

TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Title</u>	<u>Page</u>
3.1	Reactor Coolant System	3.1.A-1
	A. Operational Components	3.1.A-2
	B. Heatup and Cooldown	3.1.B-1
	C. Minimum Conditions for Criticality	3.1.C-1
	D. Maximum Reactor Coolant Activity	3.1.D-1
	E. Maximum Reactor Coolant Oxygen, Chloride and Fluoride Concentration	3.1.E-1
	F. Reactor Coolant System Leakage and Leakage into the Containment Free Volume	3.1.F-1
	G. Reactor Coolant System Pressure, Temperature, and Flow Rate	3.1.G-1
3.2	Chemical and Volume Control System	3.2-1
3.3	Engineered Safety Features	3.3-1
	A. Safety Injection and Residual Heat Removal Systems	3.3-1
	B. Containment Cooling and Iodine Removal Systems	3.3-3
	C. Isolation Valve Seal Water System (IVSWS)	3.3-4
	D. Weld Channel and Penetration Pressurization System (WC & PPS)	3.3-5
	E. Component Cooling System	3.3-6
	F. Service Water System	3.3-7
	G. Hydrogen Recombiner System and Post-Accident Containment Venting System	3.3-9
	H. Control Room Air Filtration System	3.3-10
	I. Cable Tunnel Ventilation Fans	3.3-10
3.4	Steam and Power Conversion System	3.4-1
3.5	Instrumentation Systems	3.5-1
3.6	Containment System	3.6-1
	A. Containment Integrity	3.6-1
	B. Internal Pressure	3.6-3
	C. Containment Temperature	3.6-3
3.7	Auxiliary Electrical Systems	3.7-1
3.8	Refueling, Fuel Storage and Operations with the Reactor Vessel Head Bolts Less Than Fully Tensioned	3.8-1
3.9	Radioactive Effluents	3.9-1
	A. Radioactive Liquid Effluents	3.9-1
	B. Radioactive Gaseous Effluents	3.9-4
	C. Uranium Fuel Cycle Dose Commitment	3.9-7
	D. Solid Radioactive Waste	3.9-8

TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Title</u>	<u>Page</u>
3.10	Control Rod and Power Distribution Limits	3.10-1
	3.10.1 Shutdown Reactivity	3.10-1
	3.10.2 Power Distribution Limits	3.10-1
	3.10.3 Quadrant Power Tilt Limits	3.10-3
	3.10.4 Rod Insertion Limits	3.10-4
	3.10.5 Rod Misalignment Limitations	3.10-5
	3.10.6 Inoperable Rod Position Indicator Channels	3.10-6
	3.10.7 Inoperable Rod Limitations	3.10-6
	3.10.8 Rod Drop Time	3.10-7
	3.10.9 Rod Position Monitor	3.10-7
	3.10.10 Quadrant Power Tilt Monitor	3.10-7
3.11	Movable Incore Instrumentation	3.11-1
3.12	Shock Suppressors (Snubbers)	3.12-1
3.13	DELETED	3.13-1
3.14	Hurricane Alert	3.14-1
3.15	Meteorological Monitoring System	3.15-1
3.16	Reactor Coolant System Vents	3.16-1
4.0	Surveillance Requirements	4.1-1
4.1	Operational Safety Review	4.1-2
4.2	Inservice Inspection and Testing	4.2-1
4.3	Reactor Coolant System Integrity Testing	4.3-1
4.4	Containment Tests	4.4-1
	A. Integrated Leakage Rate	4.4-1
	B. Sensitive Leakage Rate	4.4-2
	C. Air Lock Tests	4.4-3
	D. Containment Isolation Valves	4.4-3
	E. Containment Modifications	4.4-4
	F. Report of Test Results	4.4-4
	G. Visual Inspection	4.4-4
	H. Residual Heat Removal System	4.4-5

TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.5	Engineered Safety Features	4.5-1
	A. System Tests	4.5-1
	B. Containment Spray System	4.5-2
	C. Hydrogen Recombiner System	4.5-2
	D. Containment Fan Cooler System	4.5-2
	E. Control Room Air Filtration System	4.5-3
	F. Fuel Storage Building Air Filtration System	4.5-4
	G. Post-Accident Containment Venting System	4.5-6
	H. Recirculation Fluid pH Control System	4.5-7
4.6	Emergency Power System Periodic Tests	4.6-1
	A. Diesel Generators	4.6-1
	B. Diesel Fuel Tanks	4.6-2
	C. Station Batteries (Nos. 21, 22, 23, & 24)	4.6-2
	D. Gas Turbine Generators	4.6-2
	E. Gas Turbine Fuel Supply	4.6-3
4.7	Main Steam Stop Valves	4.7-1
4.8	Auxiliary Feedwater System	4.8-1
4.9	Reactivity Anomalies	4.9-1
4.10	Radioactive Effluents	4.10-1
	A. Radioactive Liquid Effluents	4.10-1
	B. Radioactive Gaseous Effluents	4.10-2
	C. Uranium Fuel Cycle Dose Commitment	4.10-3
	D. Solid Radioactive Waste	4.10-3
	E. Routine Reporting Requirements	4.10-3
4.11	Radiological Environmental Monitoring	4.11-1
	A. Monitoring Program	4.11-1
	B. Land Use Census	4.11-2
	C. Interlaboratory Comparison Program	4.11-3
	D. Routine Reporting Requirements	4.11-4
4.12	Shock Suppressors (Snubbers)	4.12-1
	A. Visual Inspection	4.12-1
	B. Functional Testing	4.12-4
	C. Functional Test Acceptance Criteria	4.12-6
	D. Record of Snubber Service Life	4.12-6
4.13	Steam Generator Tube Inservice Surveillance	4.13-1
	A. Inspection Requirements	4.13-1
	B. Acceptance Criteria and Corrective Action	4.13-5
	C. Reports and Review of Results	4.13-5

TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.14	DELETED	4.14-1
4.15	Radioactive Materials Surveillance	4.15-1
4.16	Reactor Coolant System and Containment Free Volume Leakage Detection and Removal Systems Surveillance	4.16-1
4.17	Hurricane Alert	4.17-1
4.18	Overpressure Protection System	4.18-1
4.19	Meteorological Monitoring System	4.19-1
4.20	Reactor Coolant System Vents	4.20-1
5.0	Design Features	5.1-1
5.1	Site	5.1-1
	A. Exclusion Area and Low Population Zone	5.1-1
	B. Map Defining Unrestricted Areas for Radioactive Gaseous and Liquid Effluents	5.1-1
5.2	Containment	5.2-1
	A. Reactor Containment	5.2-1
	B. Penetrations	5.2-1
	C. Containment Systems	5.2-2
5.3	Reactor	5.3-1
	A. Reactor Core	5.3-1
	B. Reactor Coolant System	5.3-2
5.4	Fuel Storage	5.4-1
6.0	Administrative Controls	6-1
6.1	Responsibility	6-1
6.2	Organization	6-1
6.3	Facility Staff Qualifications	6-3
6.4	Training	6-3

TABLE OF CONTENTS (Cont'd)

<u>Section</u>	<u>Title</u>	<u>Page</u>
6.5	Review and Audit	6-3
6.6	Reportable Event Action	6-3
6.7	Safety Limit Violation	6-4
6.8	Procedures and Programs	6-4
6.9	Reporting Requirements	6-5
6.10	Record Retention	6-11
6.11	Radiation Protection Program	6-12
6.12	High Radiation Area	6-12
6.13	Environmental Qualification	6-12
6.14	Process Control Program (PCP)	6-13
6.15	Offsite Dose Calculation Manual (ODCM)	6-13
6.16	Major Changes to Radioactive Liquid, Gaseous and Solid Waste Systems	6-14

LIST OF FIGURES

<u>Title</u>	<u>Figure No.</u>
Reactor Core Safety Limit-Four Loops In Operation	2.1-1
PORV Opening Pressure for Operation Less Than or Equal to 305°F	3.1.A-1
Maximum Pressurizer Level with PORVs Inoperable and One Charging Pump Energized	3.1.A-2
Maximum Reactor Coolant System Pressure for Operation With PORVs Inoperable and One Safety Injection Pump and/or Three Charging Pumps Energized	3.1.A-3
Coolant System Heatup Limitations	3.1.B-1
Coolant System Cooldown Limitations	3.1.B-2
DELETED	3.8-1
Spent Fuel Storage Rack Layout	3.8-2
Limiting Fuel Burnup versus Initial Enrichment	3.8-3
Required Hot Shutdown Margin versus Reactor Coolant Boron Concentration	3.10-1
Vessel Leak Test Limitations	4.3-1
Map Defining Unrestricted Areas for Radioactive Gaseous and Liquid Effluents	5.1-1

E. CONTROL ROOM AIR FILTRATION SYSTEM

The control room air filtration system specified in Specification 3.3.H shall be demonstrated to be operable:

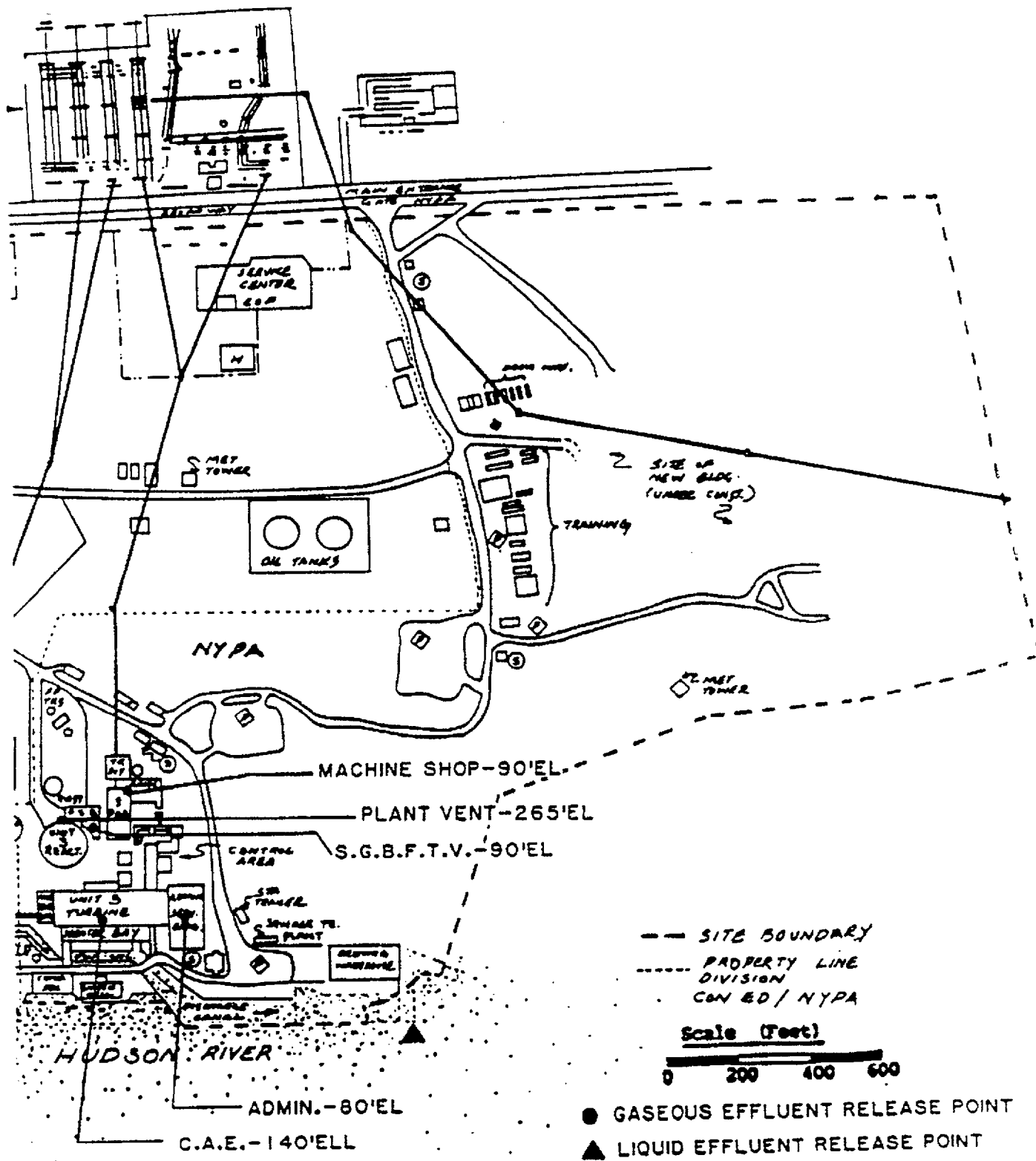
1. At least once monthly by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.
2. At least once every Refueling Interval(#) or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) at any time painting, fire or chemical releases could alter filter integrity by:
 - a. verifying a system flow rate, at ambient conditions, of 2000 cfm \pm 10% during system operation when tested in accordance with ANSI N510-1975.
 - b. DELETED
 - c. verifying that the system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, at ambient conditions and at a flow rate of 2000 cfm \pm 10%.
 - d. verifying, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration of less than 5.0 % when tested in accordance with ASTM D3803-1989 at a temperature of 30 °C [86 °F], a relative humidity of 95 %, and a face velocity of 0.203 m/sec [40 ft/min].
3. Within 31 days of completing 720 hours of charcoal adsorber operation, verify that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration of less than 5.0 % when tested in accordance with ASTM D3803-1989 at a temperature of 30 °C [86 °F], a relative humidity of 95 %, and a face velocity of 0.203 m/sec [40 ft/min].

4. At least once every Refueling Interval(#) by:
 - a. verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches water gauge while operating the system at ambient conditions and at a flow rate of 2000 cfm \pm 10%.
 - b. verifying that, on a Safety Injection Test Signal or a high radiation signal in the control room, the system automatically switches into a filtered intake mode of operation with flow through the HEPA filters and charcoal adsorber banks.¹
 - c. verifying that the system maintains the control room at positive pressure relative to the adjacent areas during the pressurization mode of operation at a makeup flow rate of 2000 cfm \pm 10%.
5. After each complete or partial replacement of an HEPA filter bank, by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 2000 cfm \pm 10%.
6. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at ambient conditions and at a flow rate of 2000 cfm \pm 10%.

F. FUEL STORAGE BUILDING AIR FILTRATION SYSTEM

The fuel storage building air filtration system specified in Specification 3.8 shall be demonstrated operable:

1. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.



MAP IS INTENDED SOLELY FOR THE PURPOSE OF IDENTIFYING LIQUID AND GASEOUS RELEASE POINT LOCATIONS AND ELEVATIONS. ELEVATIONS ARE FROM MEAN SEA LEVEL (MSL) SANDY HOOK, N J.

MAP DEFINING UNRESTRICTED AREAS FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS

FIGURE 5.1-1

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Vice President-Nuclear Power shall be responsible for overall facility activities and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Plant Manager shall be responsible for facility operations and shall delegate in writing the succession to this responsibility during his absence.

6.2 ORGANIZATION

6.2.1 Facility Management and Technical Support

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Quality Assurance Program Description (QAPD).
- b. The Plant Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. The Vice President-Nuclear Power shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

- c. principal radionuclides (specify whether determined by measurement or estimate),
- d. source of waste and processing employed (e.g., dewatered spent resin, compacted dry waste, evaporator bottoms),
- e. type of container (e.g., LSA, Type A, Type B, Large Quantity), and
- f. solidification agent or absorbent (e.g., cement, urea formaldehyde).

The Radioactive Effluent Release Reports shall include a list and description of unplanned releases from the site to Unrestricted Areas of radioactive materials in gaseous and liquid effluents made during the reporting period.

The Radioactive Effluent Release Report shall include any changes made during the reporting period to the Process Control Program (PCP) and to the Offsite Dose Calculation Manual (ODCM), as well as a listing of new locations for dose calculations and/or environmental monitoring identified by the land use census pursuant to Specification 4.11.B.

MONTHLY OPERATING REPORT

- 6.9.1.7 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the PORVs or pressurizer safety valves shall be submitted on a monthly basis to the NRC no later than the 15th of each month following the calendar month covered by the report.

CORE OPERATING LIMITS REPORT (COLR)

- 6.9.1.8 Core operating limits shall be established and documented prior to each reload cycle, or prior to any remaining portion of the cycle, for the following:
 - a. Axial Flux Difference limits for Specifications 3.10.2.
 - b. Height Dependent Heat Flux Hot Channel Factor for Specification 3.10.2.
 - c. Nuclear Enthalpy Rise Hot Channel Factor for Specification 3.10.2.
 - d. Shutdown Bank Insertion Limit for Specification 3.10.4.

6.14 PROCESS CONTROL PROGRAM (PCP)

6.14.1 Licensee initiated changes to the PCP:

1. Shall be submitted to the Commission in the Annual Radioactive Effluent Release Report for the period in which the change(s) was made. This submittal shall contain:
 - a. sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information,
 - b. a determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes, and
 - c. documentation of the fact that the change has been reviewed and found acceptable by the SNSC.
2. Shall become effective upon review and acceptance by the SNSC.

6.15 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.15.1 The ODCM shall be approved by the Commission prior to implementation.

6.15.2 Licensee initiated changes to the ODCM:

1. Shall be submitted to the Commission in the Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:
 - a. sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluation justifying the change(s),
 - b. a determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations, and
 - c. documentation of the fact the change has been revised and found acceptable by the SNSC.

2. Shall become effective upon review and acceptance by the SNSC.

6.16 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS AND SOLID WASTE SYSTEMS

6.16.1 Licensee initiated major changes to the radioactive waste systems (liquid, gaseous and solid) shall be reported to the Commission in the Radioactive Effluent Release Report for the period in which the change was made. The discussion of each change shall contain:

- a. a summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR Part 50.59,
- b. sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information,
- c. a detailed description of the equipment, components and processes involved and the interfaces with other plant systems,
- d. an evaluation of the change, which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto,
- e. an evaluation of the change, which shows the expected maximum exposures to individuals in the Unrestricted Area and to the general population that differ from those previously estimated in the license application and amendments thereto,
- f. a comparison of the predicted releases of radioactive materials in liquid and gaseous effluents and in solid waste to the actual releases for the period in which the changes are to be made;
- g. an estimate of the exposure to plant operating personnel as a result of the change, and
- h. documentation of the fact that the change was reviewed and found acceptable by the SNSC.