

PART 52, LIFE CYCLE MINIMIZATION OF CONTAMINATION AND GROUNDWATER PROTECTION PROGRAM

PROGRAM APPLICABILITY: IMC 2504 B

83531-01 INSPECTION OBJECTIVE

01.01 To determine whether the licensee's processes for minimizing the contamination of the facility and the environment, facilitating eventual decommissioning, and minimizing, to the extent practicable, the generation of radioactive waste, are fully described, and are consistent with the guidance used for implementing the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 20, Section 1406 (10 CFR 20.1406), "Minimization of Contamination," paragraph a.

01.02 To determine whether the licensee's processes for minimizing the introduction of residual radioactivity into the site are fully described and are consistent with the guidance used to implement the requirements of 10 CFR 20.1406, "Minimization of Contamination," paragraph c.

83531-02 INSPECTION REQUIREMENTS AND INSPECTION GUIDANCE

General Inspection Guidance

Nuclear Energy Institute (NEI) guidance document, NEI 08-08A, Revision 0, "Guidance for Life Cycle Minimization of Contamination," dated October 2009, ([Agencywide Documents Access Management System \(ADAMS\)](#) Accession No. ML093480532) meets the requirements of 10 CFR 20.1406(a) for licensees to have procedures for operation that will, to the extent practicable, minimize contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste. NEI 08-08A addresses the development of operational programs and procedures to limit leakage and control the spread of contamination consistent with the intent of the guidance provided by Regulatory Guide (RG) 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning." As stated in the NEI 08-08A Template, NEI 07-07, "Industry Ground Water Protection Initiative – Final Guidance Document," dated August 2007, Section 1.0, "Ground Water Protection Program," is the technical basis for the ground water protection initiative. NEI 08-08A also notes that Electric Power Research Institute (EPRI) Report 1016099, "Groundwater Protection Guidelines for Nuclear Power Plants," (TR-1016099) provides a detailed technical basis in the accomplishment of NEI 07-07 and NEI 08-08A, and is used to implement a comprehensive approach to the operational aspects of ground water protection for new reactors. Deviations from the guidance provided in TR-1016099 constitute an exception to the NEI 08-08A Template, and are to be identified as such in the implementing programs. The NEI 08-08A template also recognizes that Inspection and Enforcement (IE) Bulletin No. 80-10, "Contamination of Nonradioactive System and Resulting Potential for

Unmonitored, Uncontrolled Release of Radioactivity to Environment,” provides additional information regarding system interactions that could result in facility contamination.

For those licensees that elect to demonstrate compliance with the programmatic requirements of 10 CFR 20.1406(a) via alternate methods, SECY-04-0032, “Programmatic Information Needed for Approval of a Combined License Application Without Inspections, Tests, Analyses, and Acceptance Criteria,” notes that the program is to be fully described in the absence of inspection, test, analysis, and acceptance criteria (ITAAC). “Fully described” means that the program is clearly and sufficiently described in terms of the scope and level of detail to allow a reasonable assurance finding of acceptability at the combined license (COL) stage. For the purpose of this inspection, the program is to be consistent with the description provided in the Final Safety Analysis Report (FSAR). The FSAR program description may contain a full description of the program, consistent with SECY-04-0032, or may incorporate the NEI 08-08A template and the required supplemental information.

NEI 08-08A was developed prior to the promulgation of 10 CFR 20.1406(c), and therefore does not contain information specifically directed at addressing those requirements. The staff developed RG 4.22 “Decommissioning Planning During Operations,” to provide guidance specifically related to the implementation of 10 CFR 20.1406(c), primarily for existing facilities, and therefore may not be part of the licensing bases of the facility.

This inspection procedure focuses on those program and procedure elements implemented as part of the licensee’s compliance with 10 CFR 20.1406(a), and by extension the Decommissioning Planning Rule. While the licensee’s programs and procedures may also address other industry initiatives (i.e., voluntary initiatives), since those provisions are not part of the licensing bases, they are not within the scope of this inspection procedure. For those licensees that have included NEI 08-08A in their licensing bases, NEI 07-07 by extension, becomes part of the licensing bases of the facility, with the exception of the NEI 07-07 Section 2 provisions for voluntary communication which NEI 08-08A explicitly states is not part of its guidance.

Where available, use system walkdowns and observations of system operation to supplement the programmatic review when completing this procedure.

If the unit being constructed is at a site with existing operational units for which the same program will be used at all units, then this program may not require the same level of inspection as that required for units being constructed at sites with no operational units. This is consistent with the Baseline Inspection Program requirements identified in Inspection Manual Chapter 2506, “Construction Reactor Oversight Process General Guidance and Basis Document.” At sites with an operating unit where the licensee has chosen to take credit for similar operational programs as those that are already in use, the inspectors shall focus on the differences between the program already in use and the newly developed program. The operational program inspection should focus on those steps in the IMC 2504 inspection procedures where the inspectors cannot verify that the operational program, equipment, and components are the same, or substantially similar to, that of the operating unit. If the operational program, equipment, and components are the same, or substantially similar to, the operating unit, then the following minimum inspection requirements shall be completed, and all other inspection requirements may be omitted:

Part 52 Licensees Collocated with an Existing Operational Unit

Minimum Inspection Requirements:

- a. Verify that the 10 CFR Part 52 licensee has incorporated the operational plant's procedures for Life Cycle Minimization of Contamination and Groundwater Monitoring into their program.
- b. Verify that the 10 CFR Part 52 licensee has completed hydrological studies sufficient to support creation of a Site Conceptual Model.
- c. Verify, including via walkdowns, that the 10 CFR Part 52 licensee has identified a list of structure, system, and component (SSCs) and has ranked those SSCs based their potential to release licensed material to groundwater.
- d. Verify, including via walkdowns, that the 10 CFR Part 52 licensee has installed a sufficient number of groundwater monitoring wells, in appropriate locations, to provide adequate monitoring of the subsurface based on the SSC risk ranking and Site Conceptual Model.
- e. Verify, including via walkdowns, that the 10 CFR Part 52 licensee has designated certain areas of the plant for storage of radioactive materials and radioactive waste.

Inspection Guidance: Verification of procedure incorporation should include a review of procedure cover sheet information (e.g., procedure titles and site applicability, management approvals, revision history, etc.), and a limited review of the procedure itself for applicability to the 10 CFR Part 52 site. The licensee may have developed specific procedures due to differences in plant design or layout. If so, review the site-specific design differences for conformance with the FSAR and review procedures for adequate inclusion of the site-specific design differences. Applicable guidance can be found throughout IP 83531. Where applicable, these inspection activities should be reviewed for compliance with 10 CFR Part 20, 10 CFR Part 52, and the FSAR.

Inspection Requirement:

02.01 Verify programs are provided for minimizing contamination per the requirements of 10 CFR 20.1406(a).

Inspection Guidance:

- a. Evaluate how the contamination minimization program and procedures incorporate the requirements of the licensing bases and commitments, described in the FSAR. Examine the FSAR and contamination minimization program documents. Where available, review at least one change package.

The program and procedures **should** reflect the guidance contained within the licensing bases **including** the FSAR, **and** other commitments. Where commitments have changed, the licensee **should** demonstrate how the applicable design **change procedures** were followed for implementing those changes.

- b. Evaluate how the licensee's programs and procedures identify and control the features of the facility provided for minimizing contamination of the facility or the environment and for minimizing the generation of radioactive waste, and facilitating decommissioning. Examine at least **one** high-activity-concentration, potentially-low-volume and at least **one** low-activity-concentration, potentially- high-volume-potential leakage sources.

Assess how the licensee's programs and procedures address potential sources of contamination. The licensee's programs and procedures should demonstrate it has taken measures to minimize the potential for contamination of the facility as described in the FSAR. Review the processes used by the licensee to assess the completeness of contamination control measures (e.g., single walled buried piping containing radioactive material, below grade building penetrations, components such as valves, pipes or fittings containing radioactive material located outside of SSCs, and SSCs that were not previously identified as containing radioactive material).

- c. Evaluate how the licensee's programs and procedures identify SSCs that contain, or could contain, radioactive material, for where there is only a single barrier between the SSC and the environment. Examine the licensee's list of SSCs that contain, or could reasonably be expected to contain, radioactive material. Examine at least one high activity concentration, potentially low volume and at least one low activity concentration potentially high volume potential leakage sources.

The licensee's programs and procedures should identify those SSCs containing radioactive material where the failure of a single barrier could result in inadvertent or unintentional contamination of ground water or native soil (e.g., refueling water storage tanks, if outdoors or part of an outside wall adjacent to the ground; spent fuel pools; spent fuel pool leak detection systems; outdoor tanks; outdoor storage of contaminated equipment; buried piping; retention ponds or basins or reservoirs; and lines carrying steam). See IE Bulletin No. 80-10, "Contamination of Non-Radioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment," for more information about systems that could become contaminated. The licensee's programs and procedures should also describe the methods and processes to be used to provide early detection of leakage from these SSCs (e.g., sentinel wells).

- d. Evaluate how the licensee's programs and procedures identify and interface with other licensee programs (e.g., buried piping program, in-service inspection, preventive maintenance, surveillance, etc.) are used to provide reasonable assurance that radioactive material will not reach ground water. Where available, select at least two SSCs per each of the other programs used.
- e. Evaluate how the licensee's programs and procedures include methods for identifying and incorporating enhancements for radioactive material leakage prevention or leakage detection.

The licensee's programs and procedures should identify how enhancements for identifying potential sources of leakage, leakage prevention, and leakage detection are to be identified and included into the program.

- f. Evaluate how the licensee's programs and procedures incorporate methods for establishing the list of stakeholders, keeping the stakeholder list current, and soliciting stakeholder input. Examine the licensee's stakeholder list. Where available, select at least two additions to the list and at least two deletions from the list.

Where stakeholder cohorts have been established (e.g., a cohort for establishing sampling criteria, a cohort for notifications of leaks or spills etc.), the licensee's programs and procedures should specify the criteria for determining cohort members, and when the cohorts are to be used.

- g. Evaluate how the licensee's programs and procedures document and evaluate deviations from the guidance contained within NEI and **EPRI guidance documents**. Where available, examine at least two licensee identified deviations from the guidance documents.

The licensee's programs and procedures **should** identify how the implemented programs deviate from that described in the relevant guidance documents. Where deviations exist, the licensee's programs and procedures **should** include evaluations of the alternate methods that demonstrate continued compliance with the underlying regulatory bases.

Inspection Requirement:

02.02 Verify mechanisms and methods are provided for the prompt detection of leakage for compliance with 10 CFR 20.1406(a).

Inspection Guidance:

- a. Evaluate how the licensee's programs and procedures describing prompt detection of leakage are implemented. Select at least **two SSCs and their associated** monitoring locations. The licensee's programs and procedures **should fully** describe the processes used to establish the monitoring and routine surveillance methods and frequencies for accessible portions of SSCs containing radioactive material where the failure of a single barrier could result in inadvertent or unintentional contamination of ground water or native soil. For each of the identified SSCs, the licensee's program identifies the acceptable monitoring methods and the associated required monitoring frequencies.
- b. Evaluate how the licensee's programs and procedures describing the on-site ground water monitoring program **will** ensure timely detection of inadvertent radiological releases to ground **water**. The licensee's programs and procedures **should** describe the processes for using hydrology and geology studies to establish the locations and characteristics of ground water monitoring wells located within the site boundary. The licensee processes describe the criteria used for establishing when and where monitoring wells around SSCs with the highest potential for inadvertent releases will be provided.
- c. Evaluate how the licensee's programs and procedures for performing sampling and analysis of ground water and soil are implemented. **Specific** analyses such as gamma spectroscopy, liquid scintillation, difficult-to-detect nuclides, and where applicable, chemical species **should be identified**. Analytical protocols, sampling frequencies, **sample matrices (e.g., water, soil)**, analytical sensitivity levels, requirements for split sampling, and sample preservation **should be identified and defined**. Processes **should be** established for screening and review of analytical data, including the treatment of outlier data, false negative **or** positive results **and laboratory program bases documents (e.g., MARLAP) should also be identified**.
- d. Evaluate how the licensee's programs and procedures **describe the methods for adding or removing monitoring points, including those that are part of the Radiological Environmental Monitoring Program (REMP)**.
- e. Evaluate how the licensee's programs and procedures implement periodic reviews of the long-term ground water program.

The licensee's program and procedures **should** describe the processes used to establish the type and frequency of reviews of the ground water monitoring program, the methods for establishing or removing review elements, **for** documenting the results of reviews, and processes for rectifying identified deficiencies.

- f. Evaluate how the licensee's programs and procedures describe the preventive maintenance requirements for monitoring wells. Where available, examine the preventive maintenance requirements for at least two different sample monitoring wells.

Inspection Requirement:

02.03 Determine the status of the programs provided for minimizing the potential release of radioactive material from undetected leaks, for 10 CFR 20.1406(a).

Inspection Guidance:

Evaluate how the licensee's programs and procedures describing the methods to be used to identify hard-to-detect leaks are implemented. Where available, examine the monitoring methods for at least two inaccessible areas where low-volume high-activity concentration may exist.

The licensee's program and procedures describe the processes to be used to identify areas where hard to detect leaks may occur (e.g., inaccessible areas where low-volume, high-activity concentration may exist). The licensee's processes describe the methods to be employed to identify leaks that could, over an extended period of time, result in the accumulation of subsurface residual contamination. As noted within the guidance of RG 4.21, SSCs, such as a spent fuel pool and associated piping, have been assigned to clearly defined zones with the capability to detect and quantify small leakage rates (e.g., several gallons per week) from each zone. The licensee's processes describe the methods to be used for remote monitoring (e.g., cameras) for areas that are not readily accessible, the areas requiring remote monitoring methods, and the type of remote monitoring employed.

Inspection Requirement:

02.04 Determine the status of the programs provided for reducing the need for decontamination of equipment and structures for 10 CFR 20.1406(a).

Inspection Guidance:

- a. Evaluate how the licensee's programs and procedures describe the methods to be used to minimize leakage from components. Where available, examine the leakage prevention methods for at least two areas where low-volume, high-activity concentration may exist, and two areas where high-volume, low-activity concentration may exist.

The licensee's program and procedures describe the processes to be used to minimize leakage from components containing radioactive material. These programs and procedures include the use of current industry consensus codes, standards and guidance related to periodic inspections and testing, installation and maintenance methods, and establishment of procurement specifications specific to reducing the potential for leakage.

- b. Evaluate how the licensee's programs and procedures describe how ventilation systems are used to minimize contamination. Examine the procedures for balancing and operating ventilation system components for areas containing radioactive material. Select at least two areas where improper operation of the ventilation system could result in inadvertent facility or site environs (not effluents related) contamination.

The licensee's program and procedures describe the processes to be used to assure that the features that assure air flow from lower contamination areas to higher contamination (e.g., pressure gradients, damper balancing, fan speed controls) as described in the FSAR, are operated, inspected, tested and maintained in a manner that assures continued accomplishment of the function of minimizing contamination. Since other NRC inspection programs will focus on the facility safety-related ventilation systems, inspectors should focus on non-safety-related ventilation systems.

- c. Evaluate how the licensee's programs and procedures use the As Low As Reasonable Achievable (ALARA) programs and procedures to minimize contamination. Examine the ALARA procedures.

The licensee's program and procedures for the minimization of contamination identifies the relevant ALARA program or procedure used to implement this provision. The licensee's site procedures for the ALARA program describe the methods to be used to minimize the probability of releases to the facility or to the site environs, and to minimize the spread of contamination. The ALARA program procedures provide for the use of temporary equipment and techniques for minimizing the spread of contamination from radioactive material contained in air, steam or liquids.

Inspection Requirement:

02.05 Verify that programs are provided for the review of operational practices for compliance with 10 CFR 20.1406(a) and 10 CFR 20.1406(c).

Inspection Guidance:

- a. Evaluate how the licensee's programs and procedures describe the methods to be used to evaluate work practices. Where available, examine the established work practices/package for at least two SSCs containing radioactive material where the failure of a single barrier could result in inadvertent or unintentional contamination of ground water or native soil.

The licensee's programs and procedures have established the requirements for the evaluation of work on those SSCs containing radioactive material where the failure of a single barrier could result in inadvertent or unintentional contamination of ground water or native soil. The licensee's programs and procedures identify the work practices, or types of work practices that could reasonably be expected to cause ground water contamination; identify the leakage detection methods to be employed for performing the work practice; and identify any enhancements to the existing leakage detection provisions that are to be employed as a result of the work practice.

- b. Evaluate how the licensee's programs and procedures describe the methods to be used to review work practices. Examine the procedures describing the post-work review criteria.

The licensee's programs and procedures establish mechanisms for the periodic review of work practices involving SSCs containing radioactive material where the failure of a single barrier could result in inadvertent or unintentional contamination of ground water or native soil. The methods to be used for changing the frequency of reviews (e.g., increased number of events, etc.) are to be stated. The review process provided includes provisions for evaluating events (e.g., equipment failures, deficient work practices, human performance issues, etc.) and the effectiveness of the corrective actions. The review process includes

provisions for evaluating the effectiveness of preventive maintenance and surveillance activities for minimizing contamination.

- c. Evaluate how the licensee's programs and procedures describe the evaluation process for leaks and spills. Examine the procedures describing the evaluation criteria for leaks and spills.

The licensee's programs and procedures establish mechanisms for the evaluation of leaks and spills based on the significance of the event. As noted in the guidance of RG 4.21, footnote 1, "radiologically significant" generally refers to the presence of radioactive materials at levels which could result in radiation exposures and doses in excess of the 10 CFR Part 20 requirements for radiation workers and members of the public, or in excess of liquid and airborne effluent concentration limits and releases to sewers under Appendix B to 10 CFR Part 20. For significant events, the licensee's programs and procedures require the determination of the apparent root cause, the extent of condition, and immediate and interim corrective actions.

Inspection Requirement:

02.06 Determine the status of the programs provided for minimizing contamination of the environment for 10 CFR 20.1406(a) and 10 CFR 20.1406(c).

Inspection Guidance:

- a. Evaluate how the licensee's conceptual site model has been developed and maintained. Examine the procedures used by the licensee to develop the site conceptual model.

NOTE: the term "site conceptual model" is used interchangeably with "conceptual site model" or "conceptual model." The licensee has a conceptual site model that uses the site characterization of geology and hydrology to provide an evaluation of predominant ground water flow characteristics based upon current site conditions. The information used in the conceptual site model is consistent with the information contained within Chapter 2 of the licensee's updated FSAR. The conceptual site model, or referenced data describes the hydrogeological and geologic studies used to determine predominant ground water flow characteristics and gradients; has descriptions of the reviews of existing hydrogeological and geologic studies, historical environmental studies, and permit or license related reports; identifies potential pathways for ground water migration from on-site locations to off-site locations through ground water; establishes the frequency for periodic reviews of site hydrogeological studies; identifies the criteria (e.g., substantial on-site construction, substantial changes in on-site or nearby off-site water usage, etc.), that require a review of the site hydrogeological studies by a professional geologist/hydrologist. The licensee's programs and processes describe the criteria and methods for implementing updates to the FSAR as a result of reviews of the conceptual site model.

- b. Evaluate how the licensee's processes for early detection of leakage have been developed and implemented. Examine the licensee's site conceptual model to determine the methodology used for early leak detection. Where available, select at least one monitoring point for each methodology employed.

The licensee's programs and procedures describe the methodology used for establishing the location of early leakage detection and contamination migration monitoring points. The

programs and procedures describe the types and frequencies of samples from locations near potential sources of radioactive material.

- c. Evaluate how the licensee's programs and procedures have incorporated information from the final site configuration. Where available, select at least three aspects of the site construction that have been incorporated into the site conceptual model.

The licensee's programs and procedures ensure that prior to fuel load, the site conceptual model has been updated to reflect the current site configuration. For multi-unit new construction sites, construction activities on the subsequent units may impact characteristics of the conceptual site model developed for the lead unit. The licensee's programs and procedures ensure that the site conceptual model reflects the final "as built" site configuration following the completion of all construction activities. The licensee's programs and procedures require the performance of a review that ensures that the characterization of site geology and hydrology provides an understanding of predominant ground water flow characteristics based upon the final site configuration. The licensee's review of the site conceptual model ensures that, given the final site configuration, the licensee's program provides for the early detection of inadvertent radiological releases to groundwater. The licensee's protocols for responding to detected leaks and spills reflect the final "as built" site configuration.

Inspection Requirement:

02.07 Determine the status of the programs provided for facilitating decommissioning for 10 CFR 20.1406(a).

- a. Evaluate how the licensee's programs and procedures prevent migration of licensed material offsite and how impacts to decommissioning are minimized. Examine the licensee's procedures describing the monitoring, control, and remediation of potential site contamination.

The licensee's processes describe the decision-making process for performing remediation of leaks, spills, or other inadvertent releases of radioactive material. The licensee's programs and procedures include provisions for identifying the potential for finding detectable levels of licensed material as a result of planned releases of licensed contained in liquid or gaseous materials. The licensee's procedures describe how effluent release data will be used to perform future evaluations.

- b. Evaluate how the licensee's programs and procedures ensure the generation and retention of events of interest for decommissioning. Examine the licensee's procedures describing the generation and maintenance of records related to instances of facility and environmental contamination.

The licensee's programs and procedures describe the methods for collection, retention, and retrieval of records related to instances of facility and environmental contamination and operational events that are of interest for decommissioning or that result in residual contamination. These programs and procedures ensure that records of leaks, spills, and remediation efforts are retained and retrievable to meet the requirements of 10 CFR 50.75(g) and 10 CFR 72.30 (d).

- c. Evaluate how the licensee's programs and procedures ensure the minimization of the generation of radioactive waste. Examine the licensee's procedures describing the methods for minimizing waste, including large components.

The licensee's programs and procedures describe the processes to be used for identifying and minimizing radioactive waste from potentially significant components (e.g., reactor heads, steam generators) over the life of the plant. The licensee's programs describe the methods used to evaluate measures for minimizing waste generation.

- d. Evaluate how the licensee's programs and ensure adequate on-site storage of radioactive waste. Where the licensee has not already identified on site storage areas, examine the licensee's procedures describing the methods for establishing waste storage areas. The licensee's programs and procedures describe the processes to be used for identifying and implementing on-site storage of radioactive waste, should other disposal or treatment options become unavailable. The licensee's programs and procedures describe the processes used to assess the on-site storage facilities for radioactive waste. The licensee has an evaluation of the provisions for decontaminating and decommissioning the on-site waste storage facilities.

83531-03 RESOURCE ESTIMATES

Approximately 80 hours of direct inspection effort will be required to implement this procedure. An inspection of the program and related procedures and records will require health physicists trained in internal exposure control and assessment and in inspection techniques as they relate to nuclear power facilities.

The actual hours required to complete the inspection may vary from this estimate. The inspection hours allocated for this inspection are an estimate for budgeting purposes. The hours expended for this inspection should consider plant specific design features and operational programs. The level of effort expended in such inspections should be recorded for the purpose of planning future inspections and updating budget allocations. If this inspection procedure is performed at a 10 CFR Part 52 licensee collocated with an existing operational unit and the operational program, equipment, and components are the same, or substantially similar to, that of the operating unit, inspection effort is expected to require approximately 20 hours of direct inspection effort.

83531-04 REFERENCES

10 CFR Part 20.1406, "Minimization of Contamination."

10 CFR Part 20.1501, "General."

10 CFR Part 20.2102, "Records of radiation protection programs."

10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning."

10 CFR 72.30, "Financial assurance and recordkeeping for decommissioning."

IE Bulletin No. 80-10, "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment," May 6, 1980, (ADAMS Accession No. ML080310679)

MARLAP, Multi-Agency Radiological Laboratory Analytical Protocols Manual, NUREG-1576, EPA 402-B-04-001A, July 2004.

Regulatory Guide 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning."

Regulatory Guide 4.22, "Decommissioning Planning During Operations," SECY-04-0032, "Programmatic Information Needed for Approval of a Combined License Without Inspections, Tests, Analyses and Acceptance Criteria," (ADAMS Accession No. ML040230079)

SRM-SECY-04-0032, "Programmatic Information Needed for Approval of a Combined License Without Inspections, Tests, Analyses, and Acceptance Criteria," (ADAMS Accession No. ML041350440)

Electric Power Research Institute (EPRI) Report TR-1016099, "Groundwater Protection Guidelines for Nuclear Power Plants: Public Edition," (ADAMS Accession No. ML081000375)

Nuclear Energy Institute, "Industry Ground Water Protection Initiative – Final Guidance Document" NEI 07-07, August 2007(ADAMS Accession No. ML072610036)

Nuclear Energy Institute NEI-08-08A Revision 0, "Guidance for Life Cycle Minimization of Contamination," October 2009 (ADAMS Accession No. ML0934805320)

83531-05 PROCEDURE COMPLETION

This procedure will be closed upon satisfactory inspection results verifying the inspection objectives have been met. The inspection must demonstrate the program can be inspected under the **reactor oversight process**.

END

Attachment 1: Revision History for IP 83531

Revision History for IP 83531

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment and Feedback Resolution Accession Number (Pre-Decisional, Non-Public Information)
N/A	ML16308A273 12/22/16 CN 16-035	Initial issuance to support inspections of operational programs described in Manual Chapter 2504, Construction Inspection Program - Inspection of Construction and Operational Programs. Researched commitments for the last four years and found none.	N/A	ML16308A269
	ML20045E554 03/04/20 CN 20-013	Revises guidance for units being constructed at a site with existing operational units for which the same program will be used at all units and conditionally lowers the Resource Estimate. Also makes various refinements and clarifications to the inspection guidance.	N/A	ML20045E554