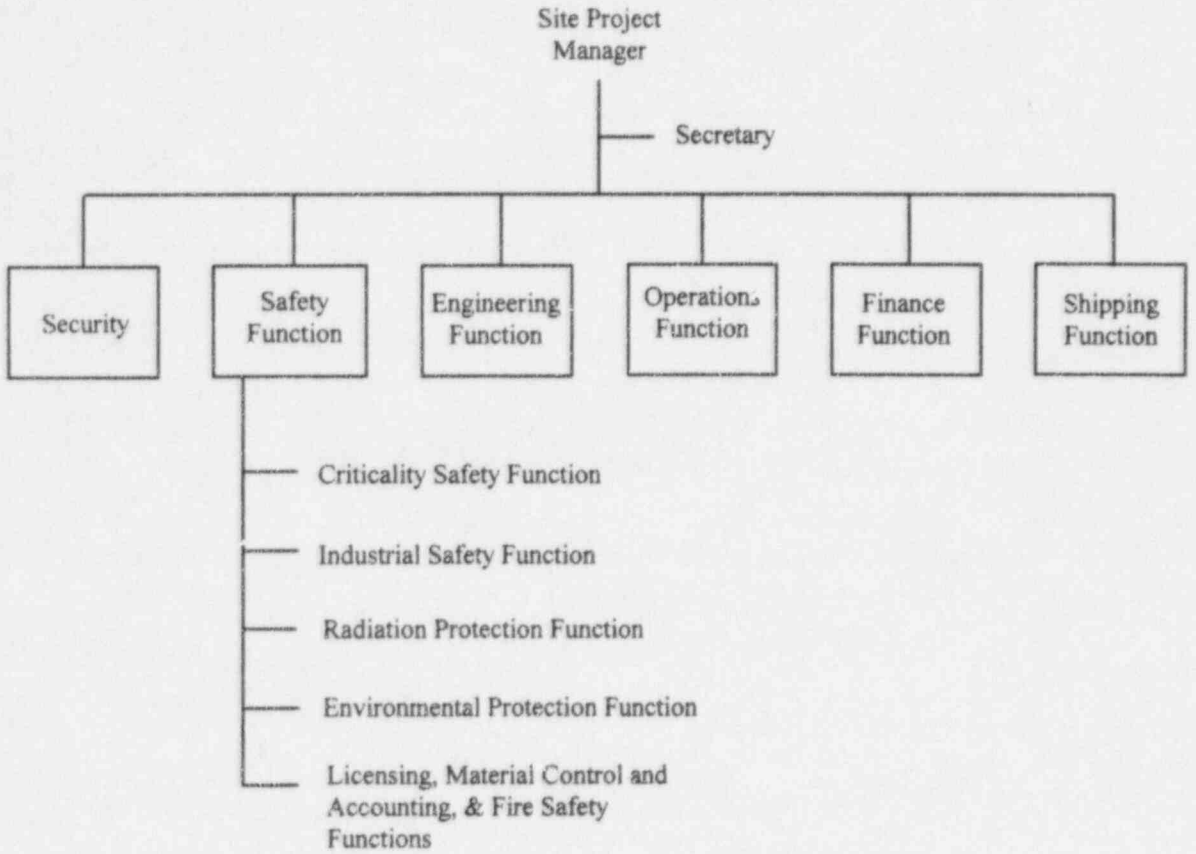
Although plant personnel will perform the decommissioning and closure task, the organization structure during decommissioning and closure will differ from the current production-oriented structure. The work will be accomplished under a project manager who will have key experienced professional support in safety related areas, safeguards, shipping, environmental protection, security, planning and operations. A typical site organizational structure identifying the functions planned for decommissioning and closure is provided in Figure 5.1.

Important functions that will be available throughout the decommissioning and closure operations are:

- The site project manager will have overall responsibility for all facets of the operation. The project manager will be responsible for assuring that the various facets of decontamination, material handling, dismantlement, shipping, and final clean-up are done orderly, safety, and completely.
- The safety function will have responsibility for the following activities; environmental, criticality safety, radiation protection, industrial safety and licensing, material control and accounting, and fire safety activities.
- The criticality safety function will be responsible for criticality safety of the uranium removal process and activities where uranium will be collected, stored or recovered.

FIGURE 5.1

SITE ORGANIZATION FOR DECOMMISSIONING AND CLOSURE (TYPICAL)



- The radiation protection function will be responsible for exposure control and radiological safety parameters for the work being performed. An in-vivo lung counting facility will be used as a part of a comprehensive bioassay program to provide internal monitoring capabilities for total dose assessment.

  The radiation protection function will be responsible for working-area measurements to assure the radiation safety of employees by determining the cleanliness (lack of radioactive contamination) of materials, by conducting contamination measurements of shipments, and by nuclear release of materials to sell or use elsewhere.

- The licensing and material control and accounting functions, will be responsible for bookkeeping activities for any uranium inventory generated during the decommissioning and closure activities in addition to associated licensing activities.

- The environmental protection function will be responsible for evaluating sample analyses to assure the protection of the health and safety of the public. It will assure that samples are taken and analyzed, and nondestructive measurements are made as required to verify that release criteria limits have been met for hazardous and other non-radioactive materials.

- Industrial safety will be responsible for overseeing the industrial safety of operations which include equipment usage and operations, air quality, protective equipment, and for coordinating efforts of outside support agencies (fire, police, and hospital) in the event of an emergency.

- The operations function will be responsible for all operational activities which involve contractors, maintenance and craft employees. It will report directly to the project manager and will be responsible for assuring that decommissioning and closure is carried out as planned.

- The shipping function will schedule trucks, coordinate loading, provide documentation, and arrange for shipments of materials to the various sites and burial facilities.

- The engineering function will be responsible for decontamination and decommissioning processes, including effluent treatment processes, facilities upkeep, and operation of the HVAC systems during decommissioning and closure activities.

- The finance function will handle worker payroll cards, purchases, contracts, and the overall financial status of the operation.

- A security force will be available to provide security to equipment and for controlled access to the site while decommissioning and closure is underway.

CHAPTER 6.0

DECONTAMINATION, DISMANTLEMENT AND CLEAN-UP METHODOLOGY

Archival records of modifications and/or incidents relative to radioactive or hazardous materials contamination will be reviewed to identify additional information important to the decommissioning and closure activities.

6.1 WET URANIUM PROCESS AREAS

There are a number of areas where uranium has been processed in liquid solutions such as the ADU conversion process (from UF_6 vaporization through hydrolysis, centrifuging and calcination), the rad waste system, the centrifuge room at the waste treatment facility, the decon facility, the uranium recovery system, uranium liquid transfer systems, sludge recovery systems, and the waste oxidation-reduction facility.

Elements of the wet uranium processing areas will include, but may not be limited to, the following types of equipment, materials and items:

Containments & Hoods	Process Equipment
Curbing	Pipes
Drains	Pumps
Filters	Resins
Floor Grating	Scrubber Systems
Hoses	Sludges
Pipes	Tanks

All items, such as carts, work tables, buckets, etc., that are not needed for the decommissioning and closure process will be removed, transferred to the decon room for decontamination or placed in containers for off-site burial. The removal and decontamination sequence for wet uranium process areas is shown in Figure 6.1.

The plan for decontamination of the wet uranium process areas will be to first remove the equipment. Particular attention will be given to process lines where material could be held up. Recovered material will be processed in the waste management system until dismantlement of that system is required. All curbing will

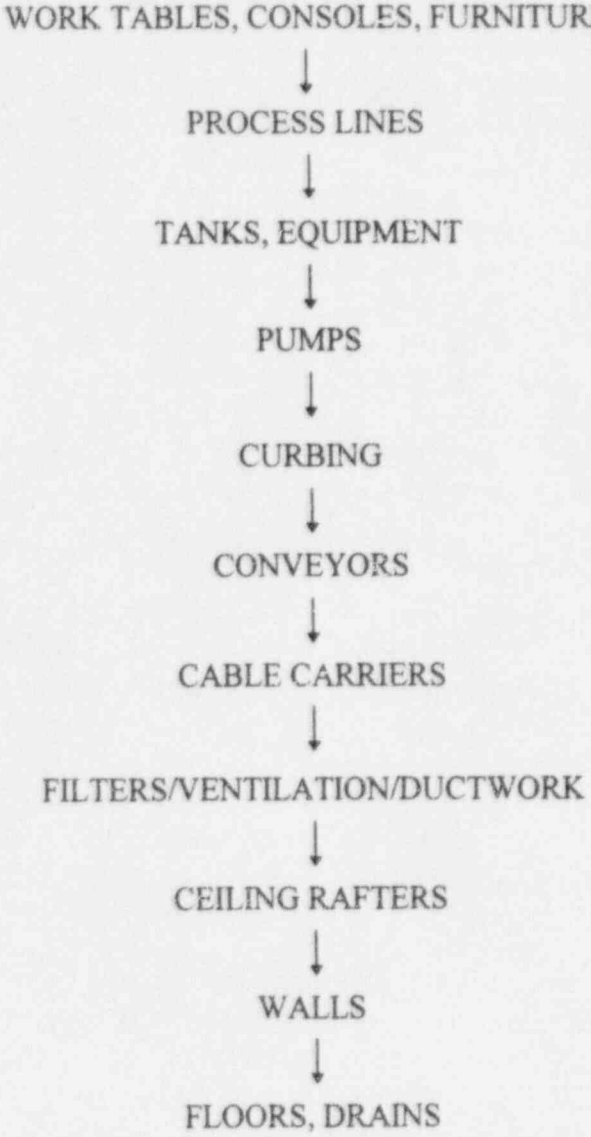
be kept intact until the potential for spillage is removed thus minimizing the spread of contamination. Work will then progress from areas with the greatest potential for contamination to areas with the least potential for contamination.

Piping will then be removed and, based upon the economics of decontamination versus burial, will either be moved to the decon room for uranium recovery or placed in containers for off-site burial.

Tanks, columns, resin containers containing uranium will be internally cleaned to the extent possible to recover material, reduce the volume of uranium, and prepare the item for disposal. In some cases it will be necessary to reduce the volume of containers by sectioning them with torches. Attention will be paid to potential airborne material; evacuation of containments with portable trunks and blowers, and respiratory equipment will be used as appropriate. Equipment such as the centrifuges, dump stations, and containments will be dismantled and transferred to the decon room for cleaning. After an initial evaluation, a determination

FIGURE 6.1

REMOVAL AND DECONTAMINATION SEQUENCE FOR WET URANIUM PROCESS AREAS (TYPICAL)



will be made whether to fully decontaminate it for reuse, ship to another licensee, or prepare it for off-site burial. Conveyors, cable racks, elevators, and other like materials will be similarly dismantled and decontaminated as appropriate.

After stripping the inside of the area, work will commence on building utilities and shell. Overhead piping, conduit, lights, etc. will be decontaminated or removed. Ventilation ductwork will be removed when appropriate, maintaining negative pressure until decontamination efforts in the area are complete. The ceilings, walls, and floor will be washed, chipped, scraped and/or removed until acceptable release limits achieved.

6.2 DRY URANIUM PROCESS AREAS

These are areas where UF_6 is first reacted with steam to form UO_2 powder. This powder is subsequently blended and granulated. Also scrap is collected and sent to dry recycle or URU for processing into forms suitable for direct recycle or for feed to the uranium recovery process. Elements of dry uranium process areas will include, but not be limited to, the following types of equipment, materials and items:

- Reactor Systems
- Blenders
- Powder Storage Containers
- Can Storage
- Carts
- Containments
- Conveyors
- Desk/Work Tables
- Dump Stations
- False Ceilings
- Filters
- Furnaces
- Tanks and Lines
- Hand Trucks
- Pellet Presses
- Sifters
- Granulators
- Electrical Control Cabinets
- Ventilation Ductwork

The plan for decontamination of the dry uranium process areas is to remove and decontaminate the most contaminated items first, working from the most to least contamination, maintaining all safety related items, such as ventilation, air monitoring, and radiation monitoring, through the last phase of decontamination. The removal and decontamination sequence for dry uranium process areas is shown in Figure 6.2.

As with the wet uranium process equipment, after an initial evaluation, a determination will be made whether to fully decontaminate, ship to another licensee,

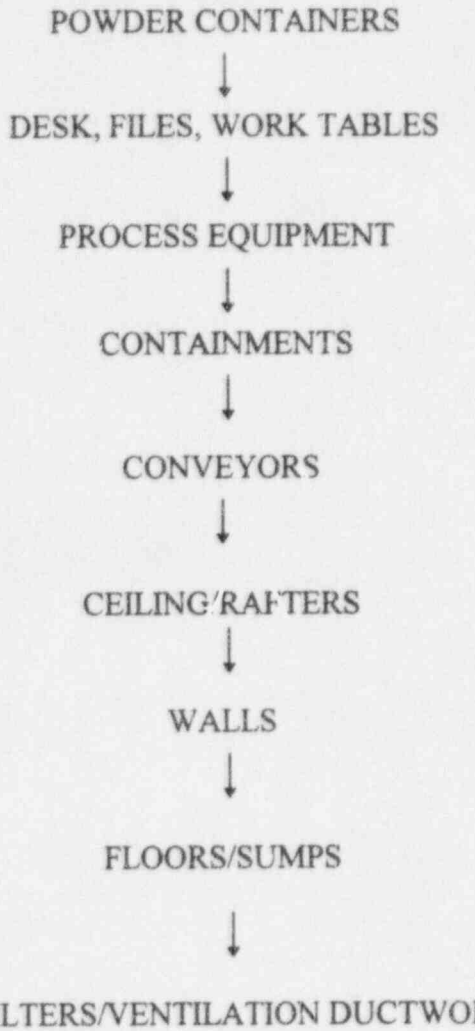
or prepare the item for off-site burial. Large equipment to be scrapped will be dismantled and/or sectioned to facilitate decontamination or burial.

The decontamination and disposal sequence for dry uranium process areas is shown in Figure 6.3.

All ceiling structures (e.g., beams, support members, conduit, light fixtures, and sprinkler lines) will be systematically evaluated for contamination and cleaned or removed as necessary. It is anticipated that extensive surveys will be required to evaluate the effectiveness of decontamination activities. Materials or structures found that cannot be cleaned to acceptable release limits will be removed and buried as contaminated.

FIGURE 6.2

REMOVAL AND DECONTAMINATION SEQUENCE FOR DRY URANIUM PROCESS AREAS (TYPICAL)



Decontamination efforts on concrete floors will be directed towards anchor holes, crevices and cracks in the floor and towards areas with higher levels of contamination. Concrete flooring will be removed as necessary to achieve acceptable release limits. Walls will be cleaned and/or removed as necessary to achieve acceptable release limits.

6.3 INDOOR CONTAINED-URANIUM PROCESS/STORAGE AREAS

There are areas inside the buildings where radioactive material is stored and/or handled in sealed containers. Typically these areas are rod storage, bundle assembly, bundle, powder, and pellet packing, site shipping and site receiving. Fuel rods and fuel bundle assemblies are processed or stored in the fuel bundle area prior to shipment. In the powder/pellet packing areas, sealed cans of powder or pellet boxes are stored prior to shipment. Shipping and receiving areas include inspection, loading, and unloading facilities. The integrity of the fuel product handled in these areas is such that the probability of contamination is negligible and not expected. None of these areas are generally contaminated as proven by routine survey programs which monitor for contamination on containers, vehicles, and work areas.

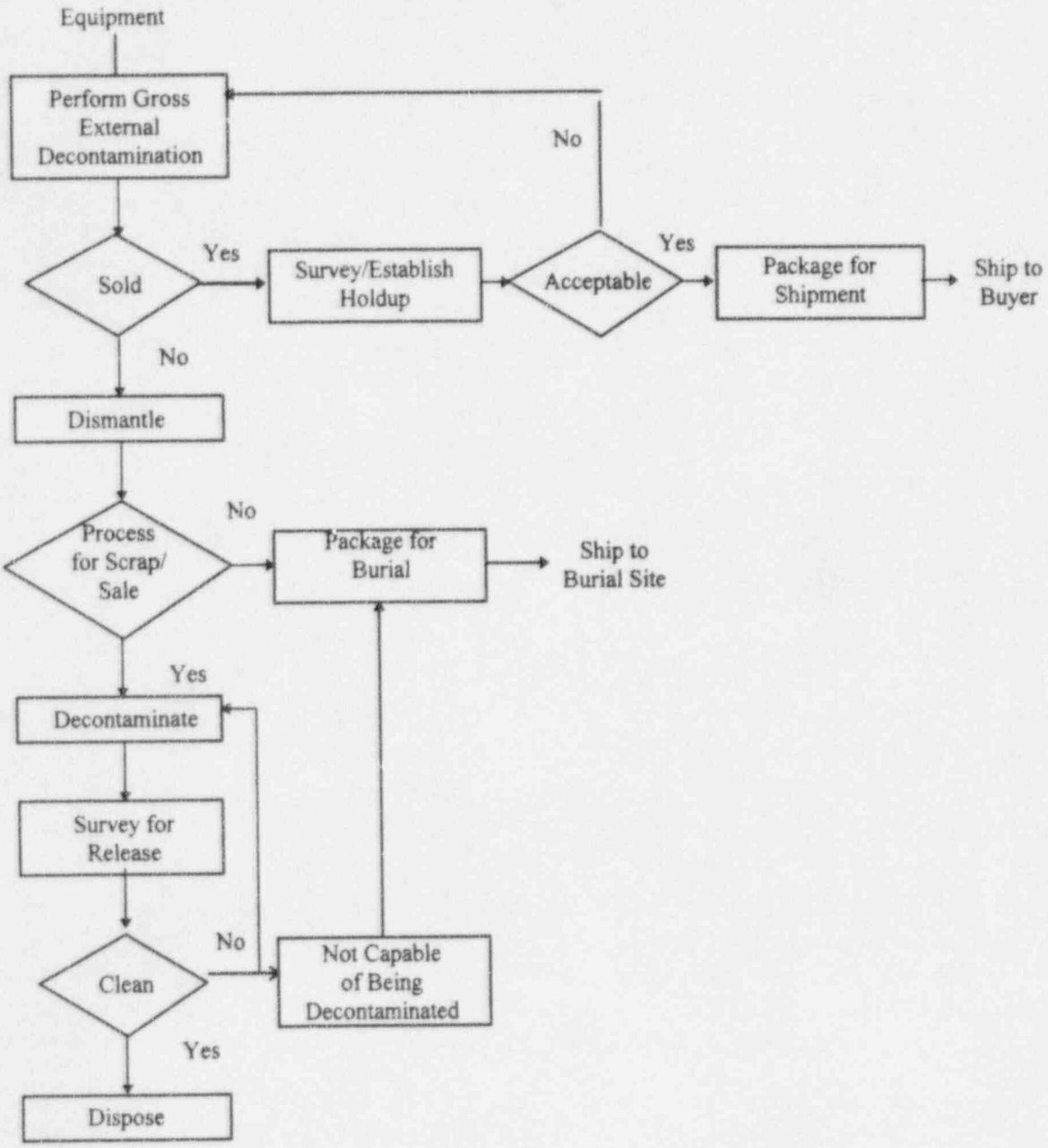
Elements of an indoor contained-uranium process/storage area may include the following equipment, materials and items:

- Barrels
- Fixtures and Tools
- Fork Lifts
- Inner Containers
- Insulating Material
- Lift Straps
- Outer Containers
- Overhead Cranes
- Pallets
- Process Equipment
- Scales
- Locking Rings

The areas will have been cleared of packed powder, pellets, fuel rods, bundles, and other radioactive materials prior to the beginning of decommissioning activities. Systematic radiation and contamination surveys will be made to verify the absence of contamination or that it is below release limits. The decontamination and disposal sequence for indoor contained-uranium process/storage areas is shown in Figure 6.4.

FIGURE 6.3

DECONTAMINATION AND DISPOSAL SEQUENCE FOR DRY URANIUM PROCESS AREAS (TYPICAL)



6.4 OUTDOOR CONTAINED-URANIUM STORAGE AREAS

There are areas outside the buildings where containers with uranium are stored. Normally these areas consist of asphalt or marl pads containing (1) boxes of material to be sent to burial sites, to be processed at the waste-oxidation reduction facility, or being stored for later use, (2) 55-gallon drums of waste, oil, etc., awaiting disposal, (3) shipping containers of fuel bundles, pellets and powder, (4) 3 or 5-gallon cans of scrap powder, and (5) UF_6 cylinders.

Elements of an outdoor contained-uranium area may include, but may not be limited to, the following types of equipment, materials and items:

- 3 or 5-Gallon Cans
- 55-Gallon Drums
- BU Type Drums
- Chocks
- Cylinders
- Hard Surfaces (Asphalt)
- Marl Surfaces
- Metal Shipping Containers
- Sea Vans
- Tie Downs
- Wooden Pallets
- Wooden Shipping Containers

All containers of material stored on outdoor pads are designed to prevent or minimize the potential for leakage. Liquids are stored in lined cans, lined metal drums or plastic drums; UF_6 is stored in shipping cylinders; and dry contaminated materials are stored in plastic bags within wooden or metal containers. The storage pad areas are routinely surveyed to monitor for contamination and, if contamination is found, it is immediately cleaned up. Protective clothing is not worn when moving materials on the storage pads.

The storage areas will be cleared of all containers as indicated in Figure 6.5. Surveys will be performed with instrumentation capable of detecting surface contamination above release limits. In addition, core samples will be taken at intervals across the pads and around its edge into the soil to monitor for any contamination. Prior to release of the pads, contamination will be reduced to releasable levels or recovered and shipped for burial.

FIGURE 6.4

DECONTAMINATION AND DISPOSAL SEQUENCE FOR INDOOR CONTAINED-URANIUM PROCESS/STORAGE AREAS (TYPICAL)

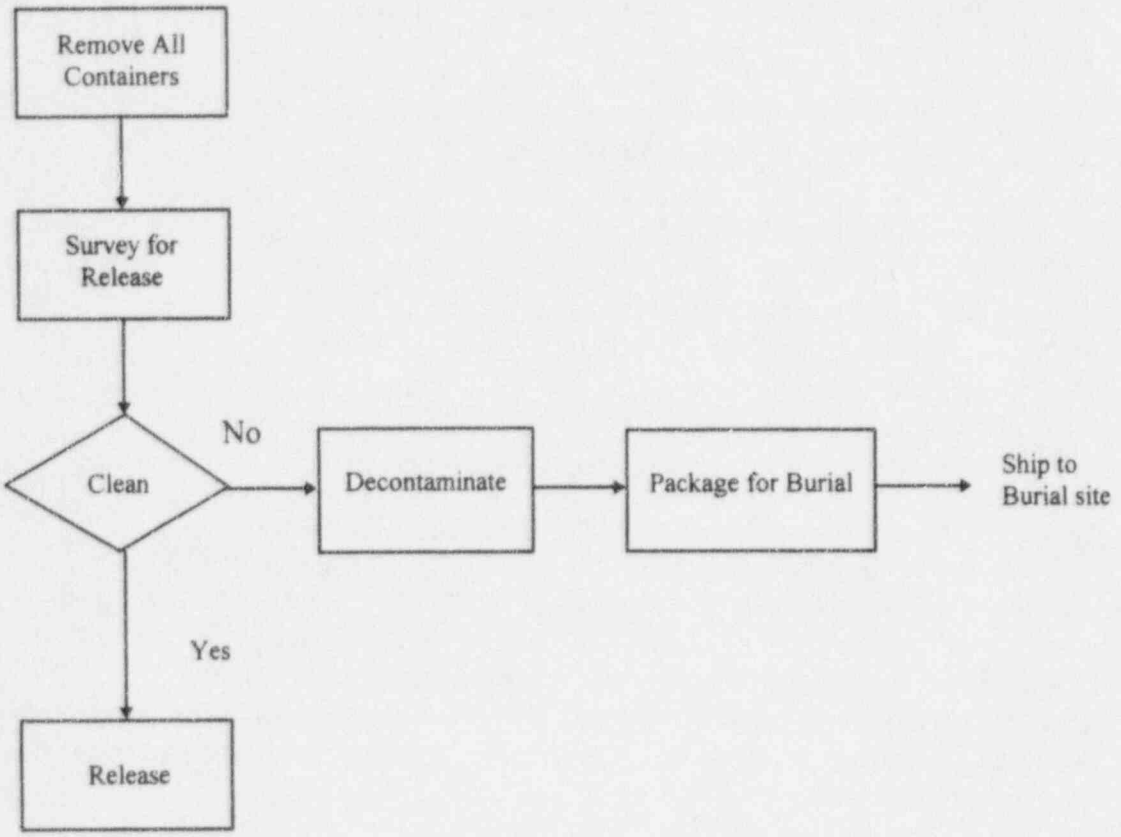
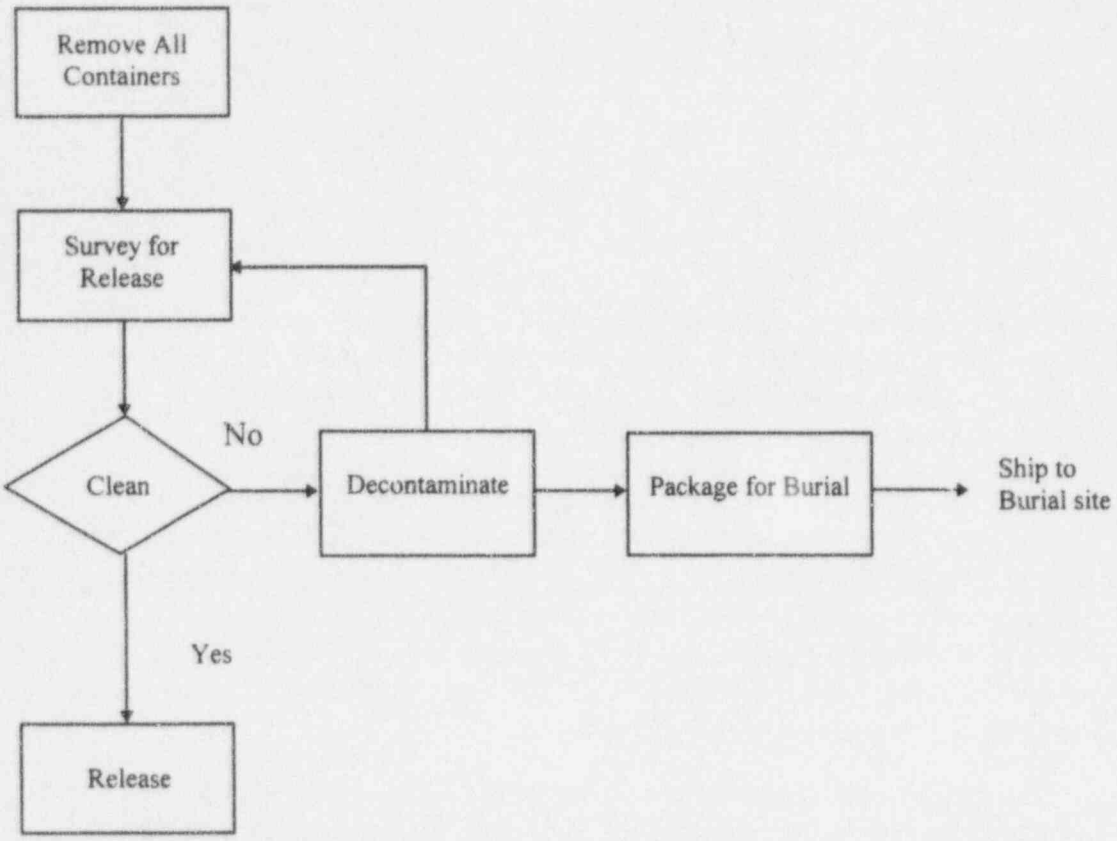


FIGURE 6.5

DISPOSAL SEQUENCE FOR OUTDOOR CONTAINED-URANIUM STORAGE AREAS (TYPICAL)



6.5 URANIUM-BEARING PROCESS/STORAGE TANK AREAS

These areas contain large storage tanks and are located near the fuel manufacturing building, at the waste treatment facility and within the uranium process areas. In these areas uranium-bearing liquid material is treated, stored or processed.

Elements of a uranium-bearing process/storage tank area may include the following equipment, materials or items:

- Curbing
- Dry Wells
- Manholes
- Piping
- Pumps
- Sumps
- Storage tanks (up to 100,000 gal)
- Valves

Normally the tanks are filled with liquids containing trace concentrations of uranium. These tanks will have been emptied as far as practical prior to the start of decommissioning and closure activities. A vessel will be identified and used to handle liquids generated during the decon process.

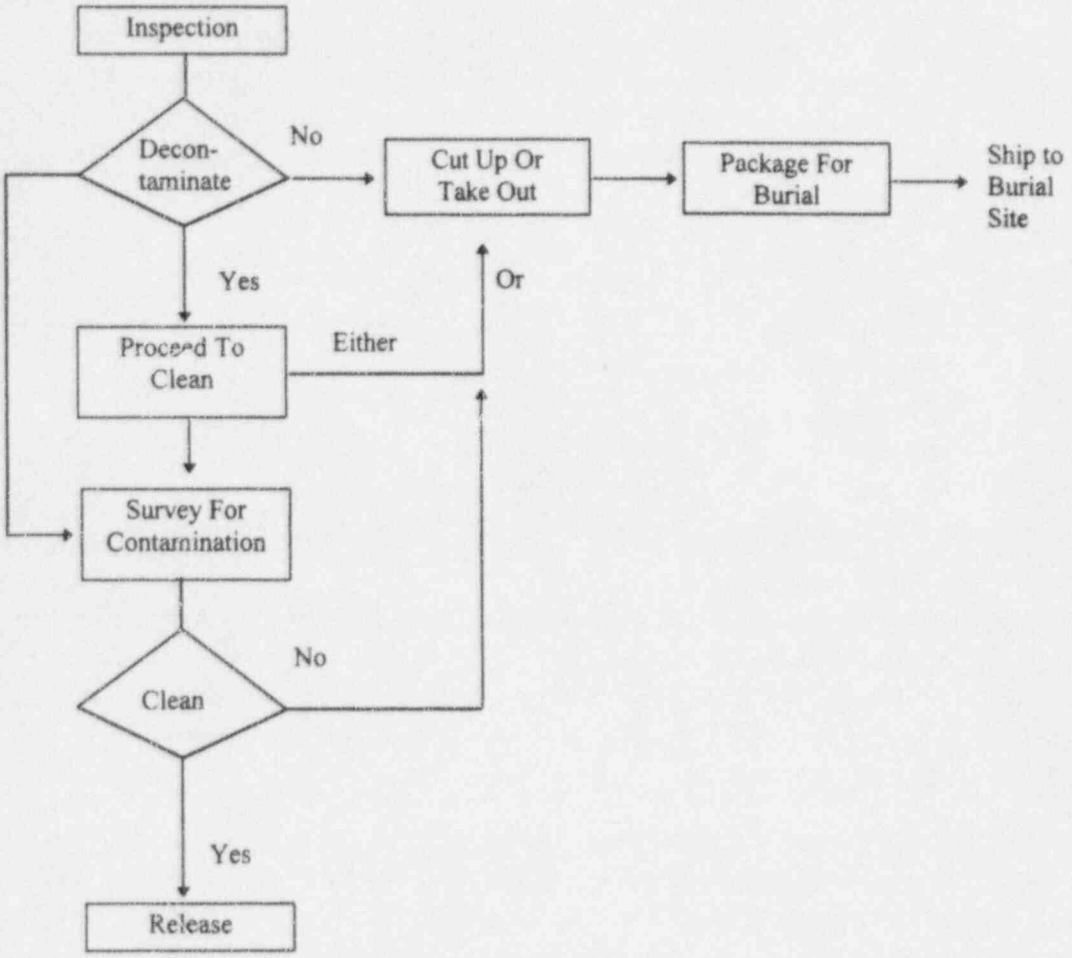
When work begins on these tanks the inspection ports will be opened and an evaluation will be made whether the tanks may be decontaminated or whether dismantlement is necessary. The clean-up sequence will be from the process tanks to the pumps and piping, and will end with the tanks at the waste treatment facility. This will preserve the capability to treat cleaning solutions used in the decommissioning and closure activities. The decontamination and disposal sequence for process/ storage tanks is shown in Figure 6.6.

If possible, decontamination efforts will permit the tanks to be kept intact. Sensitive radiation instruments will be used and swipe surveys will be made to assess the effectiveness of decontamination efforts, to provide information for estimating the relative value of continued decontamination efforts or to establish that the tanks may be released.

It is probable that piping will be sectioned, cleaned and then packaged for burial. Cutting, cleaning, and packaging will be performed under the cognizance of the radiation protection function to provide continued evaluation to assure the

FIGURE 6.6

DECONTAMINATION AND DISPOSAL SEQUENCE FOR PROCESS/STORAGE TANKS (TYPICAL)



radiological safety of the workers, to prevent any spread of contamination, to evaluate the effectiveness of the cleaning operations, and ultimately to release the area.

6.6 URANIUM-BEARING LAGOON AREAS

There are lagoons on the plant site which contain uranium-bearing liquids and sludges. The liquids, which have been treated in the waste treatment facility prior to release to the lagoons, contain very low-level concentrations of uranium. The resultant sludges should be removed prior to commencing decontamination.

Elements of a uranium-bearing lagoon area may include some of the following equipment, materials, and items:

Asphalt Liners	Pumps, Valves and Controls
Buried Pipes	Safety Lines
Fencing/Covers	Safety Rings
Floats	Uranium-Bearing Sludge
Liners	and Liquid
	Sludge Processing Equipment

The pipelines, pumps, and other equipment associated with the lagoons will be thoroughly flushed chemically and rinsed with water. Pipes, pumps, and valves will be disposed of where contamination cannot be accomplished or the item cannot be verified to be "clean." Other items such as the safety lines, floats, rings, and fence covers will be appropriately disposed of after removal.

The lagoons will be emptied and flushed with water or cleaning solutions. After cleaning, the liquids will be allowed to evaporate. The sludge remaining in the lagoons will be stripped, stored for on-site uranium recovery and/or neutralized and disposed of in a manner authorized by the NRC. The Hypalon liners will be cleaned with high pressure water and detergent, and rinsed. Sections that cannot be decontaminated to release levels will be removed and prepared for burial or waste oxidation-reduction, or disposed of in a manner authorized by the NRC. Soil under the lagoons will be tested for uranium contamination and removed, if necessary, for burial. Material and liquids collected while cleaning the lagoons could be evaporated and solidified, and stored in containers for burial. In all cases the material will be assayed to determine contamination levels.

Soil may be brought in to backfill the excavations and contour the areas. Lagoons involving radioactive materials or hazardous waste will be treated in a like manner.

The decontamination and disposal sequence for the uranium-bearing lagoons and equipment is shown in Figure 6.7.

6.7 HAZARDOUS WASTE MATERIAL AREAS

Hazardous waste materials, as defined by RCRA, are liquids, solids or sludges which pose a potential threat to the public health and safety if released to the environment. Undesirable characteristics of hazardous waste are: corrosiveness, toxicity (metals), ignitability, and reactivity.

The GE-Wilmington RCRA program has identified hazardous waste areas and has established control procedures to monitor on-going storage, treatment and shipment activities.

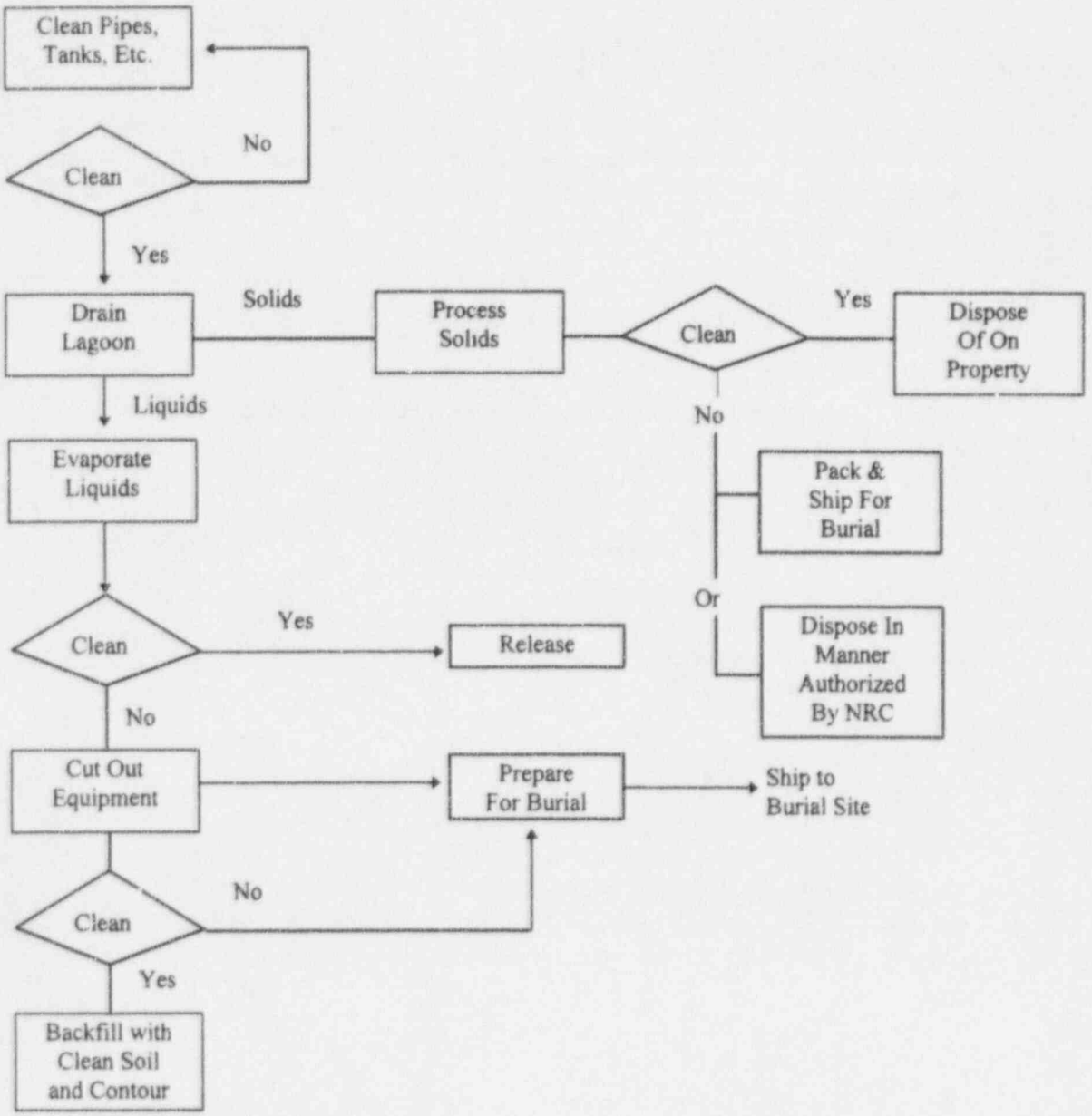
Elements of a hazardous waste material area include the following equipment, materials and items:

Storage Tanks
Portable Transfer Tankers
Pumps, Valves, Controls
Small Storage Drums or Reservoirs at Generation Point
Process Area Where Chemicals Are Used
Protective Wet Gear
Fencing
Spill Containment

Prior to initiating decommissioning and closure activities, all hazardous wastes will be shipped off-site for disposal. Storage tanks will be cleaned for reuse or dismantled for shipment off-site to an appropriate disposal site. All equipment at generation stations will be cleaned and made available for other uses as deemed appropriate.

FIGURE 6.7

DECONTAMINATION AND DISPOSAL SEQUENCE FOR THE URANIUM-BEARING LAGOONS AND EQUIPMENT (TYPICAL)



CHAPTER 7.0

RADIOLOGICAL AND INDUSTRIAL SAFETY

During decommissioning and closure activities, employee exposures and potential release pathways will be controlled and monitored in accordance with internal procedures, license conditions and regulatory requirements. Many aspects of current programs used for production will be maintained.

The criticality monitoring system which provides real-time monitoring wherever bulk quantities of uranium is handled or stored on the plant site will continue to be operationally maintained to assure that the system will provide an alarm in the unlikely event a criticality occurs. The system currently provides remote readout capability at the emergency control center which will remain active as long as the monitoring system is needed. An interim emergency response plan will be prepared prior to the start of the decommissioning and closure activities.

A centralized air sampling system is currently used to monitor airborne uranium concentrations in the fuel manufacturing controlled areas. This system will be modified as appropriate and used to monitor routine and abnormal activities as necessary. Removal of this system will be delayed until only the shell of the building remains and the potential for airborne uranium approaches zero.

Another safety system which will be essential during decontamination is the fire alarm system with fire alarm boxes strategically placed throughout the site. Once triggered, the system currently sends out a coded alarm which identifies the area of the fire. Activities during decommissioning and closure such as cutting, dismantling and nonroutine trash accumulation will make this safety system essential.

Necessary environmental monitoring programs established during the operation of the plant will continue during the decommissioning and closure activities to assure that contaminants are being contained. Samples currently are taken at the stack release points, from soil around the site, at the dam or discharge point, and from wells around the site. These samples will be analyzed for specific contaminants. A history of data has been generated to provide a reference point for the evaluation of the effectiveness of the environmental monitoring program during decommissioning and closure.

Radiation exposure to employees will be monitored through existing programs, such as issuance of personnel monitoring devices, air sampling of airborne contamination, and routine bioassays. These programs will continue to be maintained to meet the regulatory requirements specified in 10 CFR 20, "Standards for Protection Against Radiation."

Employees trained in radiation protection practices and contamination control techniques will perform decontamination activities. Protective clothing utilized in the facility will be available in sufficient quantities to allow for personnel contamination control. Various types of respirators will be available to provide the degree of protection necessary for the decontamination job being performed ranging from half-mask respirators to supplied air hoods or masks.

For jobs requiring dismantlement of heavily contaminated items, isolation tents with portable blowers and HEPA filters may be utilized. Tenting techniques may also be employed for decontamination activities where significant dusting potential exists.

CHAPTER 8.0

GENERAL DECONTAMINATION AND CLEANING METHODS

Removal of radioactive material from contaminated surfaces will be accomplished in three ways: (1) physical cleaning of the surface, (2) using chemicals to dissolve surface films containing radioactive materials or (3) removing the surface of the structure itself.

Physical cleaning methods include sweeping, vacuuming, handwiping, sandblasting, and washing with various cleansing agents. Chemical decontamination methods use acid or basic solutions to dissolve residual contamination from surfaces; this technique is usually applied to wet processing systems, such as pumps, piping, storage tanks, etc. If physical cleaning and chemical decontamination techniques do not reduce contamination levels on equipment and/or building surfaces to acceptable radioactivity release levels, or are unfeasible, it will be necessary to either use more extensive methods, such as sandblasting or scraping that physically removes surface layers, or to remove the item for burial.

Removal of contamination from sealed porous surfaces, such as painted walls and floors, asphalt, tank exteriors, etc., will be accomplished using a variety of techniques. For loose contamination, vacuuming or simple sweeping compounds are often effective. For more difficult contaminations, various cleansing compounds combined with handwiping, handscrubbing, and/or power scrubbing techniques will be utilized.

Degreasing agents may be used in removing contamination films from surfaces. Organic solvents have an advantage of not being corrosive to equipment and electrical connections.

Variable pressure, high or low-velocity liquid jets can be effective for some types of decontamination work. The device can be operated by one person, at pressures up to 30,000 psi, using a hand-held jet lance Typical tools and equipment used for dismantlement and decontamination are listed in Table 8.1.

Chemical solutions identified as decontamination agents and compatible with the available waste treatment processes and with materials used in the system may be used during decontamination. Consideration will be given to cost and environmental impact.

Concrete surfaces in the plant which are contaminated to a depth of a few centimeters and that cannot be decontaminated to an acceptable release level by surface wiping or washing techniques will be physically removed and packaged for disposal. Several criteria will be considered in selecting a concrete removal method. The selected method will facilitate control of airborne contamination and minimize the potential for personnel exposure to radioactivity. The size and weight of removed materials will be controlled to facilitate packaging and shipping for disposal.

TABLE 8.1

TYPICAL TOOLS AND EQUIPMENT FOR DISMANTLEMENT

Oxyacetylene Torch
Guillotine Pipe Saw
Tube Cutter
Ratcheting Pipe Cutter
Reciprocating Saw
Nibbler
Assorted Tools (Impact Wrenches, Bolt Cutters, etc.)
High-Velocity Liquid Jet
Low-Velocity Liquid Jet
Hydraulic Concrete Surface Spalling Device
Concrete Drills
Electric/Pneumatic Hammers
Portable A Frames
Portable Wash Tanks
Portable Greenhouse Erection Kit
Portable Spray Cleaning Booth
Portable Power Brushes
Portable Abrasive Blasting Unit

CHAPTER 9.0

WASTE MANAGEMENT

Large quantities of contaminated material will have to be removed during the decommissioning and closure of the plant. If these materials cannot be treated or decontaminated to acceptable levels, they will be properly packaged and shipped to an authorized disposal site or disposed of in a manner authorized by the NRC.

Contaminated waste materials that will be generated during decommissioning and closure include:

Process equipment, tanks, and hoods, Piping, ducts, and fixtures
HEPA and roughing filters
Concrete rubble
Lagoon liners
Soil
Misc. noncombustible materials (pumps, motors, etc.)

All shipments of radioactive material will be made in compliance with federal, state, and local regulations. Federal transportation regulations of DOT and NRC establish container requirements, dose rate limits and handling procedures to ensure the safety of the public and transportation workers during shipment of radioactive materials. Current federal regulations applicable to the transport of radioactive materials are:

- Total 49 Code of Federal Regulations Part 170-179 (40 CFR 170-179) - Department of Transportation regulations governing the transport of hazardous materials.
- 10 CFR 71 - NRC regulations governing the packaging and shipment of radioactive materials.

In addition, for highway transport, state agencies regulate vehicle sizes and weights and, in some cases, transportation routes and times of travel.

All hazardous waste will be packaged in safe containers commensurate to the hazard involved to meet regulatory packaging, shipping, and burial requirements. Materials handling will be done according to procedures for transfer, storage, preparation and shipping.

CHAPTER 10.0

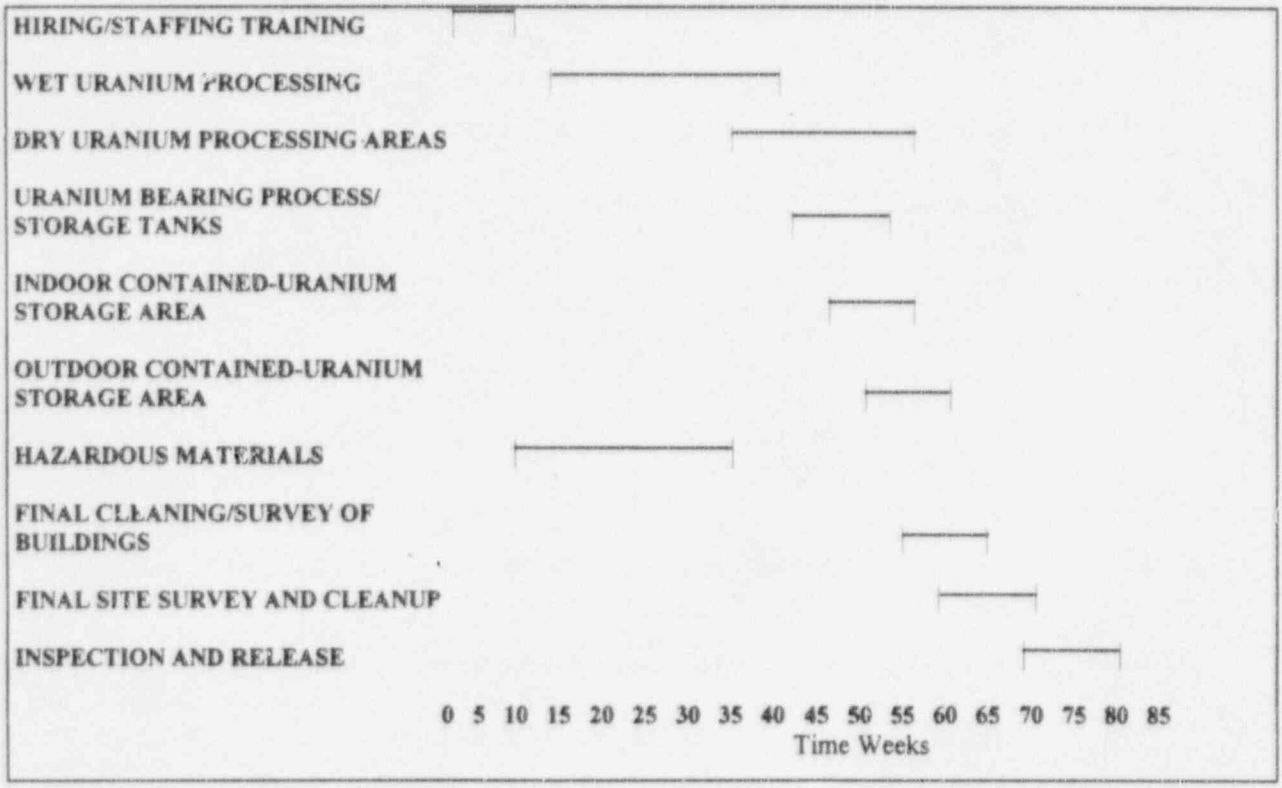
DECOMMISSIONING AND CLOSURE SCHEDULE

Upon completion of final process cleanout and removal of the uranium inventory, the decommissioning and closure activities will commence. The schedule for the decommissioning and closure activities is presented in Figure 10.1. These activities will include:

- The areas close to the powder storage warehouse and UF_6 cylinder storage areas will be cleared first to provide staging areas for the storage, packaging, and shipment of decontaminated equipment and materials from the plant.
- Plant areas will then be decontaminated, generally in the order of decreasing amount of contamination, i.e., from the most contaminated to the least contaminated.
- The outdoor lagoon areas system will be dismantled and decontaminated upon completion of liquid processing.
- The hot maintenance, rad waste, waste oxidation-reduction facility, uranium recovery system, and the ventilation system will be decontaminated near the end of the project so they can support the decommissioning and closure operations.
- The laundry room and change rooms will be the final areas to be decontaminated.
- The hazardous waste areas will be cleaned concurrent with decontamination activities. Cleaning will progress from the services components building, to the fuel component operations, to fuel areas and then to outside areas.
- A thorough radiation and hazardous materials survey of all areas in and around the plant will be conducted prior to the final inspection and release by the applicable regulatory agencies.
- A systematic survey plan will be developed using acceptable guidelines such as NUREG/CR-2082 "Monitoring for Compliance with Decommissioning Termination Survey Criteria. "

FIGURE 10.1

DECOMMISSIONING AND CLOSURE SCHEDULE



CHAPTER 11.0
FINAL RELEASE

As areas/buildings are being decontaminated, contamination surveys will be made to determine the degree to which decontamination is being achieved. Upon completion of all decommissioning and closure activities, a detailed health and safety analysis will be performed to determine the level of residual material. It is intended to demonstrate that there is no risk to the health and safety of the public, that limits are within those specified by regulatory agencies, and that the premises may be released for unrestricted use by any industry.

A detailed survey report will be prepared which identifies the premises, describes the scope of the survey, and reports the findings of the survey in specified units. A copy of this survey report will be submitted to the NRC and the State of North Carolina requesting release of the site for unrestricted occupancy.

When decommissioning and closure of the facility is completed (i.e., removal of hazardous waste and sludge, equipment cleaned or removed, and storage areas or tanks free from any hazardous waste contaminants), GE-Wilmington will submit to the RCRA Regional Administrator certification by the project manager and an independent registered professional engineer that the facility has been closed in accordance with the specifications of the approved closure plan.

CHAPTER 12.0

DECOMMISSIONING AND CLOSURE COST ESTIMATES

The estimated total cost for the decommissioning and closure of the GE-Wilmington facility is 222,180 million (1996) dollars. The cost breakdown is shown in Table 12.1. This estimated total cost includes the cost of special-purpose equipment, materials, labor, site support services, waste packaging, transportation, burial, and other miscellaneous owner expenses. The estimated total cost assumes an efficient decommissioning and closure activity but a 25% contingency is added to allow for unforeseen problems which might arise during the activity. The estimated total cost is based on the assumptions stated in Chapter 4 of this Plan. The estimated costs shown in Table 12.1 were developed using estimates provided by responsible and knowledgeable personnel in the various GE functions and off-site support groups.

Burial cost estimates are based $600 per cu. ft. It is most likely that this cost will increase faster than other factors due to the closure of the Barnwell facility in favor of Regional Compact burial sites or alternate sites.

Transportation costs assume burial at Envirocare, Clive, Utah, a site selected to provide some conservatism and flexibility since the quantity for burial is large and burial sites have been limiting the quantity allowed for burial.

The cost for a license review, approval, ongoing inspections and final review release for decommissioning the site is estimated to be $447,000 based on the current routines established by the NRC.

Nuclear liability insurance for a facility being decommissioned has not been determined. An allowance of $408,000 is included for the annual insurance premium for both nuclear and conventional insurance.

RCRA regulations specify that an outside consultant who is a registered engineer must perform an independent survey to determine that cleanup activities have been performed per procedure, the measurements are representative of the actual situation, and the total site is free of hazardous materials. A written report must then be submitted to the state certifying the plant is "clean." It is estimated that this fee will be $354,000.

TABLE 12.1

($ in 000's)

DECOMMISSIONING AND CLOSURE COST ESTIMATES

	1996	1997
Manpower		
Preplanning	$ 183	$ 189
Salaried	3,065	4,044
Contract Labor	14,153	16,886
Inspection Consultation	222	354
Lab Fees (Analysis)	62	356
Subtotal	17,684	21,829
Site Services		
Telephone	43	60
Utilities	417	572
Taxes	357	491
Insurance	298	408
Waste Management		
Burial	98,030	149,043
Transportation	131	372
Burial Boxes	1,348	2,025
Subtotal	99,509	151,440
Decon Equipment	1,528	2,497
NRC Licensing/Inspection	325	447
Subtotal	120,160	177,744
25% Contingency (NUREG-0278)	30,040	44,436
Total Cost	$150,200	$222,180

*Does not include credit for sale of equipment or for uranium recovered.

CHAPTER 13.0

FINANCIAL ASSURANCE AND RECORD KEEPING

The decommissioning and closure cost for the GE-Wilmington plant including the full fabrication facility is estimated to be 222,180 million (1996) dollars. This cost is considered to be small compared to the total assets of the General Electric Company. Therefore, it is unlikely GE would be unable to meet the financial commitment generally associated with the decommissioning and closure activities outlined and estimated above. The Corporate commitment to provide the resources for the decommissioning and closure of the plant when and if necessary is documented in a letter shown in Figure 13.1. This letter does not include decommissioning estimates for the dry conversion process. Table 12.1 contains decommissioning costs that include the dry conversion process.

Commencing in 1988, GE-Wilmington took steps to assure applicable drawings and records of modifications to areas where hazardous materials and/or radioactive materials are handled, used, or stored are being archived and maintained. Records of incidents, spills or releases to the environment are also being archived and maintained until the end of plant life in order to provide additional information for the decommissioning and closure activities.

FIGURE 13.1

CORPORATE COMMITMENT LETTER

Corporate Environmental Programs
General Electric Company
[illegible]

Letter from Chief Financial Officer to Demonstrate
Financial Assurance for **Decommissioning**

Mr. Robert M. Bernero, Director
Office of Nuclear Material Safety and Safeguards
U. S. Nuclear Regulatory Commission
One White Flint North Building
11555 Rockville Pike
Rockville, Maryland 20852

I am the Chief Financial Officer of the General Electric Company (GE), 1 River Road, Schenectady, NY 12345. This letter is in support of the use of the financial test to demonstrate financial responsibility under the *Self-Guarantee Rule* (58 FR 68726; 12/29/93) which became effective on January 28, 1994.

The firm identified above guarantees, as *self-guaranteeing licensee* and as *parent-guarantor*, through the financial test specified in (58 FR 68726, 12/29/94), the decommissioning closure care for the following licenses held by GE. The current closure cost estimates covered by the test for decommissioning, so guaranteed, are shown for each facility/license: -- see **SCHEDULE A.**

This firm is required to file a Form 10K with the U.S. Securities and Exchange Commission (SEC) for the latest fiscal year; a copy of which is enclosed.

The fiscal year of this firm ends on December 31. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended December 31, 1995. A copy of the GE's 1995 Annual Report is enclosed.

FIGURE 13.1

CORPORATE COMMITMENT LETTER

(CONTINUED)

NRC Letter
Page Two

	FINANCIAL TEST	*Dollars in Thousands*
1.	Decommissioning cost estimates for facilities as contained in **SCHEDULE A.**	$ 236,250
2.*	Tangible Net Worth at least 10 times the current decommissioning cost estimate (of the current amount required if certification is used) for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor.	$16,267,000
3.*	Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the current decommissioning cost estimate (or the current amount required if certification is used) for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor.	$168,878,000
4.	Current bond rating as issued by Standard & Poor's and Moody's	Aaa-Moody's AAA-Standard & Poor's
	Date of issuance of most recent bond	9/15/92
	Date of maturity of above bond	9/15/95
5.	Is line 2 at least 10 times line 1?	Yes
6.	Is line 3 at least 10 times line 1?	Yes

Further, I hereby certify that the contents of this letter and SCHEDULE A are true and correct to the best of my knowledge.

Dennis D. Dammerman
Senior Vice President - Finance

FIGURE 13.1
CORPORATE COMMITMENT LETTER
(CONTINUED)

CERTIFICATION

I, Dennis D. Dammerman, Senior Vice President - Finance, of the General Electric Company, do hereby certify that the attached Minute #10855 entitled "Execution of Contracts and Other Instruments" is a true and correct copy of a portion of the minutes of the meeting of the board of Directors of General Electric Company held on April 26, 1988, which minutes were approved by the Board of Directors at its meeting on May 27, 1988, and revised on December 20, 1991.

Dated this 25th day of March 1996

Dennis D. Dammerman
Senior Vice President-Finance

ATTEST:

Eliza W Fran
Attesting Secretary

FIGURE 13.1
CORPORATE COMMITMENT LETTER
(CONTINUED)

Stamford Square
3001 Summer Street
Stamford, CT 06905

The Board of Directors
General Electric Company:

We have applied certain agreed-upon procedures, as discussed below, to selected financial information included in the "Financial Test" section of your letter dated March 25, 1996 to the United States Nuclear Regulatory Commission. Our procedures were performed solely to assist you in connection with the filing of the aforementioned letter and our report is not to be used for any other purpose. Our procedures and findings are as follows:

- Tangible Net Worth - We compared the dollar amount of tangible net worth, $16,267,000 thousand, as shown in Item 2, to the difference between Total Share Owners' Equity, $29,609,000 thousand, and Intangible Assets, $13,342,000 thousand, each reflected in the Statement of Financial Position on page 28 of the Company's 1995 Annual Report, and found such amounts to be in agreement.

- Total Assets in the United States - We compared the Company's Total Assets in the United States, $168,875,000 thousand, as shown in Item 3, to the Company's Total Assets in the United States reflected in Note 28 - Geographic Segment Information on page 62 of the Company's 1995 Annual Report, and found such amounts to be in agreement.

Because the above procedures do not constitute an audit made in accordance with generally accepted auditing standards, we express no opinion on any of the items referred to above. In connection with the procedures referred to above, no matters came to our attention that caused us to believe that the items should be adjusted. Had we performed additional procedures, matters might have come to our attention that would have been reported to you. This report relates only to the items specified above and does not extend to any financial statements of General Electric Company and consolidated affiliates taken as a whole.

March 25, 1996

KPMG Peat Marwick LLP

FIGURE 13.1

CORPORATE COMMITMENT LETTER

(CONTINUED)

SCHEDULE A

NRC SELF-GUARANTEE RULE
SCHEDULE OF LICENSES

GENERAL ELECTRIC COMPANY - 1996

NRC License No.	Name & Address of Licensee	Address of Licensed Activity	($ in thousands) Cost Estimate
GE as Self-Guaranteeing Licensee:			
DPR-1	General Electric Company GE Nuclear Energy 175 Curtner Ave. San Jose, CA 95125	GE Nuclear Energy Vallecitos Nuclear Center 6705 Vallecitos Rd. Pleasanton, CA 94566	8,640
R-33	General Electric Company GE Nuclear Energy 175 Curtner Ave. San Jose, CA 95125	GE Nuclear Energy Vallecitos Nuclear Center 6705 Vallecitos Rd. Pleasanton, CA 94566	1,200
TR-1	General Electric Company GE Nuclear Energy 175 Curtner Ave. San Jose, CA 95125	GE Nuclear Energy Vallecitos Nuclear Center 6705 Vallecitos Rd. Pleasanton, CA 94566	15,580
DR-10	General Electric Company GE Nuclear Energy 175 Curtner Ave. San Jose, CA 95125	GE Nuclear Energy Vallecitos Nuclear Center 6705 Vallecitos Rd. Pleasanton, CA 94566	13,160
SNM-960	General Electric Company GE Nuclear Energy 175 Curtner Ave. San Jose, CA 95125	GE Nuclear Energy Vallecitos Nuclear Center 6705 Vallecitos Rd. Pleasanton, CA 94566	20,000
SNM-1097	General Electric Company GE Nuclear Energy 175 Curtner Ave. San Jose, CA 95125	General Electric Company GE Nuclear Energy Castle Haynes Road Wilmington, NC 28401	150,200
SNM-2500	General Electric Company Morris Operation 7555 East Collins Rd. Morris, IL 60450	GE Nuclear Energy Morris Operation 7555 East Collins Rd. Morris, Il 60450	23,570
3400054-04	GE Lighting 1975 Noble Rd. Cleveland, OH 44112	GE Lighting 1975 Noble Rd. Cleveland, OH 44112	750
3400054-05	GE Lighting 1975 Noble Rd. Cleveland, OH 44112	GE Lighting 1975 Noble Rd. Cleveland, OH 44112	750

FIGURE 13.1

CORPORATE COMMITMENT LETTER

(CONTINUED)

SCHEDULE A

NRC SELF-GUARANTEE RULE
SCHEDULE OF LICENSES

SMB-191	GE Lighting 1975 Noble Rd. Cleveland, OH 44112	GE Lighting 1975 Noble Rd. Cleveland, OH 44112	1,300
STB-53	GE Aircraft Engines 1 Jimson Rd. Cincinnati, OH 45215	GE Aircraft Engines 1 Jimson Rd. Cincinnati, OH 45215	750
		Subtotal	**235,900**

GE as Parent Guarantor:

SMN-1826	Reuter-Stokes, Inc. 8499 Darrow Rd. Twinsburg, OH 44087	Reuter-Stokes, Inc. 8499 Darrow Rd. Twinsburg, OH 44087	350
		Subtotal	**350**

Total GE Decommissioning Cost Estimates: ***$236,250***

CHAPTER 14.0
REFERENCES

- 10 CFR 20, "Standards for Protection Against Radiation."
- 10 CFR 70, "Domestic Licensing of Special Nuclear Material," includes decommission funding and termination of license requirements.
- NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," August 1988.
- NUREG/CR-1266 Volumes 1 & 2, "Technology, Safety & Costs of Decommissioning a Reference Uranium Fuel Fabrication Plant," October 1980.
- NUREG/CR-2082, "Monitoring for Compliance with Decommissioning Termination Survey Criteria," June 1981.