DocData Overall Report

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
	Liquid Radioactive Release Lessons Learned Task Force Final Report	Consolidated R	(8) The NRC should require adequate assurance that leaks and spills will be detected before radionuclides migrate offsite via an unmonitored pathway.	0	0	0	0	0	0	0	0	0
1.1	Qualification and Training of Personnel for Nuclear Power Plants (Draft RS 807-5, Proposed Revision 2, published 02/1979; Draft RS 807-5, Second Proposed Revision 2, published 09/1980; Draft OL 403-5, Third Proposed Revision 2, published 01/1985; Draft DG-1012, Proposed Revision 3, published 09/1996, DG-1084, Second Proposed Revision 3, published 03/1999) (Rev. 2, ML003739928; Rev. 3, ML003706932)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.102	Flood Protection for Nuclear Power Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.109	Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.11	Instrument Lines Penetrating Primary Reactor Containment (Safety Guide 11) Supplement to Safety Guide 11, Backfitting Considerations (ML003739934)	E.2.a	General discussion may incorporate a statement about minimizing debris traps in instrument lines to aid decommissioning	0	-1	-1	0	0	0	0	0	0

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1.11	Instrument Lines Penetrating Primary Reactor Containment (Safety Guide 11) Supplement to Safety Guide 11, Backfitting Considerations (ML003739934)	B.	General discussion may incorporate a statement about minimizing debris traps in instrument lines to aid decommissioning	0	-1	-1	0	0	0	0	0	0
1.110	Cost-Benefit Analysis for Radwaste Systems for Light-Water-Cooled Nuclear Power Reactors	A	Reg Guide should be revised to reflect the qualitative or quantitative considerations of decommissioning (20.1406) - Include discussion of decommissioning costs in Section A.	0	-1	-1	0	0	0	0	0	0
1.111	Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.112	Calculation of Releases of Radioactive Materials in Gaseous and Liquid Effluents from Light-Water-Cooled Power Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.113	Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.113	Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.116	Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.12	Nuclear Power Plant Instrumentation for Earthquakes (Draft MS 140-5, Proposed Revision 2, published 07/1981) (DG-1016, the Second Proposed Revision 2, published 11/1992) (DG-1033, the Second Proposed Revision 2, published 02/1995) (Rev. 1, ML003739947; Rev. 2, ML003739944)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.121	Bases for Plugging Degraded PWR Steam Generator Tubes (for Comment)		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.127	Inspection of Water-Control Structures Associated with Nuclear Power Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.13	Spent Fuel Storage Facility Design Basis (for Comment) (Draft CE 913-5, Proposed Revision 2, published 12/1981) (Rev. 1, ML003739943)	A.	General discussion may incorporate a statement about designing system to facillitate decontamination upon decommissioning	0	-1	-1	0	0	0	0	0	0
1.132	Site Investigations for Foundations of Nuclear Power Plants	A.	Reg Guide may need to be revised to reflect 20.1406 criteria (ground water/siting concerns). References RGs 1.59, 1.70, 1.138, and 4.7 - Add Discussion that this guidance may become "historical survey" as described in 20.1406. As such background radiation should be captured.	0	-1	0	0	0	0	0	0	0
1.133	Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.136	Materials, Construction, and Testing of Concrete Containments (Articles CC-1000, -2000, and -4000 through -6000 of the "Code for Concrete Reactor Vessels and Containments")		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.138	Laboratory Investigations of Soils and Rocks for Engineering Analysis and Design of Nuclear Power Plants	A.	Reg Guide may need to be revised to reflect 20.1406 criteria (ground water/siting concerns). References RGs 1.70, 1.132, and 4.7 - Add Discussion that this guidance may become "historical survey" as described in 20.1406. As such background radiation should be captured.	0	-1	0	0	0	0	0	0	0
1.139	Guidance for Residual Heat Removal (for Comment)		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.140	Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Normal Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.141	Containment Isolation Provisions for Fluid Systems (for Comment)		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.142	Safety-Related Concrete Structures for Nuclear Power Plants (Other than Reactor Vessels and Containments)		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	2.1	The SSCs of the gaseous radwaste treatment system should be designed and tested to requirements set forth in the codes and standards listed in Table 1 supplemented by Regulatory Positions 2.2 and 2.3 of this guide.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.2.3	Indoor radwaste tanks should have curbs or elevated thresholds with floor drains routed to the liquid radwaste treatment system. Retention by an intermediate sump or drain tank that is designed for handling radioactive materials and that has provisions for routing to the liquid radwaste system is acceptable.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.1.2	Materials for pressure-retaining components, excluding HVAC duct and fire protection piping, should conform to the requirements of the specifications for materials listed in Section II of the ASME Boiler and Pressure Vessel Code,5 except that malleable, wrought, or cast iron materials and plastic pipe should not be used.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	B	Refers to ANSI/ANS Standards 55.1-1992, 55.4-1993, and 55.6-1993 for the design of solid, gaseous and liquid radioactive waste processing systems.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.1.1	The structures, systems, and components (SSCs) of the liquid radwaste treatment system should be designed and tested to requirements set forth in the codes and standards listed in Table 1 of this guide, supplemented by Regulatory Positions 1.1.2 and 1.1.3 of this guide.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.1.3	Foundations and walls of structures that house the liquid radwaste system should be designed to the natural phenomena and internal and external man-induced hazards criteria described in Regulatory Position 6 of this guide to a height sufficient to contain the maximum liquid inventory expected to be in the building.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.2	All SSCs located outside the reactor containment that contain radioactive materials in liquid form should be classified as described in Regulatory Position 5 and designed in accordance with Regulatory Position 6.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.2	In addition, any such component should be designed to prevent uncontrolled releases of radioactive materials caused by spillage in buildings or from outdoor components.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.2.2	All radwaste tanks, overflows, drains, and sample lines should be routed to the liquid radwaste treatment system. Retention by an intermediate sump or drain tank that is designed for handling radioactive materials and that has provisions for routing to the liquid radwaste system is acceptable.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.2.4	The design should include provisions to prevent leakage from entering unmonitored and nonradioactive systems and ductwork in the area.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.2.5	Outdoor tanks should have a dike or retention pond capable of preventing runoff in the event of a tank overflow and should have provisions for sampling collected liquids and routing them to the liquid radwaste treatment system.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	4.1	Radioactive waste management SSCs should be designed to control leakage and facilitate access, operation, inspection, testing, and maintenance in order to maintain radiation exposures to operating and maintenance personnel as low as is reasonably achievable. Regulatory Guide 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable," provides guidance that is acceptable to the NRC staff on this subject.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.2.1	All tanks inside and outside the plant, including the condensate storage tanks, should have provisions to monitor liquid levels. Designated high-liquid-level conditions should actuate alarms both locally and in the control room.	0	0	-1	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	4.5	Inspection and testing provisions should be incorporated to enable periodic evaluation of the operability and required functional performance of active components of the system.	0	-1	-1	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	6.1	Solid, liquid, and gaseous radwaste SSCs described in Regulatory Positions 1, 2, and 3 for natural phenomena and internal and external man-induced hazards should be evaluated as put forth in this position.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	4.3	Pressure-retaining components of process systems should use welded construction to the maximum practicable extent. Process systems include the first root valve on sample and instrument lines. Flanged joints or suitable rapid-disconnect fittings should be used only where maintenance or operational requirements clearly indicate such construction is preferable. Screwed connections in which threads provide the only seal should not be used except for instrumentation and cast pump body drain and vent connections where welded connections are not suitable. Process lines should not be less than 3/4 inch (nominal). Screwed connections backed up by seal welding, mechanical joints, or socket welding may be used on lines 3/4 inches or larger but less than 2-1/2 inches. For lines 2-1/2 inches and above, pipe welds should be of the butt-joint type. Nonconsumable backing rings should not be used in lines carrying resins or other particulate material. All welding constituting the pressure boundary of pressure-retaining components should be performed in accordance with ASME Boiler and Pressure Vessel Code Section IX.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	1.1.1	The structures, systems, and components (SSCs) of the liquid radwaste treatment system should be designed and tested to requirements set forth in the codes and standards listed in Table 1 of this guide, supplemented by Regulatory Positions 1.1.2 and 1.1.3 of this guide.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	4.2	The quality assurance provisions described in Regulatory Position 7 of this guide should be applied.	0	0	-1	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	6.2.1	Regardless of its safety classification, the foundation and walls up to the spill height of the building housing the radwaste systems should be designed to the criteria of Tables 1, 2, 3, and 4.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	3.3	Foundations and adjacent walls of structures that house the solid radwaste system should be designed to the natural phenomena and internal and external man-induced hazards guidance given in Regulatory Position 6 of this guide to a height sufficient to contain the maximum liquid inventory expected to be in the building.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	7	A quality assurance program acceptable to the NRC staff is presented in ANSI/ANS-55.6-1993, "Liquid Radioactive Waste Processing System for Pressurized Water Reactor Plants."	0	0	-1	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	3.1	The SSCs of the solid radwaste treatment system should be designed and tested to the requirements set forth in the codes and standards listed in Table 1 supplemented by Regulatory Positions 3.2 and 3.3 of this guide.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	2.3	The portions of the gaseous radwaste treatment system that are intended to store or delay the release of gaseous radioactive waste, including portions of structures housing these systems, should be classified as described in Regulatory Position 5 and designed in accordance with Regulatory Position 6.	0	-1	0	0	0	0	0	0	0
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants	2.2	If the potential for an explosive mixture of hydrogen and oxygen exists, adequate provisions should be made to preclude buildup of explosive mixtures, or the system should be designed to withstand the effects of an explosion.	0	-1	0	0	0	0	0	0	0
1.145	Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.147	Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.148	Functional Specification for Active Valve Assemblies in Systems Important to Safety in Nuclear Power Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.150	Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.151	Instrument Sensing Lines		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.153	Criteria for Safety Systems		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.159	Assuring the Availability of Funds for Decommissioning Nuclear Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.160	Monitoring the Effectiveness of Maintenance at Nuclear Power Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.179	Standard Format and Content of License Termination Plans for Nuclear Power Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.184	Decommissioning of Nuclear Power Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.185	Standard Format and Content for Post-Shutdown Decommissioning Activities Report		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.187	Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.190	Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.191	Fire Protection Program for Nuclear Power Plants During Decommissioning and Permanent Shutdown		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.192	Operation and Maintenance Code Case Acceptability, ASME OM Code		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.196	Control Room Habitability at Light-Water Nuclear Power Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.198	Procedures and Criteria for Assessing Seismic Soil Liquefaction at Nuclear Power Plant Sites		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.20	Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Initial Startup Testing (Rev. 2, ML003739957)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.202	Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.21	Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants (Rev. 1, ML003739960)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.22	Periodic Testing of Protection System Actuation Functions (Safety Guide 22)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.26	Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants (for Comment) (Rev. 3, ML003739964)	A.	General discussion may incorporate a statement about designing system to facillitate decontamination upon decommissioning	0	-1	-1	0	0	0	0	0	0
1.27	Ultimate Heat Sink for Nuclear Power Plants (for Comment) (Rev. 2, ML003739969)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.28	Quality Assurance Program Requirements (Design and Construction) (Rev. 3, ML003739981) (Draft RS 002-5, Proposed Revision 3, published 03/1981) (Draft DG-1010, Proposed Revision 4, published 11/1992)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.31	Control of Ferrite Content in Stainless Steel Weld Metal (Rev. 3, ML003739986)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.32	Criteria for Power Systems for Nuclear Power Plants (Rev. 2, ML003739990) (DG-1079, Proposed Revision 3, issued 04/2003, ML031280598) (Rev. 3, ML040680488)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.33	Quality Assurance Program Requirements (Operation) (Draft RS 902-4, Proposed Revision 3, published 08/1979) (Draft RS 902-4, Second Proposed Revision 3, published 11/1980) (Rev. 2, ML003739995)	A.	General discussion may incorporate a statement about designing system to facillitate decontamination upon decommissioning	0	-1	-1	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.34	Control of Electroslag Weld Properties (ML003739997)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.36	Nonmetallic Thermal Insulation for Austenitic Stainless Steel (ML003740046)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.37	Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants (ML003740051)	A.	General discussion may incorporate a statement about designing system to facillitate decontamination upon decommissioning	0	-1	-1	0	0	-1	-1	-1	-1
1.38	Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants (Rev. 2, ML003740057)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.39	Housekeeping Requirements for Water-Cooled Nuclear Power Plants (Rev. 2, ML003740067)	C.3	Discussion can be revised to include benefit of housekeeping with respect to decommissioning	0	-1	-1	0	0	-1	-1	-1	-1
1.40	Qualification Tests of Continuous-Duty Motors Installed Inside the Containment of Water-Cooled Nuclear Power Plants (ML003740083)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.43	Control of Stainless Steel Weld Cladding of Low-Alloy Steel Components (ML003740095)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.44	Control of the Use of Sensitized Stainless Steel (ML003740109)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.45	Reactor Coolant Pressure Boundary Leakage Detection Systems (ML003740113)	A.	Discussion can be revised to include benefit of detecting RCPB leakage with respect to decommissioning	0	-1	-1	0	0	-1	-1	-1	-1
1.49	Power Levels of Nuclear Power Plants (Rev. 1, ML003740132)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.50	Control of Preheat Temperature for Welding of Low-Alloy Steel (ML003740136)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.52	Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants (Rev. 2, ML003740139) (DG-1102, Proposed Revision 3, issued 10/00, ML003756180) (Rev. 3, ML011710176)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.53	Application of the Single-Failure Criterion to Nuclear Power Plant Protection Systems (ML003740182) (Draft DG-1118, Proposed Revision 1, ML021260080, published 05/2002) (Rev.1, ML032670945) (Rev. 2, ML033220006)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.54	Service Level I, II, and III Protective Coatings Applied to Nuclear Power Plants (ML003740187) (Draft DG-1976, Proposed Revision 1, ML003739156, published 03/1999) (Rev. 1, ML003714475)	1.(2)	This disscussion is about decontamination ability provided by the protective coating.	0	0	-1	0	0	-1	-1	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.56	Maintenance of Water Purity in Boiling Water Reactors (for Comment) (Rev. 1, ML003740192)	B.	Add disscussion about the effects of water purity has on the decommissioning costs and effort	0	0	-1	0	0	-1	-1	-1	-1
1.59	Design Basis Floods for Nuclear Power Plants (Errata published 07/30/1980) (Rev. 2, ML003740388)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.60	Design Response Spectra for Seismic Design of Nuclear Power Plants (Rev. 1, ML003740207)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.61	Damping Values for Seismic Design of Nuclear Power Plants (ML003740213)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.63	Electric Penetration Assemblies in Containment Structures for Nuclear Power Plants (Draft EE 405-4, Proposed Revision 3, published 06/1986) (Rev. 3, ML003740219)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.65	Materials and Inspections for Reactor Vessel Closure Studs (ML003740228)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.68	Initial Test Programs for Water-Cooled Nuclear Power Plants		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.68.1	Preoperational and Initial Startup Testing of Feedwater and Condensate Systems for Boiling Water Reactor Power Plants (Rev. 1, ML003740230)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.69	Concrete Radiation Shields for Nuclear Power Plants (ML003740235)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.70	Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition) (Rev. 2, ML010610289) (Rev. 3 in three parts, ML011340072, ML011340108, and ML011340116)	3.12	Add new section about proposed plan for decommissioning as it pertains to all systems that meet OUR criteria.	0	-1	-1	0	0	-1	-1	-1	-1
1.72	Spray Pond Piping Made from Fiberglass-Reinforced Thermosetting Resin (Rev. 2, ML003740253)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.8	Qualification and Training of Personnel for Nuclear Power Plants (Draft RS 807-5, Proposed Revision 2, published 02/1979; Draft RS 807-5, Second Proposed Revision 2, published 09/1980; Draft OL 403-5, Third Proposed Revision 2, published 01/1985; Draft DG-1012, Proposed Revision 3, published 09/1996, DG-1084, Second Proposed Revision 3, published 03/1999) (Rev. 2, ML003739928; Rev. 3, ML003706932)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.81	Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants (Rev. 1, ML003740343)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.82	Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident (Draft MS 203-4, Proposed Revision 1, published 05/1983) (Rev. 1, ML003740236) (Draft DG-1038, Proposed Revision 2, ML003739202, published 07/1995) (Rev. 2, ML003740249) (Rev. 3, ML033140347)		After Review, document is not impacted by decommissioning	0	0	0	0	0	0	0	0	0
1.83	Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.84	Design, Fabrication, and Materials Code Case Acceptability, ASME Section III		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.86	Termination of Operating Licenses for Nuclear Reactors		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.87	Guidance for Construction of Class 1 Components in Elevated-Temperature Reactors (Supplement to ASME Section III Code Cases 1592, 1593, 1594, 1595, and 1596)		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.92	Combining Modal Responses and Spatial Components in Seismic Response Analysis		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.96	Design of Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Nuclear Power Plants	Appendix A	Reg Guide may need revision to caution users about 20.1406 criteria - Add section for design to conform to decommissioning criteria.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1.97	Criteria For Accident Monitoring Instrumentation For Nuclear Power Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1.99	Radiation Embrittlement of Reactor Vessel Materials		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Minimize areas, to extent practical, where licensed materials are used and stored.	0	0	-1	0	0	0	0	0	0
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Establish a frequency and scope of surveys that will identify and minimize the spread of contamination	0	0	-1	0	0	0	0	0	0
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Minimize the number of sites (sinks and drains) where liquid waste is disposed.	0	0	0	0	0	-1	0	-1	0
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Use appropriate plumbing materials with minimal pipe lengths and traps	0	-1	0	0	0	-1	0	0	0
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Employ ventilation stacks and ductwork with minimal lengths and minimal abrupt changes in direction	0	-1	0	0	0	-1	0	0	0
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Use non-porous materials in radioactive material use and storage areas	0	0	-1	0	0	0	0	0	-1
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Ensure filtration of effluent streams	0	0	0	0	0	0	0	0	0
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	Choose short half-life isotopes for use and consider the chemical composition, whenever practical	0	0	-1	0	0	0	0	0	-1

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
1736	Consolidated Guidance: 10 CFR Part 20 - Standards for Protection Against Radiation	3.20.1406	This regulation is intended to minimize the potential impact and costs associated with decommissioning activities, beginning with application process for new licenses. To achieve this goal, new applicants should consider: Implementing and adhering to good health physics practices	0	0	-1	0	0	0	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Equipment drain sump vents are piped directly to the radwaste HVAC system to remove airborne contaminants evolved from discharges to the sump.	0	-1	0	0	0	0	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.2	Examples of ESBWR design procedures for operation that minimize the generation of radioactive waste include the following: • The Liquid Waste Management System (LWMS) is divided into several subsystems, so that the liquid wastes from various sources can be segregated and processed separately, based on the most efficient process for each specific type of impurity and chemical content. This segregation allows for efficient processing and minimization of overall liquid waste.	0	0	0	0	0	0	0	0	-1

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.2	For management of gaseous radioactive waste, the Offgas System (OGS) minimizes and controls the release of radioactive material into the atmosphere by delaying release of the offgas process stream initially containing radioactive isotopes of krypton, xenon, iodine, nitrogen, and oxygen.	0	0	0	0	0	0	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.2	The Solid Waste Management System is designed to segregate and package the wet and dry types of radioactive solid waste for off-site shipment and burial. This segregation allows for efficient processing and minimization of overall solid waste.	0	0	0	0	0	0	0	-1	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.2	During liquid processing by the LWMS, radioactive contaminants are removed and the bulk of the liquid is purified and either returned to the condensate storage tank or discharged to the environment, minimizing overall liquid waste. The radioactivity removed from the liquid waste is concentrated in filter media ion exchange resins and concentrated waste. The filter sludge, ion exchange resins and concentrated waste are sent to the Solid Waste Management System (SWMS) for further processing.	0	0	0	0	0	-1	-1	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Provision to design features such as the Reactor Water Cleanup/Shutdown Cooling System and the condensate demineralizer to minimize crud buildup.	0	-1	0	0	0	-1	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Provisions for epoxy-type wall and floor coverings which provide smooth surfaces to ease decontamination.	0	0	0	0	0	-1	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	The ESBWR is designed to limit the use of cobalt bearing materials on moving components that have historically been identified as major sources of in-water contamination.	0	-1	0	0	0	0	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Examples of ESBWR design procedures for operation that minimize contamination and facilitate decommissioning include the following: • Design of equipment to minimize the buildup of radioactive material and to facilitate flushing of crud traps.	0	0	0	0	0	-1	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Provisions for draining, flushing, and decontaminating equipment and piping.	0	0	0	0	0	-1	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Penetrations through outer walls of a building containing radiation sources are sealed to prevent miscellaneous leaks to the environment.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	The reactor building HVAC system is divided into two major components: the contaminated and clean areas. The clean area system conditions and circulates air through all the clean areas of the reactor building; the contaminated area system conditions and circulates air through the contaminated areas of the building.	0	-1	0	0	0	0	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Appropriately sloped floor drains are provided in areas where the potential for a spill exists to limit the extent of contamination.	0	-1	0	0	0	0	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	Equipment and floor drain sumps are stainless steel lined to reduce crud buildup and to provide surfaces easily decontaminated.	0	0	0	0	0	-1	0	0	0
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	For all areas potentially having airborne radioactivity, the ventilation systems are designed such that during normal and maintenance operations, airflow between areas is always from an area of low potential contamination to an area of higher potential contamination.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
26A6642BJ, R	ESBWR Design Control Doccument, Tier 2, Chapter 12, Radiation Protection	12.6.1	The Fuel and Auxiliary Pools Cooling System (FAPCS), equipped with two independent filter demineralizer units, is designed to reduce pool water radioactive contamination in the major pools in the ESBWR.	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.b.4	Drain systems for storm water and sanitary sewage should be separate from contaminated waste drain systems. Laundry facilities and personnel decontamination facilities should be designed so that effluents will be sent to the radioactive liquid waste treatment system when contaminated with radioactivity.	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.b.6	The use of traps in radioactive liquid waste lines should be avoided and the piping should be designed to minimize entrapment and buildup of solids in the system.	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.c.1	The waste treatment system should include means (solidification, evaporation, flocculation, or other process) for conversion of radioactive waste to liquid and/or solid forms suitable for disposal.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.c.2	The radioactive liquid waste treatment system should be designed to achieve a decontamination factor for each radionuclide sufficient to reduce total radioactivity of normal operational liquid waste to an acceptable release level on a "once through" treatment bases.	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.c.4	There should be no bypasses or drains in the radioactive liquid waste treatment system by which waste may inadvertently circumvent treatment equipment components or be released directly to the environment.	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.a.6	The area in which liquid radioactive waste is treated should be isolated from production, loading, storage and support facilities by compartmentalization and access controls to reduce the potential for cross contamination.	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.a.1	The liquid waste system, its components and required supporting services should be capable of handling the expected volume of potentially radioactive waste generated during normal plant operations and under credible emergency conditions resulting from internal accidents or natural phenomena.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.a.2	The system design should provide for redundancy or diversity of components required to prevent release of radioactive materials to the environment…	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.b.3	Shipping containers approved by the DOT for the shipment of solid waste contaminated with plutonium should be used for collection of solid waste materials produced in the liquid waste treatment system to eliminate the necessity of repackaging prior to shipment to a licensed burial ground.	0	-1	-1	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.a.5	Tank and piping systems used for liquid waste handling and treatment should be designed to take advantage of gravity flow to reduce the potential for contamination associated with pumping and pressurization.	0	-1	0	0	0	0	0	0	0
3.10	Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants	2.a.7	Cleanup systems should be provided which are designed to contain safely water collected from firefighting activities and provide for retrievability of radioactive liquids and solids for cleanup and decontamination through the scrap recovery and/or waste treatment system(s).	0	-1	0	0	0	0	0	0	0
3.11	Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills	C.1.a	Stability of the retention system, including the tailing dam, foundation, and abutments, should be ensured under all conditions of construction and operation.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.11	Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills	C.1.c	Seepage through the embankment, foundation, abutments, and basin area should be controlled to prevent excessive uplift pressures, piping, sloughing, and erosion of materials by loss into cracks, joints, and cavities.	0	-1	0	0	0	0	0	0	0
3.11	Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills	C.1.b	The magnitude of total and differential settlement should be within tolerable limits that will not result in harmful cracking and dam instability.	0	-1	0	0	0	0	0	0	0
3.11.1	Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mill Tailings		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	5.a	The material of construction for the ventilation systems should be carefully selected according to such safety considerations as …smooth surface finish to aid in decontamination.	0	-1	0	0	0	0	0	0	0
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	2.g	The filtered air should be discharged to the environs through a stack of sufficient height to reduce close-in ground-level concentrations of radioactive or other potentially dangerous contaminants.	0	0	0	0	0	0	0	0	0
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	1.a	The ventilation systems should confine the radioactive materials within the process areas as close to the point of origin as practicable.	0	-1	-1	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	1.b	Confinement of radioactive materials should be provided by multiple zones.	0	-1	0	0	0	0	0	0	0
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	5.c	The design should permit convenient inspection, maintenance, decontamination, and/or replacement of critical components such as filters, fans, and dampers.	0	-1	0	0	0	0	0	0	0
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	1.c	Pressure differentials should be maintained between building confinement zones and also between the building confinement zones and the outside atmosphere to assure that air flow is from zones of lesser potential for contamination to zones of greater potential for contamination.	0	0	-1	0	0	0	0	0	0
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	7.a	Glove boxes should be constructed using the highest quality of materials and workmanship to assure total containment and minimize leakage.	0	-1	0	0	0	0	0	0	0
3.12	General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants	7.d	The glove box or enclosure design should permit filter replacement with minimum exposure to personnel performing this task and with minimum release of contaminants to the environment outside of the glove box or enclosure.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.13	Guide for Acceptable Waste Storage Methods at UF6 Production Plants	C.2.f	Provisions should be made to stabilize loose radioactive material produced by evaporation of liquid from the (retention) basins (for liquid radioactive waste).	0	0	0	0	0	0	0	0	-1
3.13	Guide for Acceptable Waste Storage Methods at UF6 Production Plants	C.1.a	...storage of solid radioactive wastes should be in appropriate containers approved by the Department of Transportation.	0	0	0	0	0	0	0	0	-1
3.13	Guide for Acceptable Waste Storage Methods at UF6 Production Plants	C.1.b	Process operations, storage of non-nuclear material, and other functions not directly a part of normal storage operations should be kept separate from storage areas for solid radioactive waste.	0	0	0	0	0	0	0	0	-1
3.13	Guide for Acceptable Waste Storage Methods at UF6 Production Plants	C.2.d	The interior of each retention or settling basin should be lined with an essentially impervious synthetic lining material designed to prevent seepage.	0	0	0	0	0	0	0	-1	0
3.13	Guide for Acceptable Waste Storage Methods at UF6 Production Plants	C.2.j	The design should provide for the needs of routine system maintenance, the stabilization of the basins when manufacturing operations are terminated, and alternative methods of storage if the integrity of any basin is determined insufficient to retain its contents safely.	0	0	0	0	0	0	0	-1	0
3.15	Standard Format and Content of License Applications for Storage Only of Unirradiated Power Reactor Fuel and Associated Radioactive Material		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.18	Confinement Barriers and Systems for Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.20	Process Offgas Systems for Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.21	Quality Assurance Requirements for Protective Coatings Applied to Fuel Reprocessing and to Plutonium Processing and Fuel Fabrication Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.25	Standard Format and Content of Safety Analysis Reports for Uranium Enrichment Facilities		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.26	Standard Format and Content of Safety Analysis Reports for Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.27	Nondestructive Examination of Welds in the Liners of Concrete Barriers in Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.29	Preheat and Interpass Temperature Control for the Welding of Low-Alloy Steel for Use in Fuel Reprocessing Plants and in Plutonium Processing and Fuel Fabrication Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.30	Selection, Application, and Inspection of Protective Coatings (Paints) for Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.31	Emergency Water Supply Systems for Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.32	General Design Guide for Ventilation Systems for Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.37	Guidance for Avoiding Intergranular Corrosion and Stress Corrosion in Austenitic Stainless Steel Components of Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.39	Standard Format and Content of License Applications for Plutonium Processing and Fuel Fabrication Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.40	Design Basis Floods for Fuel Reprocessing Plants and for Plutonium Processing and Fuel Fabrication Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.44	Standard Format and Content for the Safety Analysis Report for an Independent Spent Fuel Storage Installation (Water-Basin Type)		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.46	Standard Format and Content of License Applications, Including Environmental Reports, for In Situ Uranium Solution Mining		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.48	Standard Format and Content for the Safety Analysis Report for an Independent Spent Fuel Storage Installation or Monitored Retrievable Storage Installation		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.49	Design of an Independent Spent Fuel Storage Installation (Water-Basin Type)		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.5	Standard Format and Content of License Applications for Uranium Mills		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.50	Standard Format and Content for a License Application to Store Spent Fuel and High-Level Radioactive Waste		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.51	Calculational Models for Estimating Radiation Doses to Man from Airborne Radioactive Materials Resulting from Uranium Milling Operations		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.53	Applicability of Existing Regulatory Guides to the Design and Operation of an Independent Spent Fuel Storage Installation		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.54	Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.55	Standard Format and Content for the Health and Safety Sections of License Renewal Applications for Uranium Hexafluoride Production		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.56	General Guidance for Designing, Testing, Operating, and Maintaining Emission Control Devices at Uranium Mills		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.59	Methods for Estimating Radioactive and Toxic Airborne Source Terms for Uranium Milling Operations		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.6	Content of Technical Specifications for Fuel Reprocessing Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.60	Design of an Independent Spent Fuel Storage Installation (Dry Storage)		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.61	Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.62	Standard Format and Content for the Safety Analysis Report for Onsite Storage of Spent Fuel Storage Casks		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.65	Standard Format and Content of Decommissioning Plans for Licensees Under 10 CFR Parts 30, 40, and 70		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.66	Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70 and 72		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.7	Monitoring of Combustible Gases and Vapors in Plutonium Processing and Fuel Fabrication Plants		Reviewed -- no pertinent information	0	0	0	0	0	0	0	0	0
3.71	Nuclear Criticality Safety Standards for Fuels and Material Facilities		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.72	Guidance for Implementation of 10 CFR 72.48, Changes, Tests, and Experiments		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3.73	Site Evaluations and Design Earthquake Ground Motion for Dry Cask Independent Spent Fuel Storage and Monitored Retrievable Storage Installations		Reviewed -- No pertinent information	0	0	0	0	0	0	0	0	0
3.8	Preparation of Environmental Reports for Uranium Mills	10	Design the isolation area so that seepage of toxic materials into the ground-water system would be eliminated or reduced to the maximum extent reasonably achievable.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	'onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.5	Containment of Liquids. Potential Sources: Sump overflow: lower set points on high level alarms; increase sump capacity, install reserve tankage. Automatic sump pump initiation w/no available/adequate discharge reservoir: revert to manula intervention on high indication. Increase storage capacity. Cross connected/open floor drain system: administrative controls on critical access points, eg, caps/plugs. Check valves to limit backflow. Tank Overflows: Lower setpoints on high level alarms, tank cubicle design to contain at least one tank volume, overflows routed to supplemental tankage, containment surfaces protected from liquid migration. Embedded piping integrity loss: double walled or sleeved piping. Spills/liquid migration: curbs, dikes, protected and inclinde surfaces.	0	-1	0	0	0	-1	0	-1	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Plant Breathing Air Supply System A system to supply breathing air to potential airborne work areas in the plant should be installed at the time of plant construction. This will reduce the time needed to set up portable units and support equipment in radiation areas and will reduce exposure time. This will also avoid running long air supply hoses through work areas, thus avoiding safety hazards or the obstruction of decommissioning work.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Lifting Lugs on Large Components This technique involves the incorporation of lifting lugs into the design of large components to facilitate rigging for intact removal. By installing the lifting features before plant startup rather than in a radioactive environment, significant radiation exposures can be prevented.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Anchor Points for Lifts This technique involves the preplacement of anchor devices around large components that must be lifted during decommissioning. By incorporating the anchor points into the plant during the construction phase, it will avoid much of the time spent needed for rigging in a radioactive environment.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Tracks for Remote cutting Devices This technique involves pre-installing (at the time of construction) cutter guide tracks used to guide segmentation devices on components that will become radioactive. Thus, a portion of the decommissioning setup work is performed in a radiation-free environment, eliminating that portion of worker exposure.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Preplaced Core Samples This is an exposure reducing technique. It eliminates the time consuming task of concrete core drilling in high radiation areas needed to obtain samples to determine activated concrete profiles. The core samples are drilled or cast in-place during preoperational stages and then held in-place for the life of the plant. At the time when radiological characterization of the concrete is desired, the cores are simply pulled out in minutes rather than the hours or days that it takes by core drilling. Thus, there is a very significant reduction in the time spent in a high radiation area.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Removable Roof, Wall Panels and Plugs This technique provides improved access to radioactive components to be removed. This will reduce exposure by eliminating unnecessary segmentation and manuevering time to remove radioactive items. Components can be lifted, removed and shipped intact.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.4	Canal Gate. An analysis performed to examine the impact of installing a refueling canal gate at time of plant construction. Most applicable for PWRs. A canal gate could be used to partition the canal into two areas. One, the reactor cavity, where vessel segmentation could take place. The other area, behind the gate (and containing the deep end) would contain the cutting equipment and store segments awaiting cask shipment. Use of the gate would allow segmentation of the vessel to proceed in parrallel with the internals segmentation.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Access to and into all Tanks Access to and into tanks will allow decontamination by water lancing or entry of a decontamination technician. Large manholes with access ladders and work platforms outside the manhole will shorten setup times and facilitate tank interior decontamination. This technique should be incorporated into plant present design philosophy.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.6	Preplaced Blast Holes. Technique intended to reduce occupational exposure associated with demolition by incorporating blasting holes during the construction of structures prior to contamination/activation.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.7	Smooth and Coat Concrete Surfaces. This tecnique intended to effectively decrease the radwaste associated with decontamination of contaminated surfaces using preventative/protective measures (i.e., smoothing and coating (sealing) concrete surfaces).	0	-1	-1	0	0	0	0	-1	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.8	Substutution and Purification of materials. Certain isotopes present in a plant generate radiation dose rates far out of proportion to their fraction of total activity, such as Co-60. Others include Mn-54 and Ni-63. Perform asays of stock (plates, bar, sheet, etc.) prior to component fabrication and select materials low in undesirable trace elements.	0	-1	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	4.4	Develop and maintain a comprehensive data base, including operating histories, repair records, purchase requisitions (eg, weights, dimensions, materials), installed location, latest radiation levels, etc. Establishing the data base is a responsibility of the utility and the AE/constructor. Maintaining the data base is an operational activity. A list of data requirements/items is included in Table 4.4-1 of the NUREG/CR. The data base can be used (through increased planning) to eliminate the generation of unnecessary waste volume. Prevent cross-contamination of clean waste/materials.	0	0	0	0	0	-1	-1	-1	-1
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Complete Drainage Capacity The capability of complete drainage minimizes exposure to the worker from pockets and dead legs containing contaminated liquids. It also permits complete flushing and drying of the system prior to dismantling. Drain connections should be located on system lowpoints and designed to drain to appropriate collection tanks.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	4.7	Preoperational Electropolishing. This technique is intended to reduce occupational exposure and costs by reducing the inventory of radionuclides fixed on the interior of tanks, piping, valves, and pumps. Electropolishing the interior surfaces of components after fabrication but prior to installation will smooth the surface and reduce buildup of contamination during operations.	0	-1	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Pre-Installed Manipulator Support This technique is intended to reduce exposure during segmentation of a vessel. The support structure attached to the plasma arc cutter (or other torch tool) manipulator is designed for use on the external suface of the vessel and is installed before startup of the plant. Exterior circumferentially geared or magnetic track would be pre-installed and aligned to receive the torch cutting head assembly. During decommissioning, circumferential segment rings of the vessel can be lifted out and moved to the fuel or service pool for further segmentation. Therefore, a portion of the work that is normally performed in a high radiation area is done in a low radiation environment, thereby minimizing radiation exposure.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	4.5	This technique is intended to reduce occupational exposure and costs by reducing the inventory of radionuclides fixed on the interior of tanks, piping, valves, pumps and other process equipment, as well as surfaces of large of large structures, such as steel pool linings or other building surfaces. The most straight forward method of repassivation is to use pure water at high (operational temperatures and control water chemistry over an extended period. This forms a corrosion layer from the action of high temperatures and dissolved oxygen. Other methods include use of mild chemicals to induce a corrosion layer to form. Use of passivation methods (electropolishing) prior to initial use should also be considered.	0	-1	-1	0	0	-1	-1	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Non-Embedment of Pipes, Ducts and Equipment Structures in Concrete This technique is intended to reduce the effort and exposure time required to remove various items at the time of decommissioning. Whenever possible, embedment of radioactive pipes, duct and equipment into concrete structures should be avoided.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Construct Scale Models. Availability of construction models improves planning efficiency, aids in construction simulations and mock-ups and improves ALARA planning.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Remote Sampling/Measurement Capabilities. This technique reduces exposure associated with environmental sampling activities by allowing the data to be gathered remotely. Involves installing remote monitors, shielded access points and automated data collection and dissemination.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Sealed Nonporous Insulation. This technique to minimize contaminated insulation. Insulation is sealed in nonporous, easily decontaminable waterproof jacket to inhibit moisture absorption and prevent insulation from becoming a source of exposure. Prevents contamination of a large volume of materials.	0	-1	0	0	0	0	0	-1	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Enclosed Cable trays. This technique prevents contamination of large quantities of cabling by totally enclosing the trays with solid sheet metal. More effective with the installation of fire retardant materials and blanketing.	0	-1	0	0	0	-1	0	-1	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Relocated Motor Control Centers This technique s aimed at reducing the amount of contaminated equ pment by locating motor control centers in areas that are not susceptible to contamination. Ideally, this concept should be applied for all equipment; however, this is not practical considering the constraints in operating plant arrangements.	0	-1	0	0	0	0	0	-1	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Sufficient Waste Storage Capacity This technique is intended to circumvent critical path items. Either during construction or, just prior to decommissioning, a waste storage facility could be constructed on-site to provide temporary storage space. This wi!l help avoid two problems: (I) waste can be generated at a rate greater than can be shipped off-site (causing a plant with inadequate storage space to become bottle-necked), thereby slowing down work and, (2) without adequate storage facilities, radioactive wastes may have to be stored in areas that may pose increased exposure hazards.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Bolted Steel Construction This technique is intended to reduce exposure by decreasing disassembly time and reducing radioactive waste by using an easily decontaminable construction material. This technique is also cost effective because decontaminated steel can eventually be sold for scrap. Components and structural items such as walls, floors and shields can be constructed out of steel and bolted together. For example, flat sections of steel plate similar to conventionally used floor gratings could be directly bolted to beams for faster construction and demolition. At the time of decommissioning the bolts would be removed or cut enabling rapid disassembly. The use of steel rather than concrete would facilitate use of surface decontamination and volume reduction techniques such as electropolishing or chemical cleaning. Bolted segments would also be designed to fit into waste containers, thereby reducing void spaces and avoiding the need for segmentation.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Flanged Construction of components This technique is intended to reduce exposure by decreasing the time required to disconnect components and avoiding the use of contamination spreading procedures. Cutting methods such as power hacksaws and circular cutters will generate particulate, and torches will generate particulate and contaminated gases. Bolted connections will minimize this contamination potential. Items such as pumps, valves, sections or large bore piping or steam generators should be designed so that they incorporate flanged and bolted connections. Flanged connections would facilitate rapid removal. This technique is limited in application to low pressure systems where leakage of seals is less likely to occur.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Quick Disconnect Components This technique IS intended to reduce exposure by decreasing the time required to disconnect components. Whenever possible, components could be designed and installed with quick disconnect couplings. This would allow rapid disassembly at the time of decommissioning. Systems should be designed for rapid replacement of these quick disconnects. Adequate leakage collection is necessary to prevent spills.	0	0	0	0	0	-1	0	0	0
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Shearable Nuts and Bolts This technique is intended to reduce exposure by reducing exposure time and/or allowing remote segmentation. Bolted construction could be made using a specialized nut that has a 1" -3" long shoulder shaft incorporated into its design. At the time of construction, the bolts and nuts would be tack welded to meet applicable codes. At decommissioning, the threaded portion of the bolt and nut could easily be sheared off with a bolt cutter or remote hydraulic shear. Segmenting a flanged pipe section could be performed in minutes without elaborate setup, thereby significantly reducing personnel exposure.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
3587	Identification and Evaluation of Facilitation Techniques for Decommissioning Light Water Power Reactors	5.2	Minimize Cable Trays in Contaminated Areas. This technique minimizes contamination of cable trays by locating trays in clean areas. Branch feeders to specific equipment may then be run in enclosed trays or conduit.	0	-1	0	0	0	-1	0	-1	0
4.1	Programs for Monitoring Radioactivity in the Environs of Nuclear Power Plants	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
4.13	Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications	all	Reviewed. No applicable guidance/criteria included.	0	0	0	0	0	0	0	0	0
4.14	Radiological Effluent and Environmental Monitroing at Uranium Mills, Rev. 1	all	Reviewed. No applicable criteria/guidance included. Consider including as reference for methods for environmental monitroing for early identification of environmental contamination.	0	0	0	0	0	0	0	0	0
4.15	Quality Assurance for Radiological Monitoring Programs (Normal Operation) -- Effluent Streams and the Environment	all	This Guide may need to be cited in the Discussion Section of the new guide referencing its applicability to QA for effluents ad environmental monitoring.	0	0	0	0	0	0	0	0	0
4.16	Monitoring and Reporting Radioactivity in Releases of Radioactive Materials in Liquid and Gaseous Effluents from Nuclear Fuel Processing and Fabrication Plants and Uranium Hexafluoride Production Plants, Rev. 1	all	Reviewed. No applicable criteria/guidance. Consider possible reference to acceptable program for environmental monitroing for environmental contamination.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
4.17	Standard Format and Content of Sute Characterization Plans for High-Level-Waste Geological Respositories, Rev. 1	8.9.3	Describe plans for mitigating any significant adverse environmental impacts caused by site characterization activities if such area is determined unsuitable for a construction authorization appliation for a geological repository operations area.	0	0	0	0	0	-1	0	0	0
4.18	Standard Format and Content of Environmental Reports for Near-Surface Disposal of Radioactive Waste	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
4.2	Preparation of Environmental Reports for Nuclear Power Stations, Rev. 2	5.8	Decommissioning and Dismantling. The applicant should also discuss the consideration given in the design of the station and its auxiliary systems relative to eventual decommissioning. ... However, since the environmental impact of terminating station operation is, in part, determined by station design, applicants should give attention to the subject in the project planning.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
4.2	Preparation of Environmental Reports for Nuclear Power Stations, Rev. 2	3.5.1	Identify planned operations and anticipated operational occurrences that may result in release of radioactive materials to the environment. Consider leakage rates and concentrations ofradioactive materials for both expected and design conditions. ... Describe special design features provided to reduce leakage. Provide estimates of the releases of radioactive gases, radioactive particulates, and radioiodines (by radionuclide) from each leakage source, and describe their subsequent transport mechanism and release path.	0	-1	0	0	0	0	0	0	0
4.20	Constraint on Releases of Airborne Radioactive Materials to the Environment for Licensees other than Power Reactors	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
4.8	Environmental Technical Specifications for Nuclear Power Plants	all	Reviewed. Guide is no longer applicable. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
4.9	Preparation of Environmental Reports for Commercial Uranium Enrichment Facilities, Rev. 1	6.2.2.1	If surface or ground water may be affected by plant operations or accidents, the applicant should describe the systems to be used to monitor the potentially affected surface or ground water.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
4.9	Preparation of Environmental Reports for Commercial Uranium Enrichment Facilities, Rev. 1	4.4	Decommissioning and Dismantling. The applicant should describe his plans and policies regarding the actions to be taken at the end of the plant's useful life. Information should be provided on the long-term uses of the land; the amount of land irretrievably committed, if any; the expected environmental consequences of decommissioning; and the estimated monetary cost involved in decommissioning, discounted to present value.	0	0	0	0	0	-1	0	0	0
8.10	Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable	all	Reviewed. No applicable criteria/guidance	0	0	0	0	0	0	0	0	0
8.18	Information Relevant to Ensuring that Occupational Radiation Exposures at Medical Institutions will be As Low As Reasonably Achievable, Rev. 1	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.19	Occupational Radiation Dose Assessment in Light-Water Reactor Power Plants Design Stage MAN-REM Estimates	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.2	Guide for Administrative Practices in Radiation Monitoring	all	References ANSI N13.2 - 1969, "Guide for Administrative Practices in Radiation Monitroing." Out of date. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.21	Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants, Rev. 1	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.23	Radiation Safety Surveys at Medical Institutions	all	Reviewed Feb. '79 version. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.24	Health Physics Surveys During Enriched Uranium-235 Processing and Fuel Fabrication, Rev. 1	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.24	Health Physics Surveys During Enriched Uranium-235 Processing and Fuel fabrication	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.25	Air Sampling in the Workplace, Rev. 1	C.2.1	Purposes of air sampling are ... (2) verify that the confinement of radioactive material is effective, (4) determining whether there is any leakage of radioactive materials from a sealed confinement system.	0	0	-1	0	0	0	0	0	0
8.25	Air Sampling in the Workplace, Rev. 1	C.2.3	Samplers may be located in ducts if their purpose is to detect leakage from systems that do not leak during normal operations and if quantitative measurements of workplace airborne concentrations are not needed.	0	0	-1	0	0	0	0	0	0
8.27	Radiation Protection Training for Personnel at Light-Water-Cooled Nuclear Power Plants	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.30	Health Physics Surveys in Uranium Recovery Facilities, Rev. 1	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.31	Information Relevant to Ensauring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable, Rev. 1	C.4.1	Where ore is handled in the open, the objective should be to minimize blowing of dust. Water sprinkling systems are recommended for use on ore piles when the ore moisture content is less than 10%. If ore is crushed and transported in the dry state (i.e., moisture content less than 25%), the use of ventilation systems and dust collectors is recommended. As ore travels along conveyor belts to the grinder, all drop points should have either hooded dust collectors or dust suppressant systems, such as sprinklers or foam ejectors. When crushers are used prior to 8.31-15 grinding, it is recommended that a hooded ventilation system be installed over all external openings to the crusher. The use of wet scrubbers or dust collectors is recommended for ventilation systems that service ore storage, handling, and crushing areas of the mill to prevent recirculation of contaminated air.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.31	Information Relevant to Ensauring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable, Rev. 1	C.4.2	Grinding, Leaching, and Concentating Process Areas. General ventilation systems for facility areas where leaching and thickening tanks are located should be designed to maintain natural uranium ore dust concentrations in air at less than 19.0 ìg/m3 of uranium. If the mill is so designed that the solvent extraction (SX) concentration process equipment is in enclosed structures, a general ventilation system is recommended and should be designed to maintain the airborne natural uranium concentration in air to less than 25% of the DAC for natural uranium. The use of wet scrubbers on general ventilation systems that service areas of the facility where grinding and leaching equipment are located is recommended. Scrubbers are not necessary on ventilation systems that service areas of the facility where the clarification or solvent extraction equipment is located.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.31	Information Relevant to Ensauring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable, Rev. 1	C.3.7	General features applicable to equipment that will be used for handling, containing, or contacting uranium and its daughters are as follows: 1. Equipment that contains large volumes of uranium-bearing liquids should be designed with sumps or dikes to contain the liquids in the event of leaks or spills; ...	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.31	Information Relevant to Ensauring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable, Rev. 1	C.4.3	Precipitation, Drying, and Packaging Areas. Since the potential for the release of airborne yellowcake is much greater in dry form, it is recommended that drying and packaging of yellowcake should be performed in an enclosure that is separated from other areas of the facility. Also, the drying and packaging enclosure should be maintained under negative pressure. A separate air suction ring system should also be used at each yellowcake drumming station; individual suction ring systems need only be operated during periods when the drum at that location is being filled. The exhausts for the drying and packaging enclosure and the suction ring should be vented through a wet scrubber. To ensure proper operation, the scrubber system on the concentrate drying and packaging area should be checked every shift and documented, or automatic malfunction alarm or interlock systems should be installed. Manometer readings or operational and instrument checks should be recorded once per shift and subsequently documented.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.31	Information Relevant to Ensauring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable, Rev. 1	C.3.6	UR facility plans should include the following: 1. Provisions for storage of raw ore6 or other materials to be processed, fine ore bins, and yellowcake storage in areas so that the material does not cause unnecessary exposure to the facility's personnel and so that material is not dispersed by wind and rain; 2. Adequate space in the yellowcake storage and packaging areas to conduct initial surveys and spot smear tests of yellowcake packages and to enable decontamination of drums to avoid transporting a contaminated package through other mill areas.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.31	Information Relevant to Ensauring that Occupational Radiation Exposures at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable, Rev. 1	C.3.1	The facility layout should be designed to maintain employee exposures ALARA while at the same time ensuring that exposure to other persons is not thereby increased. The facility layout should provide for: 1. Safe access to process equipment for routine maintenance; 2. Adequate ventilation in all facility areas in which radioactive materials might be spilled, suspended, or volatilized, (e.g., engineered controls); 3. Isolation of yellowcake drying, packaging, and shipping areas from other accessible facility areas; 5The figure 25% is used here to encourage the use of ventilation systems and other process controls in an effort to prevent the existence of airborne radioactivity areas as defined in 10 CFR 20.1003. According to 10 CFR 20.1701, “The licensee shall use, to the extent practical, process or other engineering controls (e.g., containment or ventilation) to control the concentrations of radioactive material in air.” 8.31-12 4. Controlling access to the UR facility and the ability to secure or restrict entry to any airborne radioactivity areas; 5. Change rooms and shower	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
			facilities so that all workers can remove any possible radioactive contamination before leaving the site; 6. Dispersion control on radioactive materials moving from contamination areas (e.g., crushers) to relatively contamination-free areas (e.g., crusher control room); 7. Isolation of facility areas where there is a high potential for the dispersal of uranium as the result of a fire.									
8.7	Instructions for Recording and Reporting Occupational Radiation Exposure Data	all	Reviewed. No applicable criteria/guidance.	0	0	0	0	0	0	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.i.(2)	Use of stainless steel for constructing and lining components can reduce corrossion.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.i.(8)	Leaks from pumps can be reduced by using canned pumps. ... Drains on pump housings and provisions for collection of leakage or disposal to a drain sump.	0	-1	0	0	0	0	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.i.(6)	Leakage of contaminated coolant from the primary system can be reduced by using live-loaded valve packings and bellow seals.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.1.d.(2)	Design concepts and station features should reflect consideration of the activities of station personnel (such as maintenance, refueling, inservice inspections, processing of radioactive waste, decontamination, and decommissioning) that might be anticipated and that might lead to personnel exposure to substantial sources of radiation. Radiation protection aspects of decommissioning should be factored into planning, designing, construction, and modification activities. Station design features should be provided to reduce the anticipated exposures of station personnel to these sources of radiation to the extent practicable.	0	-1	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.b.(4)	Streaming or scattering of radiation from locally shileded components (such as cubicles) can be reduced by providing labyrinths for access. However, such labyrinths or other design features of the cubicle should permit the components to be removed readily from the cubicle for repair or replacement where such work is expected or anticipated.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.b.(7)	Design features that permit the rapid removal and reassembly of shielding, insulation , and other materials from equipment that must be inspected or serviced periodically can reduce the exposure of station personnel performing these activities.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.b.(8)	Space within cubicles and other shielding to provide laydown space for special tools and ease of servicing activities can reduce potential doses by permitting the services to be accomplished expeditiously, thus reducing exposure time.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.b.(9)	Design features that permit the pmompt removal and instillation of these components (components in high radiation fields) can reduce the exposure time.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.f.(5)	The potential for contamination of "clean systems" from leakage from adjacent systems contaninig contamination can be reduced by separating piping fro those systems.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.c.(4)	The use of instrumentation that contains minimum quantities of contaminated working fluid (e.g., pressure transducers rather thna bellows-type pressure guages) can reduce the potential exposure at the readout locations.	0	0	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.d.(1)	The spread of airborne contamination within the station can be limited by maintaining air pressure gradients and airflows from areas of low potential airbrne contamination to areas of higher potential contamination. Periodic checks would ensure that the design pressure differentials are being maintained.	0	0	0	0	0	-1	-1	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.d.(2)	Potential doses from these systems (ventilation and gaseous radwaste treatment) can be minimized by providing ready access to the systems, by providing space to permit the activities to be accomplished expeditiously, by seperating filter banks and components to reduce exposure to radiation from adjacent banks and components, and by providing sufficient space to accomodate auxiliary ventillation or shielding of components.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.e.	Design features of the primary coolant system, the selection of construction materials that will be in contact with the primary coolant, and features of equipment that treat primary coalant should reflect considerations that will reduce the production and accumulation of crud in stations where it can cause high exposure levels.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.e.(1)	Production of Co-58 and Co-60, which constitute substantial radiation sources in crud, can be reduced by specifying, to the exxtent practicable, low-nickle and low-cobalt bearing materials for primary coolant piping, tubing, vessel internal surfaces, heat exchangers, wear materials, and other components in contact with primary coolant. Alternate materilas fir hard facings of wear materilas of high cobalt content should be considered where it is shown that these high-cobalt materials contribute to the overall exposure levels. ... Alternate materials for high nickel alloy materials (e.g., Inconel 600) should be considered where it is shown that these materials contribute to overall exposure levels.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.e.(5)	Deposition of crud within the primary coolant system can be reduced by providing laminar flow and smooth surfaces for coolant and by minimizing crud traps in the system to the extent practicable.	0	0	0	0	0	0	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.f.(1)	refer to text for details. Summary: Necessity to decontaminate can be reduced by limiting deposition, dead spaces or traps, avoiding stagent legs, locating connections above pipe centerline, and drains at low points.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.f.(2)	See text for details. Summary: Need to decontaminate can be reduced by reducing probability of releases, reducing spread of contamination from the source -- treatment of exhaust from vents and overflows, drainage control such as curbs and floor sloping to local drains, and sumps.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.f.(3)	Accumulation of crub or other radioactive materials that can not be avoided can be reduced by providing featues that will permit recirculation or flushing of fluids.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.b.(10)	Floor and equipment drains, piping, and sumps that are provided to collect and route any contaminated liquids that might leak or be spilled from process equipment or sampling stations can become substantila radiation sources. The drain lines can be located in concrete floors, concrete ducts, columns, or radwaste pipe chases to provide shielding.	-1	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.h.(2)	Specific discussion on Resin and sludge treatment systems. Summary: reduce pipe runs, use large diameter piping, avoid low points, reduce number of fittings, minimize flow restrictions, use full-ported valves, avoid cavaties in valves, long radius elbow bends (5 diameters), smooth interior pipe surfaces, for tees use flow through straight run and orientating branch horizontally above run.	0	0	0	0	0	-1	0	0	0
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Is Reasonably Achievable	C.2.f.(6)	Surfaces can be decontaminated more expeditiously if they are smooth, nonporous, and free of cracks, crevices, and sharp corners, using sealers on surfaces. Refer to ANSI N101.2.	0	0	0	0	0	-1	0	0	0
ANS DD&R 20	Practical Solutions to Difficult Decommissioning Issues -- Lessons Learned, Claudia Craig, NRC	III.	However, there are actions that can be taken at the design and construction phase to incorporate some of the lessons learned from decommissioning activities today. Examples include: 1) not burying or embedding radioactive pipes so that they will not have to be dug up or the wall demolished to decommission, 2) establishing a comprehensive groundwater monitroing program during the operational phase, 3) and locating certain buildings on the site such that should a spill occur it can be naturally contained.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Carl Feldman "	Overview of 10 CFR 20.1406 Rule Requirements for Power Reactors - early draft by one staff member, does not represent an agency position.	Item 7	Additionally, mechanisms, such as cranes, lifts, etc. should be given placement and contaminant disposal minimization.	0	0	-1	0	0	0	0	0	0
Carl Feldman "	Overview of 10 CFR 20.1406 Rule Requirements for Power Reactors - early draft by one staff member, does not represent an agency position.	Item 3	Also, as part of the background surveys design considerations, detailed site characterization should also be developed to ascertain wher significant contamination pathways might occur for the release of radionuclides (e.g. geologic considerations, including any replacement fill materials used during construction).	0	-1	0	0	0	-1	0	0	0
Carl Feldman "	Overview of 10 CFR 20.1406 Rule Requirements for Power Reactors - early draft by one staff member, does not represent an agency position.	Item 1	ONe of the significant early lessons learned about minimizing the impacts from reactor decommissioning was the importance of early planning. Such planning, when possible, should be developed during the design state of the reactor.At that time, opportunities for minimization of contamination of the facility and the environment should be explored which carefully consider reactor design, operatiing procedures, and facilitate decommissioning.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Carl Feldman "	Overview of 10 CFR 20.1406 Rule Requirements for Power Reactors - early draft by one staff member, does not represent an agency position.	Item2	Because, ultimately, a termination survey will be required for the site's release, it's imperativehtat a detailed site surveys are performed before reactor construction takes place, suitable for establishing radioactive background levels. The survey should be designed to provide needed background information (above and below ground) to compare with the termination survey used to verify dose level compliance wtih the provisions in Part 20, Subpart E. This means that during the reactor planning stage, a detailed termination survey plan should be anticipated and developed that is consistant with the Part 20 radioactivity requirement validation because the release requirements are indexed to the above background levels.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Carl Feldman "	Overview of 10 CFR 20.1406 Rule Requirements for Power Reactors - early draft by one staff member, does not represent an agency position.	Item 4	A major concern for minimizing radioactive waster is contamination from leakage or spills onto the surrounding areas of the facility or into soil and, consequently into the surrounding environment (soils, geology, etc.). Although designs to minimize any liquid waste contamination wiill be discussed later, it is important to recognize that even careful design planning and enactment cannot preclude the possibility of some eventual liquid releases into the soil. Therefore, it's important to first consider site suitability for mitigating any unplanned liquid release into the soil and surrounding environment. Adequate planning for possible releases requires consideration of hydrological contaminant transport modeling, and such modeling should be developed as part of the considerations for determining site suitability. The parameters required to evaluate the modeling considerations should be determined to the degree appropriate from site specific measurements. Of course, some problems with site suitability might be mitigated through careful design considerations, such as replacing some soil with other materials that could retard the transport of any anticipated significant readionuclides of concern.If such soil	0	-1	0	-1	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
			replacement is under consideration (including excavation), then the properties of such replacements should also be characterized to the degree required for realistic transport modeling.									
Carl Feldman "	Overview of 10 CFR 20.1406 Rule Requirements for Power Reactors - early draft by one staff member, does not represent an agency position.	Item 5	Despite any design considerations to either avoid or collect liquid waste, it's important during operations to be able to detect when such possible waste contamination starts so that its spread can be quickly stopped or mitigated. Thus continuous monitoring for the detection of any potential contamination must be considered. This should include consideration of designing in placement of instruments or readily inspectible locations, and associated procedures, that will enable early detection of contamination. Because leakage detection is only the necessary first step, mitigation planss should also be developed for quickly acting to stop any spread of contamination, should it be detected.	0	-1	-1	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Carl Feldman "	Overview of 10 CFR 20.1406 Rule Requirements for Power Reactors - early draft by one staff member, does not represent an agency position.	Item 6	It is also important that systems, or equipment , or materials used to help isolate or remove liquid contamination be tested prior to their use to ensure that they don't further contribute to spreading contamination. This includes consideration of any portable equipment that may be used, which should also have redundancy provisions built in to prevent or isolate any liquid spills. In this regard, mock ups and procedure development should also be explored to help ensure that workers know how to inspect for laeakage, and how to use any liquid contamination removal equipment and/or techniques in a responsive way at anytime during reactor operations.	0	0	-1	0	0	0	0	0	0
IAEA-TECDOC	Prevention and Mitigation of Groundwater Contamination from Radioactive releases	all	No applicable guidance/criteria.	0	0	0	0	0	0	0	0	0
NCRP Report 1	Dose Control at Nuclear Power Plants	5.5.6	Robotics It would be prudent for designers to consider that reactor system areas should be designed for ease of robot access for carrying out inspections, maintenance operations, surveys, sample taking, etc.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
NCRP Report 1	Dose Control at Nuclear Power Plants	6.3	Contamination Control. An aggressive leak identification and repair program for components containing radioactive materials will prevent unnecessary contamination and will minimize radioactive waste. There were many other items in this reference that discussed operational considerations, such as system chemistry, controlled shutdown chemistry, system decontamination, fuel integrity. These were considered feature for operational ALARA and not directly applicable for decommissioning consideration.	0	0	-1	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
NCRP Report 1	Dose Control at Nuclear Power Plants	5.5.4	System layout Nonradioactive system components which will require maintenance to be separated from radioactive system components and piping. Frequently, this is as simple as placing a valve or sampling station at one end of a pipe run rather than the other. In planning piping layout of radioactive systems, designers should avoid creating corrosion traps such as unnecessary bends and stagnant legs. At some time during design and construction, either the architect engineer or the operator should make comprehensive video tapes of equipment layout in areas where radiation fields are expected to be high following operations.	0	-1	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
NCRP Report 1	Dose Control at Nuclear Power Plants	5.5.1.2	System Chemistry and Metallurgy Surface pretreatment condition and finish within reactor systems affects radiation field buildup dramatically. Hot conditioning is a commissioning and operational activity that can produce an oxidized surface to which corrosion products do not readily adhere. A prospective design feature that will also influence radioactive material buildup on reactor system surfaces is surface polishing. Future stations may well electrolytically polish and preoxidize the inside surfcaes of reactor systems in order to minimize deposition of activated corrosion products. Designers must install systems which enable operators to carry out decontamination efficiently, with minimum of collective dose and a minimum production of radioactive waste. If system decontamination facilities are not provided in the initial design, major problems arise in operation, e.g., the rupture of temporary hose connections, exposure to partially shielded ion exchange columns, and lack of operating and maintenance	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
			space. These shortcomings can result in high doses to station staff, possible high liquid effluent releases and significant levels of surface contamination.									
NCRP Report 1	Dose Control at Nuclear Power Plants	5.5.3.2	Ease of Maintenance, Operation, Inspection and Access Appropriate consideration must be given during design to: * methods of moving equipment into and out of its normal location, * ease of connection of services to equipment such as pumps, i.e., quick disconnects, * selection of components that can be maintained by modular replacement. * ease of removal of insulation.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	'onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
NCRP Report 1	Dose Control at Nuclear Power Plants	5.5.1.1	Cobalt Source Reduction. EPRI has provided valuabel summaries for designers on methods of reducing radiation fields and has issued cobalt reduction guidelines. (See EPRI references.) Valve seats, disks and other parts which have hard facing should be replaced with materials which have zero or very-low cobalt content. There is probably no single factor more important for dose reduction than the elimination/reduction of stable cobalt in reactor system materials.	0	-1	0	0	0	0	0	0	0
Rafael Rodrigu	Draft Input On Lessons Learned	Item 5	Licensees should compare the benefits of embedded radioactive pipes during the design and operation of a facility against the difficultiesthey could cause at the time of decommissioning. Embedded pipes, especially those that are small in diameter (less than 6 inches), could complicatee decommissioning activities because they are very difficult to remove or to survey.	0	-1	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Rafael Rodrigu	Draft Input On Lessons Learned	Item 1	Adequate onsite characterization of the subsurface hyro-geology of a site helps to understand how potential contamination resulting from daily operation of the facility will migrate through the soil and possibly into the groundwater. After the facility had been built, licensees should re-confirm that the characteristeics of the subsurface hydro-geology are still consistent with the hydro-geology profile of the subsurface prior to construction. If there are changes, licensees may need to evaluate those changes and address them during operations and before starting decommissioning.	0	0	0	-1	-1	-1	0	0	0

Reference	Description	FSection	Discussion	Conflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Rafael Rodrigu	Draft Input On Lessons Learned	Item 2	Licensees should consider design features that will facilitate access and incorportate ALARA for maintenance, component replacement, surveillance, and remote sampling near areas that have a tendency to be high-radiation areas and/or highly contaminated areas. Examples that might apply to the reactor vesselor steam generator area could include: - install walkways - install platforms - install shield walls Other design features could include: - plan removal pathways for tanks and vessels (hatches, removal walls, collapsible systems, etc.) - coatings for porous materials - isolation of radioactive waste systems	0	-1	0	0	0	0	0	0	0
Rafael Rodrigu	Draft Input On Lessons Learned	Item 4	Licensees should consider establishing onsite decontamination facilities and/or waste segregation facilities in order to properly manage large quantities of radioactive material/waste.	0	0	0	0	0	-1	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Rafael Rodrigu	Draft Input On Lessons Learned	Item 6	As stated in RIS-2002-002, establishing a comprehensive groundwater monitoring program beyond the normal radioactive effluent monitoring program may reduce delays in decommissioning. This should be accomplished during the design and operation of a facility.	0	0	0	0	0	0	-1	0	0
Rafael Rodrigu	Draft Input On Lessons Learned	Item 7	Minor leaks over a long period of time can contributeto significant contamination in soil and groundwater that results in significant costs for remediation. Leak detection systems for a spent fuel pool should be capable of detecting minor leakage from the pool. The detection system should have the ability to be flushed with clean water to remove small quantities of borated water and dissolve boric acid solids resulting from minor leakage (from the spent fuel pool wall and floor welds, bellows to transfer channels, and access gates areas) that may tend to obscure the data from leak detection systems.	0	-1	-1	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Rafael Rodrigu	Draft Input On Lessons Learned	Item 8	Storage tanks for radioactive material should have leak detection systems to ensure that any leakage of material is detected to prevent contamination of the soil and groudwater under the tank. In addition, these tanks should have a catch basin around the base of the tank to collect minor thru-wall leaks and ensure adequate collection and monitoring of precipitation on the outside of the tank.	0	-1	-1	0	0	0	0	0	0
Rafael Rodrigu	Draft Input On Lessons Learned	Item 9	Concrete grouted connections for floor drains should be constructed such that leaks and spills on the floor will be collected in the floor drains. A quality assurance inspection program must be developed that ensures that grouted areas have no cracks or fissures to allow fluids to bypass the floor drain and into unmonitored areas beneath the floors and foundations.	0	-1	0	0	0	0	0	0	0
Rafael Rodrigu	Draft Input On Lessons Learned	Item 10	A floor/wall expansion joint inspection procedure should be developed so that floor and wall joiints are installed properly to ensure that spills and leaks on the floors do not enter unmonitored areas beneath the floors and foundations. This item should be expanded to address how licensees will ensure that spills and leaks from skid mounted systems will be contained and routed to radioactive waste drains.	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
Rafael Rodrigu	Draft Input On Lessons Learned	Item 11	Concrete block walls constructed to allow removal for future maintenance or replacement of large components must be properly sealed to prevent intrusion of radioactive materials into the block interiors. Hollow and solid block walls that are sealed by concrete, paint, or other nuclear coatings, have been found found with contamination inside the walls. This condition has been found with walls that are connected to ceilings and free-standing walls that are not physically connected to the ceilings or roofs.	0	-1	-1	0	0	0	0	0	0
Rafael Rodrigu	Draft Input On Lessons Learned	Item 3	When designing enclosures for large pieces of equipment (e.g., steam generators, large piping, tanks, etc.), the licensee design should consider how these pieces will be removed for replacement or permanently removed at the time of decommissioning. Licensees should evaluate things like: - size/space considerations - installation of removable roofs/walls - installation of lifting lugs - anchor points for lifts - shearable nuts and bolts - quick disconnect components	0	-1	0	0	0	0	0	0	0

Reference	Description	FSection	Discussion	onflict	CFD	CFO	CED	CEO	FDD	FDO	GWD	GWO
RIS 2002-02	NRC Regulatory Issues Summary 2002-02: Lessons Learned Related to Recently Submitted Decommissioning Plans and License Termination Plans	all	No applicable guidance/criteria.	0	0	0	0	0	0	0	0	0
TR-1011734	Maine Yankee Decommissioning Experience Report	F.	Contamination Control · Operate a clean plant - prevent leaks and spills, and clean them up quickly when they occur · Aggressively control contamination and eliminate hot spots · Maintain stringent and well documented free release control processes · Minimize the amount of radiation work performed outside the restricted area	0	0	-1	0	0	0	0	0	0
TR-1011734	Maine Yankee Decommissioning Experience Report	F	· Ship waste offsite when generated; avoid legacy wastes.	0	0	0	0	0	0	0	0	-1
TR-1011734	Maine Yankee Decommissioning Experience Report	F.	Structures and Equipment · Look at total life cycle including removal and disposal when designing modifications and operating processes · Thoroughly apply sealant to original construction joints · Avoid use of underground piping (or place into structured pipe chases) · Construct clear separation between containment and spent fuel pool in fuel transfer tube · Eliminate floor drains and buried piping where possible · Know what is underground.	0	-1	0	0	0	0	0	0	0