

NRC INSPECTION MANUAL

PIPB

MANUAL CHAPTER 0610*

POWER REACTOR INSPECTION REPORTS

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REACTOR INSPECTION REPORTS

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INSPECTION REPORTS

0610-01 PURPOSE

To provide guidance on content, format, and style for power reactor inspection reports.

0610-02 OBJECTIVES

To ensure that inspection reports:

02.01 Clearly communicate significant inspection results to licensees, NRC staff, and the public.

02.02 Provide a basis for significance determination and enforcement action.

02.03 Present information associated with significant inspection findings in a manner that will be useful to NRC management in developing longer-term, broad assessments of licensee performance.

0610-03 DEFINITIONS

The following terms are applicable to the enforcement program.

Apparent violation. A potential noncompliance with a regulatory requirement (regardless of possible significance or severity level) that has not yet been formally dispositioned by the NRC. Apparent violations may end up dispositioned as Non-Cited Violations, cited in Notices of Violation, or issued in conjunction with civil penalties or various types of orders. The NRC may also choose to exercise mitigation discretion in accordance with Section VII.B of the NRC Enforcement Policy and refrain from issuing enforcement action. Apparent violations are discussed in the Summary of Findings, the PIM and in the cover letter of the report. The significance of an apparent violation is temporarily assigned the acronym "To Be Determined", (TBD).

Closed Item. A matter previously reported as a noncompliance, an inspection finding, a licensee event report, or an unresolved item, that the inspector concludes has been satisfactorily addressed based on information obtained during the current inspection.

Credible. A scenario offering reasonable grounds for being realistic (given a set of existing conditions postulating a scenario with no more than one "if").

Cross-Cutting Issues. Cross-cutting issues are those concerns related to the areas of human performance, problem identification and resolution, and safety conscious work environment issues which have the potential to affect multiple cornerstones.

Deficiency. (Applies to emergency preparedness.) A demonstrated level of performance (e.g., in a drill) that could have detracted from effective implementation of the emergency plan in the event of an actual emergency.

Deviation. A licensee's failure to satisfy a written commitment, such as a commitment to conform to the provisions of applicable codes, standards, guides, or accepted industry practices when the commitment, code, standard, guide, or practice involved has not been made a requirement by the Commission.

Escalated Enforcement Action. A notice of violation or civil penalty for any Severity Level I, II, or III violation,(or problem); a Notice of Violation associated with an inspection finding that the significance determination process characterizes as having low to moderate, or greater safety significance; or an order based upon a violation.

Finding. An issue with some significance that has been placed in context, and determined to be of sufficient significance to warrant more detailed analysis using the SDP, or has extenuating circumstances. To be a finding, it must pass through the threshold screening process described in Appendix E, "Threshold for Documentation" in this MC. Findings may or may not be related to regulatory requirements.

Green Finding. A finding of very low safety significance.

Integrated Inspection Reports. A reactor inspection report that combines inputs from several inspections (resident, regional, etc.) conducted within a specific period.

Issue. A well defined observation or collection of observations which are of concern and may or may not result in a finding.

Minor Violation/ Finding. A violation or issue that is less significant than either a Severity Level IV violation, or less significant than an issue which the significance determination process characterizes as green. Although minor violations must be corrected, they are not usually described in inspection reports or inspection records.

Non-Cited Violation (NCV). A method for dispositioning a Severity Level IV violation or a violation associated with a finding that the significance determination process characterizes as green. Provided applicable criteria in the Enforcement Policy are met, issues are documented as violations, but are not cited in Notices of Violation which normally require written responses from licensees.

Noncompliance. Violations (regardless of whether they are cited or not), nonconformances, or deviations.

Nonconformance. A vendor's or certificate holder's failure to meet contract requirements related to NRC activities (e.g., 10 CFR Part 50, Appendix B, Part 71, or Part 72) where the NRC has not placed requirements directly on the vendor or certificate holder.

Notice of Violation (NOV). A formal written citation in accordance with 10 CFR 2.201 that sets forth one or more violations of a legally binding regulatory requirement.

Observation. A fact; any detail noted during an inspection.

Open Item. A matter that requires further inspection or evaluation. The reason for requiring further inspection or evaluation may be that the matter has been identified as an unresolved item, licensee event report or an item for which the significance has not yet been determined.

Potentially Generic Issue. An inspection finding that may have implications for other licensees, certificate holders, and vendors whose facilities or activities are of the same or similar manufacture or style.

Red finding. A finding of high safety significance.

Significance. The quality of being important: As used in this MC,

involves the consideration of: (1) actual safety consequences; (2) potential safety consequences, including the consideration of risk information; (3) potential for impacting the NRC's ability to perform its regulatory function; and (4) any willful aspects of the violation.

Significance Determination. The characterization of the significance of an inspection finding using the Significance Determination Process (SDP) outcome color scheme to identify the level of risk significance (i.e. green, white, yellow, red).

Significance Determination Process (SDP). The process used to determine the risk / safety significance of pertinent inspection findings within the reactor oversight process.

Significant. Having or likely to have influence or effect. For example, a white issue still under review is an apparent significant issue with low to moderate safety significance.

Substantive. Involving matters of major or practical importance to all concerned; considerable in amount or numbers. In this Manual Chapter substantive information must be placed in context relative to the inspection scope.

Unresolved Item. A matter about which more information is required to determine whether the issue in question is an acceptable item, a deviation, or a violation, a matter for which additional guidance is required such as Task Interface Agreements (TIAs), Temporary Instructions (TIs) or awaiting other policy determinations.

Violation. The failure to comply with a legally binding regulatory requirement, such as a statute, regulation, order, license condition, or technical specification.

Weakness. (Applies to emergency preparedness.) A demonstrated level of performance (e.g., in a drill) that could have precluded effective implementation of the emergency plan in the event of an actual emergency.

Willfulness. An attitude toward non-compliance with requirements that ranges from careless disregard to a deliberate intent to violate or to falsify.

White Finding. A finding of low to moderate safety significance.

Yellow Finding. A finding of substantial safety significance.

0610-04 RESPONSIBILITIES

All NRC inspectors are required to prepare inspection reports in accordance with the guidance provided in this inspection manual chapter. General and specific responsibilities are listed below.

04.01 General Responsibilities Power Reactor Inspections. Each inspection of a reactor facility should be documented in a report consisting of a cover letter, a cover page, a summary of findings, and inspection details.

04.02 Report Writing

- a. Inspectors have the primary responsibility for ensuring that inspection findings are accurately reported, and that referenced material is correctly characterized. Advice, subjective opinions and recommendations are not to be included in inspection reports.
- b. Inspectors are responsible for ensuring that the content of the report does not conflict with the information presented at the exit meeting. When the report provides information that differs significantly from that presented at the exit meeting, the inspector (or the report reviewer) should discuss those differences with the licensee before the report is issued.
- c. Report writers and reviewers should ensure that inspection reports follow the general format given in this chapter and in the enclosed sample report (see Exhibits 1 and 2).
- d. For inspections conducted by regional and resident inspectors, the report number is in the following form:

Docket No./Year - [sequential number of the report in that year] (e.g., 50-363/00-01)

For inspections conducted by NRR, or other headquarters offices, the report number is in the following form:

Docket No./Year - 2 [sequential number of the report in that year] (e.g., 50-250/00-201)

- 2 NOTE: Entry in to the ADAMS format requires for example 05000(and the docket number), see summary of findings ADAMS template.

04.03 Report Review and Concurrence

- a. Before issuance, each inspection report should, as a minimum, be reviewed by a member of NRC management familiar with NRC requirements in the area inspected.
- b. The report reviewer (i.e., the member of management referred to above) should establish that the findings are consistent with NRC policies and requirements; that enforcement-related issues are addressed in accordance with the NRC Enforcement Policy and the NRC Enforcement Manual.
- c. The report reviewer should ensure that assessments made in the inspection report are in accordance with the SDP.
- d. Regional administrators and office directors should establish internal procedures to provide a record of inspectors' and reviewers' concurrences. The procedures should address how to ensure continued inspector concurrence when substantive changes are made to the report as originally submitted, and how to treat disagreements that occur during the review process. As a minimum, substantial changes should be discussed with the inspector or inspectors involved to ensure continued concurrence, and disagreements that cannot be adequately resolved should be documented.

NOTE: The record of inspector and reviewer concurrence is maintained by the issuing office. This concurrence record is not included in the generally distributed version of the report.

04.04 Report Issuance

- a. For regional inspection reports, the applicable division director or designated branch chief is responsible for the report content, tone, and overall regulatory focus. For integrated reports issued to reactor licensees, the Director, Division of Reactor Projects (DRP) or designated branch chief is responsible for issuing the report to the licensee.

04.05 Report Timeliness

- a. General Timeliness Guidance. Inspection reports should be issued no later than 30 calendar days after inspection completion. (45 calendar days for integrated reports and major team inspections.)

NOTE: Inspection completion is normally defined as the day of the exit meeting. For resident inspector and integrated inspection reports, inspection completion is normally defined as the last day covered by the inspection report.

- b. Reports Preceding Escalated Enforcement Actions. Timeliness goals should be accelerated for inspection reports covering potential escalated enforcement actions.
- c. Expedited Reports for Significant Safety Issues. Whenever an inspector identifies concerns involving issues of greater risk significance (i.e. white or higher), or a significant or immediate public health and safety concern, an expedited inspection report should be considered that is limited in scope to the specific issue. The first priority is facility and public safety. MC 0609 allows for issues of significance to be documented on an expedited bases.

0610-05 GUIDANCE—INSPECTION REPORT

This section relates primarily to matters of content in the inspection report details. Refer to Exhibit 2 as a general example.

Although this guidance applies to all power reactor inspections, additional guidance for reports documenting supplemental inspections is found in Appendix B.

Whenever possible, the “Details” section of routine and integrated NRC inspection reports should conform to the standard format described in this section and illustrated in the attached Exhibit 1. This standardization in format significantly enhances consistency, readability, and information retrieval, which in turn increases efficiency and improves the ability to integrate inspection results. Exceptions include major team inspection reports, augmented inspection team (AIT) reports, supplemental inspections and other cases where the specifically directed focus of the inspection does not easily fit into the baseline inspection program and subtopics given in the standardized report outline. In these cases and in the cover letters of inspection reports where a standard format is not essential, the primary subject should be identified followed by a discussion of significant major topics identified.

05.01 Cover Letter. Three example cover letters for reports with (1) no findings, (2) white findings and (3) green findings with NCVs, are provided with the example routine report. Future revisions to this manual chapter will provide guidance on other reports.

Inspection reports are transmitted using a cover letter from the applicable NRC official (branch chief, division director, or regional administrator) to the designated licensee executive. Cover letter

content varies somewhat depending on whether or not the inspection identified noncompliances. In general, however, every cover letter uses the same basic structure.

- a. Addresses, Date, and Salutation. At the top of the first page, the cover letter begins with the NRC seal and address, followed by the date on which the report cover letter is signed and the report issued.

For cover letters transmitting reports with issues assigned an enforcement action (EA) number, the EA number should be placed in the upper left-hand corner above the principal addressee's name.

The name and title of the principal addressee are placed at least four lines below the letterhead, followed by the licensee's name and address. Note that the salutation is placed after the subject line.

- b. Subject Line. The subject line of the letter should state the plant name (e.g., "DIRJAC Generating Station- NRC INSPECTION REPORT") followed by the report number. The words "NOTICE OF VIOLATION" (or "NOTICE OF DEVIATION," etc.) should be included if such a notice is accompanying the inspection report.

- c. Introductory Paragraphs. The first two paragraphs of the letter should give a brief introduction.

- d. Body of the Letter. In keeping with the "Plain Language Initiatives" the most significant topics identified should be discussed first. Findings white or above, for which the issuance of a Notice of Violation is being considered should be briefly discussed in the order of their significance. The appropriate wording for issues that are also violations of requirements is included in the ["Enforcement Manual"](#) (under Guidance Documents . If Non-Cited Violations were identified the report should state they were not cited due to their very low safety significance and because they have been entered into the licensee's corrective actions system. If "Green" findings, other than violations, were identified, including unresolved items which have been evaluated by the SDP, the report should state, " There were (the number) findings of very low safety significance (Green) identified in the report;" without further elaboration. If there are no findings in the inspection report, the final statement in this paragraph should state, "Based on the results of this inspection no findings were identified".

- e. Closing. The final paragraph consists of standard legal language that varies based on whether or not enforcement action is involved, (See example cover letters Exhibit 2).

The signature of the appropriate NRC official is followed by the docket number(s), license number(s), and lists of enclosures and distribution.

05.02 Cover Page. The report cover page provides a quick-glance summary of information about the inspection (see Exhibit 2). It contains the dates of inspection, the report number, the names and titles of participating inspectors, and the name and title of the approving NRC manager.

05.03 Summary of Findings. The summary should be informative but concise. The inspection report summary is an overview for licensee management, the public and for NRC staff. It also provides the basis for the entries in the Plant Issues Matrix (PIM) and Agency Document Access and Management System (ADAMS). The first paragraph provides an input into the NRC ADAMS template.

- a. Introduction. The first paragraph of the summary of findings is to be used in the title value field of the ADAMS template NRC-002 as a report summary. The paragraph must be cryptic, without the use of extraneous words or articles, and be in the following order: (1) Inspection report number, (note the format in example EX2); (2) Dates of the inspection; (3) Name of the utility; (4) Name of the site; and (5) Subjects of inspection where findings were identified. The subject of inspection should ONLY list each baseline inspection topic where findings were identified, (i.e. Equipment Alignments, Fire Protection, Operability Evaluations, etc.) If no findings were identified the general topic of the inspection should be listed as i.e. radiation specialist report, or resident inspector report, or environmental report etc.. This information must be cryptic as the field is limited to 256 characters and be in a single paragraph. Where necessary abbreviate.

A second paragraph should also contain who conducted the inspection, i.e. resident or specialist inspectors, the number of findings and violations, and a statement that the significance of various issues was determined using the Significance Determination Process.

The body of the summary of findings should be compiled by reviewing each report section and writing a short summary for each finding, noncompliance, unresolved item, or apparent violation. All findings except those which could result in an acceptable conclusion should be included in the summary of findings. Specific requirements violated should also be cited. The following guidelines apply to where and what should be documented in the cover letter, the summary of findings, the details of the report, as well as the PIM and RPS.

(1) Findings and violations whose significance is known are to be discussed in the report details, summary of findings, and in the cover letter. They are entered into RPS as either a finding (FIN), a violation (VIO) or noncited violation (NCV), and are marked for entry into the PIM. The significance is either the color (SDP issues) or severity level for non-SDP issues.

(2) Findings and violations whose final significance is undetermined but is known to be at least green (because of delays in performing phase 2 or 3 of the SDP, or other delays) should be discussed in the report details, summary of findings, and in the cover letter. They are entered into RPS as either a finding (FIN) if not a violation, or an apparent violation (AP) if a violation, and are marked for entry into the PIM. The significance is entered in to the PIM as TBD.

(3) Unresolved items whose significance is known from the SDP to be at least green should be documented in the report, documented in the summary of findings, and mentioned in the cover letter. These items are identified as unresolved items (URIs) in the report. They are entered into the RPS as a URI and marked for entry into the PIM. The significance is either green or TBD. Additional action is required to determine whether a non-compliance exist, and/ or to validate the significance with a "choice letter" to the licensee, and to update the PIM accordingly. and associated actions, (NOV for greater than green issues). NOTE: This is the only time a URI is discussed in the summary of findings and cover letter.

(4) Unresolved items whose significance has not been evaluated by the SDP should be documented in the report, but not documented in the summary of findings, nor mentioned in the cover letter. These items are identified as unresolved items (URIs) in the report. They are entered into the RPS as a URI and not marked for entry into the PIM.

The format of the summary of findings should begin with the significance color, including those with “No Color or TBD”, This is followed by a short description of the finding in a single paragraph, followed by second paragraph providing a short description of the regulatory nexus and/ or risk evaluation of the finding. If the finding has no color, the second paragraph should described why the finding is important in lieu of the risk evaluation.

Cornerstones should be listed in the order specified in Exhibit-1. Cross-cutting issues related to specific SDP analyzed findings should be addressed along with the finding in the details section of the report emphasizing the relationship to the finding and also noted in the applicable cornerstone area in the summary of findings. Significant trends or patterns observed which may be emerging in the cross-cutting areas may be documented in a separate cross-cutting issue area within the summary of findings. Performance indicator verification results that cross a threshold should also be documented in the summary of findings.

Inspectors should ensure that the summary is consistent with the details.

- b. Plant Issues Matrix. General and specific data entry guidance on the Plant Issues Matrix is contained in Appendix C. Also note the guidance in 05.03.a (1-4) above.

05.04 Table of Contents. For reports which are considered complicated or are of significant length (i.e., the “Report Details” section exceeds 20 substantive pages), the writer should include a table of contents as an aid to clarity.

05.05 Report Arrangement. The standardized report outline is provided as Exhibit 1, attached to this manual chapter. Inspection reports should begin the inspection report with a "Summary of Plant Status". The “Plant Status” should briefly describe pertinent operational issues such as any plant shutdowns or significant changes in power. For specialist inspections, this summary may be eliminated as appropriate (e.g., plant operating status may or may not be relevant to a safeguards or emergency preparedness inspection). The report details should be topically arranged in accordance with the standardized report outline. This does not mean that each outline topic should be covered in each report. To the extent that inspection is performed in a particular area (e.g., inspection of "gaseous and liquid effluents"), the resulting findings should be placed in the corresponding standard section of the report (e.g., in 2PS1 of the standardized outline in Exhibit 1).

NOTE: For events the discussion of the entire event should be included under 4OA3 Event Follow-up. However, situations arise where circumstances surrounding an event or related issues are documented in an another cornerstone area. In this case the event description should be referenced under section 4OA3. For example:

“4OA3 Event Follow-up

- .1 Section 2PS1 describes the circumstances and licensee actions regarding a release gaseous effluents which exceeded 10 CFR part 20 limits. This is reported in LER XXXX.”

05.06 Report Details The overall organization of each report section should follow the same basic progression of: inspectable area, optional title, scope, and findings, and as shown in the attached sample report (Exhibit 2),:

- a. Inspection Scope. The scope section should include a list of items or activities inspected in sufficient detail to inform the reader of what was inspected. The scope should be derived from the inspection objectives and requirements sections from the applicable inspection procedure and list criteria used during inspection. Criteria is that documented material the inspector uses to evaluate the acceptability the findings. Generally, acceptance criteria consist of requirements, codes, standards of performance, licensee administrative procedures or in some cases it may be the inspection procedure.

In those cases where there are “no findings”, the level of detail in the scope should provide additional detailed to inform the reader of the methods of inspection as well as objectives and criteria used.

For certain types of inspection activities when there is substantial documentation regarding an issue in support of a finding, it may not be necessary to provide detail in the scope, as placing the finding in context may also describe the necessary portions of the scope. In cases where findings are reported, the scope should be more succinct such as in a single paragraph. Additionally, areas that are routinely report the same or similar scope should be brief.

- b. Findings. Within each inspectable area the report should discuss the most important finding first. In cases where there were no findings identified the only thing that should be in this section is the following statement under Findings “There were no findings identified.”

Where findings were identified, the first sentence or two of this section should provide the results of the inspection in the area. This should be even more brief than the summary of findings, and does not need to stand alone because the discussion that will follow will provide the supporting details.

The next paragraph should provide the description of the finding. The description may consist of several paragraphs depending on the significance of the finding.

Generally, in the final paragraph the inspector state the logic for evaluation by the SDP. That is provide the answers to group one, two or three thresholds for documentation questions found in Appendix D. For example

“This finding if left uncorrected would become a more significant concern, and could cause an increase in the frequency of an initiating event”.

This answers which group one question was answered to determine the finding was more than minor, and which group 2 question was answered to determine that the issue affected a cornerstone. If applicable, which group 3 question would be answered to determine that the finding had extenuating circumstances.

For White findings or above the assumptions made during an SDP determination, including pertinent issues, duration, mitigation, accident scenarios, and worst case safety significance to a cornerstone(s) from any increased risk should be discussed. When discussing accident scenarios and worst case safety significance, clearly indicate if the condition actually occurred or could have credibly occurred.

The following guidance applies to attain the appropriate level of detail for documenting complex green issues, or white and above findings into the description and the evaluation of the finding.

1. The degree of actual or potential safety consequence associated with an issue should be a primary consideration in determining the level of appropriate detail. Items of potential significance (issues assessed using the reactor SDP phase 2 or similar issues) merit more discussion.
2. Credible scenarios must reflect the actual condition or analysis and may assume only one additional condition or failure.

For example: Under a given condition an accident analysis assumes one passive and one active failure. It is credible to assume one additional failure. It is not credible to assume a change in those conditions and the additional failure.

Discussions with more than one “if”, “potentially” or “could have” should be reviewed carefully to ensure the finding is credible.

3. Cross-cutting issues must be related to findings that has been analyzed using the SDP before the cross-cutting issue can documented or become a finding. Cross-cutting issues, should be discussed in sufficient detail to communicate the nexus and causal relationship succinctly and clearly.
4. When the inspector has identified that a particular finding has added significance based on risk, that perspective should be explained. For example, if the inspector finds that two components with reliability problems are related by a dominant event sequence, that relationship should be explained.
5. Positive findings should not be documented. However, when describing all the information that was needed to properly perform an SDP evaluation, findings that licensee actions were adequate to mitigate a problem should be supported by the appropriate description of positive licensee performance that influenced the significance of the finding.
6. When documenting an unresolved item, the issue description should provide enough background information that a different inspector, using that information, would be able to perform the follow-up inspection.

(Succinctly written Green findings should be documented in two paragraphs for non-complex findings and an additional paragraph for each NCV identified. Complex green issues with NCVs are expected to be written succinctly 4-5 paragraphs.)

05.07 Exit Meeting Summary. The final section of each reactor inspection report should be a brief summary of the exit meeting. It should identify the licensee manager who attended the meeting who will also be identified in the first paragraph of the cover letter. This summary normally should include the following elements:

- a. Characterization of Licensee Response. In general, the report should not characterize a licensee's exit meeting response as one of wholehearted acceptance of the inspection findings. If the licensee generally agreed with the findings presented the exit meeting characterization might be as indicated in the attached example report. If the licensee disagrees with the inspectors' finding, this position should be briefly and specifically

characterized (e.g., "the plant manager stated that he believed the violation of TS 4.3.1.2, regarding a reactor trip system surveillance, to be of no safety significance"). Specific items discussed elsewhere in the report should not be described in this section in detail.

- b. Oral Statements and Regulatory Commitments. If, at the exit meeting or at any other time during the inspection, the licensee makes an oral statement that it will take a specific action, the report should attempt to accurately characterize that statement. This however is not to be interpreted as a commitment. Should the licensee wish to make a commitment, the commitment should be documented by licensee correspondence after which the inspector should reference the correspondence in the inspection report. Oral statements made or endorsed by a member of licensee management authorized to make commitments are not regulatory commitments unless they are documented by the licensee as such.

Because regulatory commitments are a sensitive area, the inspector should also ensure that any reporting of such a licensee documented statement is paraphrased accurately, and contains appropriate reference to the licensee's document.

- c. Absence of Proprietary Information. At the exit meeting, the inspectors should verify whether or not the licensee considers any materials provided to or reviewed by the inspectors to be proprietary.

NOTE: When an inspection is likely to involve proprietary information (i.e., based on the technical area or other considerations of inspection scope), the topic of how to handle such information should be discussed at the entrance meeting.

If the licensee does not identify any material as proprietary, the exit meeting summary should include a sentence to that effect (see Inspection Manual Chapter (IMC) 0611 on actions to take if the report includes proprietary material). See the example report.

- d. Subsequent Contacts or Changes in NRC Position. The report writer should briefly discuss any significant contacts between the inspectors and licensee staff or management that occur after the exit meeting (e.g., to discuss new information relevant to an inspection finding). In addition, as discussed earlier, if the NRC's position on an inspection finding changed significantly after the exit meeting, that change should be discussed with the licensee before the report is issued.

05.08 Report Attachments. The attachments discussed below should be included at the end of the inspection report if applicable to the inspection.

- a. Key Points of Contact. The report writer should list, by name and title, those individuals who furnished significant information or were key points of contact during the inspection (except in cases where there is a need to protect the identity of an individual). An exhaustive list is neither required nor desirable; 5 - 10 key individuals normally is sufficient. The alphabetized list should include the most senior licensee manager present at the exit meeting. The list should also include other NRC technical personnel who had significant involvement, if they were not listed as inspectors on the cover page.
- b. List of Items Opened, Closed, and Discussed. The report should provide a quick-reference list of items opened and closed, including the item number, the tracking number for the item, and a brief phrase (10 words or less) describing the item. Open items that were discussed (but not closed) should also be included in this list, along with the a

reference to the sections in the report in which the items were discussed. See the sample list included with Exhibit 2.

- c. List of Documents Reviewed. A listing of the documents and records reviewed during an inspection is to be publicly available. Therefore, if a listing is not otherwise made public, the report should include a listing of all the documents and records reviewed during the inspection that are not identified in the body of the report. (Reference IMC 0620)
- d. List of Acronyms. Reports of significant length (i.e., in which the report details section exceeds 20 substantive pages excluding lists of items) should generally include a list of acronyms as an attachment. For reports in which a relatively small number of acronyms have been used, such a list should be considered optional. In all cases, however, acronyms should be clearly defined when first used in text, regardless of whether a list of acronyms follows the report narrative.

05.09 Release and Disclosure of Inspection Reports

- a. General Public Disclosure and Exemptions. Except for report enclosures containing exempt information, all final inspection reports will be routinely disclosed to the public. IMC 0611, "Review and Distribution of Inspection Reports," describes the various types of exempt information. IMC 0620, "Inspection Documents and Records," provides guidance on acquisition and control of NRC records, including inspection-related documents.
- b. Release of Investigation-Related Information. When an inspector accompanies an investigator on an investigation, the inspector shall not release either the investigation report nor his or her individual input on the investigation report. This information is exempt from disclosure as provided by 10 CFR 9.5, subject to determination by OI. OI reports of investigations, while in preparation or review, will not be circulated outside NRC without specific approval of the Chairman (OI Policy Statement 23).

If an issue disclosed during an inspection is to be referred to OI for possible investigative action, the inspection report should not contain information that would lead a reader to conclude or infer that an investigation may be opened. In this case, the report should contain only relevant factual information collected during the inspection. The referral to OI should be made by separate correspondence, with any additional information needed to support the referral.

0610-06 GUIDANCE OTHER.

06.01 Thresholds of Significance. The purpose of this section is to provide guidance on how to screen out violations and issues that do not rise to a level of significance that warrant documentation, and when and how to document findings related to cross-cutting issues, (refer to Appendix E Figure 1). There are two screening paths which lead to documenting issues or violations. One path screens the issues through the SDP which then becomes findings with a color assigning an associated risk significance. In the other path, the issue has extenuating circumstances or is not suited for the SDP and is determined to be a finding without assigning a color or risk significance. Each path leads to a final question whether the finding is a violation or not. If the finding was determined in the SDP and was determined to be a violation then it would have a color and risk significance associated with it. If the finding resulted from being an extenuating circumstance and it was a violation then it would have no color or risk significance associated with it. In either case the issue becomes documented.

The process utilizes three sets of screening questions and a flow diagram, contained in Appendix E. The screening questions should not prevent any significant issue from being documented but are intended to provide a greater level of consistency regarding the type and significance of issues which NRC inspectors may consider as minor and not document. Inspectors should use Appendix E Figure 1 and group 1, 2 & 3 questions in determining if an issue should be documented in an inspection report. The decision points in this process are discussed in general detail below:

- a. Issues The inspector first makes an observation or collection of observations which is believed to be an issue. The inspector should determine whether the issue has sufficient significance to warrant further analysis or documentation by determining whether the issue is a “Minor” concern.
- b. Minor Issue/Violation (Group One Questions). The inspector should first use Appendix E “Group One Questions”, as a filter to determine if an issue can be considered minor. If the issue is questionable the inspector should use the NRC Office of Enforcement (OE) “Guidance for Classifying Violations as Minor Violations” dated September 29, 1999, for additional guidance. This guidance can be found on the internet under (<http://www.nrc.gov/OE>) under guidance documents, and Index. If the finding does not have more than minor significance, it should not be documented.

If the answer to any question is “Yes” the issue is considered more than minor. The inspector should then determine if the issue affects a cornerstone by asking Appendix E group 2 questions. If the answer to all the group one questions is “No” the issue can be considered minor. However, the inspector should also review the group 3 questions to determine whether the issue has extenuating circumstances and may warrant being documented.

Note that documenting a minor violation may be necessary in documenting closure of a licensee event report, as part of the resolution to an allegation, or if the associated technical information relates directly to an issue of agency-wide concern (e.g. to document the results of an NRC temporary instruction (TI)). If the inspector determines that it is necessary to document a minor issue which is also a violation, then it should be documented as a minor violation with a reference to Section IV of the NRC Enforcement Policy, such as: “This failure constitutes a violation of minor significance and is not subject to formal enforcement action in accordance with Section IV of the NRC’s Enforcement Policy” Minor violations shall not be included in the Summary of Findings, and shall not be given a tracking number. If an issue already has an enforcement action (EA) number or other tracking number and is determined to be minor, it is acceptable to use the existing number when discussing the minor violation.

- c. Issues Affecting Cornerstones (Group 2 Questions). Generally speaking, most issues discussed in inspection reports are those affecting cornerstones and the Cross-cutting areas of human performance, safety conscience work environment, problem identification and resolution, as well as violations of requirements. The SDP evaluates risk significance and assign

colors to those issues which affect a cornerstone. Appendix E group 2 questions should be used to determine whether an issue affects a cornerstone.

If the answer to any group two question is “yes”, the issue should be analyzed using the SDP process and documented in the inspection report and assigned a color. If the answers to all group 2 questions are “no” then the inspector should determine whether there are extenuating circumstances which warrant documenting the issue by reviewing Appendix E group 3 questions.

d. Extenuating Circumstances (Group Three Questions).

If an issues is either minor or more than minor and does not affect a cornerstone, there should be extenuating circumstances associated with the issue in order to be documented. Appendix E group 3 questions should be used to determine whether an issue has extenuating circumstances. If all the answers to the group 3 questions are “No” the issue does not have extenuating circumstances and should not be documented. If the answer to any question is “yes” the issue should be documented as a finding or a violation. Since the issue/violation did not go through the SDP, a color associated with its risk significance cannot be assigned. All violations greater than minor not assessed using the SDP will be assessed through the enforcement policy for assignment of a severity level.

e. SDP Analysis All issues, violations or concerns that have greater than minor significance and are related to cornerstone, should be documented with a risk significance and color assigned to them after evaluation by the SDP.

- f. Violations The Significance Determination Process assigns findings a risk significance and color whether it is a violation or not. If an issue does not go through the SDP no risk characterization or color is assigned. All violations are referred to the Enforcement Policy for dispositioning either with or without a color.

06.02 Cross-cutting Issues Cross-cutting issues are those concerns related to human performance, problem identification and resolution, and safety conscious work environment, which have the potential to affect multiple cornerstones. These issues should be documented in the inspection report only if they are related to the cause of a finding which is evaluated by the SDP or if there are multiple findings with a similar theme that impact one or more cornerstones.

- a. Single Issues A single cross-cutting issue must be related to a cornerstone and have a credible impact. Pertinent cross-cutting aspects of a single issue should be documented along with the inspectors description of the finding as a contributing or direct cause of the finding, as appropriate. The significance of the finding is determined by the SDP. Inspectors should ensure that the cross-cutting aspects are highlighted in the inspection report description and the summary of findings. Cross-cutting issues that are associated with a finding that filters out as minor after being subjected to the analysis of group one questions should not be documented. A single cross-cutting issue, by itself without being associated with a finding, should not be documented.
- b. Multiple Issues Multiple cross-cutting issues that manifest themselves in different cornerstones or in a number of findings should be first, treated as individual single issues based on the individual risks determined by the SDP and then may be addressed as an aggregate under a common theme without being subject to the SDP. The following guidance applies to documenting multiple cross-cutting issues:

(1) The individual issue must provide substantive information that has greater than minor concern.

(2) The concerns which are associated with the Cross-cutting issues have been documented as individual issues in the current or previous reports (sections and previous report numbers must be referenced.)

(3) Multiple issues which have not been captured as individual issues but indicate performance trends or patterns which are each substantive may be documented under Other Activities. A section called "Cross-cutting Issues" should be developed where the causally linked relationships of each of the issues and the potential safety impact of the combined effect within the applicable cross-cutting area should be addressed. The results of this effect will be considered a "Finding". The issue should be addressed in the Summary of Findings and in the inspection report. Emphasis should be placed on any significant trends or patterns which may be emerging in the different cross-cutting areas. These trends or patterns should be highlighted in the Summary of Findings in support of the assessment process. Identical causally linked relationships, of green issues previously documented as a single issue in a previous report may be brought forward and referenced. Only a succinct reiteration of the common theme is necessary. However, aggregating of minor issues is not permitted. The issue should then be coded and carried forward in the PIM as "Miscellaneous" for a cornerstone and the significance should be "not applicable".

- c. Problem Identification and Resolution Issues. During the performance of each baseline inspection procedure, issues arise which relate to the licensee's problem identification and resolution program. These issues should be screened through the Thresholds for Documentation (Figure 1) and if applicable, reviewed by the SDP. Any finding resulting from this process should be documented under the applicable cornerstone. Single PI&R

issues associated with, or related to a finding should be documented along with the finding as a contributing or direct cause. If multiple findings are identified and documented each with a common PI&R theme indicating a significant trend relating to the corrective action process ONLY then, Section (4OA2) may be used, to discuss only the common traits of the previously reported PI&R issues (referencing the applicable sections within the report), and discussing the potential significance of the aggregate. In all cases the PI&R issues must be related to a substantive finding. A single cross-cutting issue, by itself, should not be documented in section 4 of the report.

06.03 Documenting Noncompliances. The primary guidance for all matters related to enforcement, including documentation, is in the NRC Enforcement Policy (NUREG-1600), and the NRC Enforcement Manual (NUREG/BR-0195 REV.3).

The guidance in the Enforcement Policy and Manual applies to issues found or reviewed during inspections that are also violations of regulatory requirements. The significance determination process (SDP) will be used, where applicable, for making the determination of significance. Issues that are not evaluated under the significance determination process will be processed in accordance with the enforcement policy. Such issues are situations with actual safety consequences (such as an overexposure to the public or plant personnel or a substantial release of radioactive material) or are violations related to willfulness or to impeding the regulatory process (such as violations of reporting requirements). (Reference EGM/Enforcement Policy)

a. Specific Enforcement Related Guidance. Findings that are minor violations should not be documented but should be discussed with the licensee during the exit meeting following the inspection previously discussed. Refer to [“Guidance for Classifying Violations as Minor Violations”](#), dated September 29, 1999. Note: look under Guidance Documents, Appendix A, Index.

1. Violations that are determined to be within the licensee response band (i.e., very low risk significance or green), will be treated as noncited in accordance with the Enforcement Policy. The noncited violation will be documented in the associated cover letter, the inspection report, entered into the Summary of Findings and PIM. The cover letter must clearly state why the citation is being issued in terms of which exception of section 1 of the Enforcement Manual the violation met. The inspection report cover letter should include NCV appeal process language (see example cover letter 3 on the NCV appeal process).

The discussion on NCVs in the body of the report should include sufficient information to support the conclusion that the violation was not minor. Issues which have been identified by the licensee, are being tracked within the licensee's corrective action program, and are determined by the inspector to be within the licensee response band should be documented emphasizing the effectiveness of the licensee's corrective action program in identifying the issue. At a minimum, for violations other than minor, the report should state:

- what requirement was violated;
- how the violation occurred;
- when the violation occurred, and how long it existed;
- when the violation was identified;
- any actual or potential safety consequence;
- the root cause (if identified);
- all information required to complete the SDP;
- what corrective actions have been taken or planned. [For licensee's with adequate corrective action programs, it is acceptable to only verify that the licensee has

entered the issue in its corrective action program for issues that are of very low significance (green)].

A conclusion that the violation will not be cited should be documented in the details section of the report.

2. For issues that are determined to have more than very low safety significance (i.e., white, yellow, or red), if available at the time of documentation, the following should be documented in the inspection report.

- The assumptions used by the inspector or regional SRA in determining the issue's significance must be documented.
- The significance attributed to the issue by the licensee and, if different than the NRC's significance level, a description of the assumptions the licensee used and considers applicable to its determination that are different from the NRC's.
- Pertinent accident sequences and mitigating capabilities.
- Actions the licensee has taken or plans to take to correct the condition and underlying root cause(s), including the appropriate condition reports used to enter the issue into the licensee's corrective action program
- The licensee's position on the NRC's determination that a requirement has been violated, if so determined.

The final significance determination will be documented, the issue entered into the plant issues matrix, and the associated enforcement action will be taken based on the significance. If (a) the issue is green, a noncited violation should be documented in an inspection report, and (b) if the issue is white, yellow, or red, a notice of violation will be issued in accordance with the Enforcement Policy/EGM.

3. Significance to be Determined: Some issues may have a potential significance of greater than "green", for which the risk characterization may not have been finalized at the date of the report issuance. Issues initially categorized as having a potential risk significance of greater than very low significance (Green)" but whose risk significance has not yet been determined should be documented in the report, and the summary of findings. The issue may be documented as an "apparent violation" if a violation of requirements is associated with the issue, and with a significance of "TBD" in RPS.

Emphasis should be placed on the risk characterization as being potential and not yet finalized. After a final risk characterization is determined by the SDP oversight and enforcement panel and a letter is sent to the licensee regarding this characterization, the PIM should be updated to reflect the final risk characterization and the next subsequent resident inspector inspection report should include a brief description of the issue and the change in risk classification in the summary of findings.

Inspectors must be careful to avoid making direct statements regarding safety significance in the inspection report details outside the SDP analysis or for issues not subject to the SDP. Violation severity levels, as described in the NRC Enforcement Policy, are based on the degree of safety significance involved. In addition, the NRC Enforcement Policy uses the term "safety significance" in a specific sense, which involves consideration of (1) actual safety consequence, (2) potential safety

consequence, and (3) regulatory significance (e.g., willfulness or management involvement in a noncompliance, etc.). Note that isolated cases versus programmatic and repetitive occurrence do not add to regulatory significance. Also aggregating issues does not add to the regulatory significance.

Inspection reports should not solely refer to a noncompliance as being (just) "of low safety significance".

UNACCEPTABLE: "The issue was determined to be green by the Significance Determination Process,"

The inspector should state why that determination was reached.

ACCEPTABLE: "The issue was determined to be of very low significance by the Significance Determination Process because even though it was degraded the equipment was capable of performing its safety function and trained operators were also available and ready to take appropriate manual actions if needed."

4. Violations of requirements that can not be evaluated with the SDP should be documented in the report section relating to the inspectable area in which the violation was discovered, or in Section 4, Other Activities, if unrelated to a specific inspectable area. The severity level of such violations will be determined using the guidance in the Enforcement Policy and Enforcement Manual.

- b. Noncompliances Involving Willfulness. Inspection reports should neither speculate nor reach conclusions about the intent behind a violation, such as whether it was deliberate, willful, or due to careless disregard. The report should include relevant details on the circumstances of the violation without making a conclusion about the possible intent of the violator:

APPROPRIATE: "The radiographer failed to activate his alarming dosimeter, although he had informed the inspectors earlier that he had been properly trained on the use of the device."

INAPPROPRIATE: "The radiographer deliberately failed to activate his alarming dosimeter."

Conclusions about the willfulness of a violation are agency decisions, and are normally not made until after the Office of Investigation (OI) has completed an investigation and a predecisional enforcement conference has been held. A premature or inaccurate discussion of the willfulness of an apparent violation in the inspection report could result in later conflicts based on additional input and review. Inspection reports that include potentially willful violations are to be coordinated with OI and the Office of Enforcement (OE).

06.04 Treatment of Open Items. Issues that require additional inspection before coming to closure on the issue are identified by a unique tracking number and entered into the IRAM module of RPS by the originating inspector or office. Open items include unresolved items, violations, deviations, non-cited violations, licensee event reports (LERs), and SDP related issues whose significance have yet to be determined.

- a. Initiating Open Items. The action of initiating an open item is a commitment of future resources, and should therefore only be used when some specific licensee action is pending, or when needed information is not available at the time of the inspection. When the inspector believes that the additional information may reveal the issue to be a matter of noncompliance, an open item should be initiated. For an unresolved item, the report should identify the actions or additional inspection effort needed to resolve the issue.

Issues of noncompliance (except for minor violations) should always be assigned an IRAM number for tracking purposes. When an inspection involves multiple violations (or multiple examples of a single violation), the inspector should be careful to ensure a one-to-one correspondence between the number of IRAM entries and the number of "contrary to" statements in the accompanying notice of violation. The NRC Enforcement Manual provides additional guidance on tracking and following up issues of noncompliance.

Upon receipt, LERs should automatically be entered into the IRAM system for tracking, screening and follow-up.

- b. Follow-Up and Closure of Open Items. The level of detail devoted to closing open items depends on the nature and significance of the additional information identified. The closure of an open item should, at a minimum, summarize the topic, summarize the inspector's follow-up actions, evaluate the adequacy of any licensee actions, determine if a violation occurred, and include enough detail to justify closing the issue.

The close-out description of a violation should be brief if the licensee's response to the notice of violation already has given an accurate description of the root cause, corrective actions taken, and other aspects of the condition causing the violation, and the inspector identifies no other instances of the violation. Normally NCVs will be opened and closed in the initiating inspection report. (see example report)

- c. Treatment of Licensee Event Reports. Licensee Event Reports (LER) are addressed in several areas including MC 2515 Light -Water Reactor Inspection Program, IP 71153 Event Follow-up, and IP 71111.4 Personnel Performance During Non-Routine Plant Evolutions and Events. Each require that all LERs be at least screened by an inspector and closed in an inspection report. LERs discussions should be documented under section OA3 Event Follow-up. If inspection in another cornerstone area provides a description of an event for which an LER is issued, that section should be referenced under OA3 of the report. In general LER reviews should have a brief event description, referencing the docketed LER and require little discussion other than the significance evaluation and referencing the licensee's corrective action program (CAP) system tracking number for the issue.

For LERs involving minor issues or potential violations meeting the criteria for being minor the LER closure should note that the issue is captured in the licensee's corrective action program, reference the LER, state that the LER was reviewed and, there were no findings identified. LERs that were already addressed by separate NRC letter should also be closed with a brief statement in an inspection report.

When the LER involves more than a minor issue, the LER should describe the safety significance of the event, the corrective actions, referencing the (CAP) tracking number, the apparent root cause, a summary of the inspector's follow-up actions, and any required enforcement actions. If a special inspection was conducted which would provide additional information regarding this event, the inspection report should be referenced.

Note that LERs frequently involve violations of TS or other requirements. As with other report findings, if the LER states a violation occurred, the noncompliance must be clearly

identified in the report as a cited violation, a noncited violation, or a minor violation, as appropriate. (Otherwise, a statement should be included that "this event did not constitute a violation of NRC requirements"). This should be the last statement of the section.

If an LER describes an issue which may be a potential violation and readily appears to be of very low safety significance, the inspector should ascertain if a non-compliance occurred based on the inspectors knowledge of NRC regulations and the content of the LER, without necessarily gathering additional details. The inspector should document the issue in this or a subsequent inspection report as described above referencing the licensee's corrective action program tracking number. If the issue is determined to be greater than very low significance, a more detailed on-site follow-up is required if not already performed.

d. Avoiding "Implied" Inspection Follow-Up Items.

Other than what is implied in discussing open items the inspection report should not commit to future NRC attention in a particular area. This will be part of inspection planning and the assessment process described in MC 0305.

END

EXHIBITS:

Exhibit 1: Standard Reactor Inspection Report Outline

Exhibit 2: Sample Reactor Inspection Report EX-2

APPENDICES:

Appendix A: List of Acronyms Used in IMC 0610*

Appendix B: Documentation Guidance for Supplemental Inspections

Appendix C: Detailed Guidance for the Plant Issues Matrix

Appendix D: Thresholds for Documentation

Cover Letter
 Cover Page
 Summary of Findings
 Table of Contents (optional)

Report Details:

1 REACTOR SAFETY

Initiating Events/Mitigating Systems/Barrier Integrity [REACTOR - R]

Note: The baseline inspection procedure number is provided here as a convenience. It may be added to the headings in inspection reports at the option of the region.

<u>[Number]</u>	<u>Topic</u>	<u>Baseline Procedure]</u>
R01	Adverse Weather	71111.01
R02	Evaluation of Changes, Tests or Experiments	71111.02
R03	[R03 Reserved]	
R04	Equipment Alignment	71111.04
R05	Fire Protection	71111.05
R06	Flood Protection Measures	71111.06
R07	Heat Sink Performance	71111.07
R08	Inservice Inspection Activities	71111.08
R09	[R09 Reserved]	
R10	[R10 Reserved]	
R11	Licensed Operator Requalification	71111.11
R12	Maintenance Rule Implementation	71111.12
R13	Maintenance Risk Assessment and Emergent Work Evaluation	71111.13
R14	Personnel Performance During Non-routine Plant Evolutions	71111.14
R15	Operability Evaluations	71111.15
R16	Operator Work-Arounds	71111.16
R17	Permanent Plant Modifications [R18 Reserved]	71111.17
R19	Post Maintenance Testing	71111.19
R20	Refueling and Outage Activities	71111.20
R21	Safety System Design and Performance Capability	71111.21
R22	Surveillance Testing	71111.22
R23	Temporary Plant Modifications	71111.23

Emergency Preparedness [EP]

EP1	Exercise Evaluation	71114.01
EP2	Alert Notification System Testing	71114.02
EP3	Emergency Response	

EP4	Organization Augmentation Testing Emergency Action Level and Emergency Plan Changes	71114.03 71114.04
EP5	Correction of Emergency Preparedness Weaknesses and Deficiencies	71114.05
EP6	Drill Evaluation	71114.06

2. RADIATION SAFETY

Occupational Radiation Safety [OS]

OS1	Access Control to Radiological Significant Areas	71121.01
OS2	ALARA Planning and Controls	71121.02
OS3	Radiation Monitoring Instrumentation	71121.03

Public Radiation Safety [PS]

PS1	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems	71122.01
PS2	Radioactive Material Processing and Transportation	71122.02
PS3	Radiological Environmental Monitoring Program	71122.03

3. SAFEGUARDS

Physical Protection [PP]

PP1	Access Authorization	71130.01
PP2	Access Control	71130.02
PP3	Response to Contingency Events	71130.03
PP4	Security Plan Changes	71130.04

4. OTHER ACTIVITIES [OA]

OA1	Performance Indicator Verification	71151
OA2	Identification and Resolution of Problems	71152 (Note 2)
OA3	Event Follow-up	71153
OA4	Cross-cutting Issues	
OA5	Other	
OA6	Meetings, including Exit	

NOTES:

1. Any findings related to the performance indicator (PI) verification baseline inspection shall be included under Other, 4OA1.
2. Section 4OA2 is to be used to document only the Annual identification and resolution of problems, (IP 71152), and significant trends relating to the corrective action process that are exemplified by other documented inspection findings.
3. Section 4OA3 is to be used to discuss both following up on recent events and reported events (LERs). Discussions in other cornerstone areas which provide a description of an event for which an LER is issued should also be referenced under OA3.
4. Section OA4 is to be used only to document significant trends in the other cross-cutting areas .

NOTE: the inspection report that follows is based on a fictional reactor licensee and a fictional inspection. The report contains realistic issues; however, any resemblance to an existing facility or actual events is coincidental.

This exhibit may be used as a sample or model report for matters of format and style. It illustrates how to use the standardized inspection report outline, and adheres to the expected internal organization for each report section (as discussed in IMC 0610).

Pages are numbered continuously through this exhibit. Inspection reports should use separate page numbering for the cover letter, summary of findings, and report details.

SAMPLE COVER LETTER NO.1 (No Findings)

August 14, 1999

Ms. Joan A. Doe, Vice President, Nuclear
Greckenshire Power & Light
721Y Brick Road
Stone Towers, WF 44632

SUBJECT: DIROJAC GENERATING STATION- NRC INSPECTION REPORT 50-998/99-07,
50-999/99-07

Dear Ms. Doe:

On July 24, 1999, the NRC completed an inspection at your Dirojac 1 & 2 reactor facilities. The enclosed report presents the results of that inspection which were discussed on July 24, 1999, with Mr. D. Prue and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection no findings were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

Samuel A. Johnson, Director
Division of Reactor Projects

Docket Nos.: 50-998, 50-999
License Nos: XXX-77, XXX-79

Enclosure(s):
Inspection Report 50-998/99-07, 50-999/99-07

cc w/ encl: L. Collinsworth, Compliance Manager
R. Littleroy General Manager, Technical Services
J. Bradwood, Plant General Manager
F. Buckfry, General Counsel
D. Soapsam, Operations Manager

SAMPLE COVER LETTER NO.2 (WHITE ISSUE)

August 14, 1999

EA No: 00-125

Ms. Joan A. Doe, Vice President, Nuclear
Greckenshire Power & Light
721Y Brick Road
Stone Towers, WF 44632

SUBJECT: DIROJAC GENERATING STATION- NRC INSPECTION REPORT 50-998/99-07, 50-999/99-07

Dear Ms. Doe:

On July 24, 1999, the NRC completed an inspection at your Dirojac 1 & 2 reactor facilities. The enclosed report presents the results of that inspection which were discussed on July 24, 1999, with Mr. D. Prue and other members of your staff

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Also, an examination of radioactive material processing, handling, storage, and transportation activities was also conducted during this inspection. Within these areas, the inspections consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

This report discusses an issue of low to moderate safety significance. The issue of low to moderate safety significance, involving under-characterization of radioactive waste shipped for near-surface land disposal, appears to be an apparent violation of NRC requirements. As described in Section PS2.2 of this report, on May 10, 1999, your staff shipped radioactive waste material to Foley Nuclear Systems, Steinwell, Georgia, that had not been properly classified and characterized as required by 10 CFR 61.55. This issue was assessed using the Public Radiation Safety Significance Determination Process as an apparent significant finding that was preliminarily determined to be White, an issue with some increased importance to safety which may require additional NRC inspection. This issue has a low to moderate safety significance because accurate waste characterization is necessary to ensure proper near-surface disposal of radioactive waste materials.

Although we believe that we have sufficient information to make our final significance determination for the issue, we are giving you the opportunity to send us your position on the finding's significance and the bases for your position in writing. Also, please inform us if you would like to schedule a Regulatory Conference to discuss your evaluation and any differences with the NRC evaluation. A Regulatory Conference on this matter would be open for public observation. Accordingly, no enforcement is presently being issued for this inspection finding. Please contact Mr. Slim Koltay at (123-457-890) within 10 days of the date of this letter to notify the NRC of your intentions in this matter. If we have not heard from you in writing or regarding a conference within the time specified, excepting a granted extension, we will continue with our significance determination and enforcement decision and you will be advised by separate correspondence of the results of our deliberations on this matter.

The NRC also identified an issue involving proper closure of radioactive materials shipping packages that was evaluated under the Public Radiation Safety Significance Determination Process as of very low safety significance (Green). The issue involved a violation of NRC requirements, but because

the issue has been entered into your corrective action program, and because of its very low safety significance, the violation was not cited.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

Projects Branch 8
Division of Reactor Projects

Docket Nos: 50-998, 50-999
License Nos: XXX-
77, XXX-77,

Enclosure: Report No. 05000xxx/1999-007, 05000xxx/1999-007

SAMPLE COVER LETTER NO.3 (Green Issue and NCVs)

August 14, 1999

Ms. Joan A. Doe, Vice President, Nuclear
Greckenshire Power & Light
721Y Brick Road
Stone Towers, WF 44632

SUBJECT: DIROJAC GENERATING STATION- NRC INSPECTION REPORT 50-998/99-07, 50-999/99-07

Dear Ms. Doe:

On July 24, 1999, the NRC completed an inspection at your Dirojac 1 & 2 reactor facilities. The enclosed report presents the results of that inspection which were discussed on July 24, 1999, with Mr. D. Prue and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, three issues of very low safety significance (Green) were identified. Two of these issues were determined to involve violations of NRC requirements. However, the violations were not cited due to their very low safety significance and because they have been entered into your corrective action program. If you contest these noncited violations, you should

provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with a copies to the Regional Administrator, Region ____; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Dirojac facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

Samuel A. Johnson, Director
Division of Reactor Projects

Docket Nos.: 50-998, 50-999
License Nos: XXX-77, XXX-79

Enclosure(s):
Inspection Report 50-998/99-07, 50-999/99-07

cc w/ encl: L. Collinsworth, Compliance Manager
R. Littleroy, General Manager, Technical Services
J. Bradwood, Plant General Manager
F. Buckfry, General Counsel
D. Soapsam, Operations Manager

EXAMPLE INSPECTION REPORT

U.S. NUCLEAR REGULATORY COMMISSION

REGION X

Docket Nos: 50-998, 50-999
License Nos: XXX-77, XXX-79

Report No: 50-998/99-07, 50-999/99-07

Licensee: Greckenshire Power & Light (GP&L)

Facility: Dirojac Generating Station, Units 1 & 2

Location: 11555 Granite Blvd.
Stone Towers, WF 44632

Dates: June 11 - July 24, 1999

Inspectors: A. Rand, Senior Resident Inspector
M. Heidegger, Resident Inspector
J. Locke, Senior Radiation Specialist
P. Sappho, Reactor Projects Inspector

Approved by: E. Tudor, Chief, Projects Branch 2
Division of Reactor Projects

SUMMARY OF FINDINGS

For Adams Title Value,(do not type this)

IR 05000998-99-07, IR 05000999-99-07, on 06/01-07/24/1999, Greckenshire Power & Light, Dirojac Generating Station, Units 1 & 2. (As applicable to only those areas with findings, typically only two to five areas. The following are example areas where findings were identified: Do not type this.) Emergent Work, Equipment Alignment, Flood Protection, Inservice Inspection, Inservice Testing, Non-routine Plant Evolutions, Permanent Plant Modifications, Post Maintenance Testing, Refueling and Outage, Other Activities. (This paragraph is limited to 256 characters. Abbreviate if necessary)

The inspection was conducted by resident inspectors and a regional radiation specialist and a regional projects inspector. This inspection identified three green findings, two of which were noncited violations. The significance of findings are indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process.

Cornerstone: Initiating Events

- Green. A Non-Cited Violation was identified because Unit 2 had less than the number of operable intermediate range nuclear instruments per channel (three) for the reactor protective system required during core alterations.

The risk for having too few intermediate range nuclear instruments was determined to be of very low safety significance because the neutron level during refueling operations was too low for the nuclear instruments to perform their intended functions.(Section 1R20)

- Green. The inspectors identified a Non-Cited Violation for failure to insure nondestructive examination contract inspectors were qualified.

The finding was of very low safety significance because, although the inspector performing the core shroud inspections was not qualified, a different inspector reperformed the core shroud inspection and did not identify any weld cracks (Section 1R07).

- Green. During plant startup operators failed to initiate emergency feedwater, resulting in an uncomplicated unit trip. The inspectors identified a noncited violation for inadequate procedures

The risk significance of this finding was very low because all mitigation system remained operable and barrier integrity was not challenged and the licensee entered the finding into the corrective action program. (Section 1R14.2).

- Green. The inspectors identified that the licensee's in-progress corrective actions for failure of a drywell fan did not include resolution of the subsequent increase in drywell temperatures above Final Safety Analysis Report limits for drywell snubbers.

This finding was of very low safety significance because the licensee subsequently determined that the snubbers were always functional, but that their qualification life was reduced by one year (1R03).

Cornerstone: Occupational Radiation Safety

- Green. Radiation protection technicians failed to remove all the tools and other material with low levels of radioactive contamination prior to release of a trailer as a temporary radiological

protected area, additionally the licensee had recently identified two similar release problems on radiological problem reports

The finding was of very low safety significance because contamination was not spread beyond the radiological area and the licensee identified and corrected the problem. (Section 2OS4).

Cross-cutting Issues: Human Performance

- NO COLOR. Human performance errors were identified in both initiating event and mitigating system cornerstone areas. Inspectors found that errors in review, coordination, and implementation of maintenance activities during or near Unit 2 refueling outage number 12 led to inoperable safety systems. Operators were unaware that Technical Specification or administrative limiting condition for operation action statements were entered or exceeded. Required nuclear instruments and emergency diesel generators were not operable during some fuel moves (IR/ 99-06 Sections 1R04.2 and 1R20.4), automatic depressurization system valves were taken out of service while required (Section 1R20.2), and the high pressure coolant injection system was inoperable due to incomplete maintenance (IR/99-05 Section 1R19.1)..

While the risk of the individual events was very low, the number of maintenance-related incidents indicated a problem with control, review, and performance of maintenance activities. (Section 1R20.5).

Report Details

Summary of Plant Status: The plant was at 100 percent power throughout the inspection period except for two days following an uncomplicated trip.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R06 Flood Protection

a. Inspection Scope

The inspectors conducted a walkdown inspection of the reactor auxiliary building and the service water tunnel and examined the LHSI and HHSI systems to verify that the equipment was not subjected to damage resulting from internal flooding (e.g. from pipe breaks). The inspectors reviewed the internal flooding analysis design calculations performed to demonstrate that the safety related equipment in the reactor auxiliary building was not vulnerable internal flooding and also reviewed the design basis for the plant site to verify that the reactor auxiliary building and service water tunnel were not vulnerable to external flooding events. The following documents/calculations were used as criteria for this inspection:

PRA/FE-4 RAB Unit 1 Compartment Flood Analysis Elev.436
PRA/FE-5 RAB Unit 1 Compartment Flood Analysis Elev.222
PRA/FE-6 RAB Unit 1 Compartment Flood Analysis Elev.259
PRA/FE-7 RAB Unit 1 Flood Analysis for Elev. 123 & 210
UFSAR Section 15, Accident Analysis

b. Findings

There were no findings identified.

1R08 Inservice Inspection Activities

Qualification of Inspectors

a. Inspection Scope

The inspectors reviewed the ultrasonic testing of core shroud vertical welds by contractor nondestructive examination (NDE) personnel; verified the activities were performed in accordance with the ASME Code, and if present, defects were appropriately dispositioned. Reviews were conducted of radiographs of welding activities for code compliance and the inspectors that repairs and replacements met Code requirements.

b. Findings The inspectors identified a noncited violation for use of an unqualified contract inspector during performance of core shroud inspections. Reinspection by qualified personnel did not identify any weld cracks.

On July 14, 1999, the inspectors, incidental to weld inspection review, identified that the licensee did not have qualification documents for a contractor Level II NDE inspector performing the core shroud inspections. In addition, the inspectors could find no evidence that the licensee had reviewed the NDE inspector's qualifications.

The inspectors discussed several requirements with the engineering supervisor in charge of the NDE work. ANSI N45.2.6-1978 required that records of personnel qualifications be maintained by the employer. The Dirojac Quality Assurance Manual required the designated technical services engineer to obtain qualified contractors for in-service inspections, and to

review NDE personnel qualifications before beginning work. Durojac Quality Assurance Procedure (DQAP) 320-3, "NDE," Revision 14, required completing a certification checklist before beginning work. Durojac Test Procedure (DTP) 110-6, "Use of Contractors for NDE," Revision 6, Step 5.2, required preparing a qualification review sheet for each contractor NDE employee.

The engineering supervisor was unaware of whether the necessary certification reviews had been performed. Additional licensee evaluation determined that the certification review, checklist, and qualification review sheet had not been completed for any contract NDE inspectors. The licensee stopped the core shroud inspection and determined that the qualifications for the inspector in question had expired. After completing the required certification reviews, the licensee repeated the core shroud inspections using a different inspector.

TS 6.2.a requires that written procedures be established, implemented, and maintained covering activities recommended in Regulatory Guide 1.33, Revision. 2, Appendix B. TS 6.2.a applies to Procedure DQAP 20-3, Procedure DTP 110-6, and the Durojac Quality Assurance Manual. Failure to perform the required qualification and certification reviews before beginning core shroud ultrasonic testing is a violation of TS 6.2.a which is being treated as a noncited violation,(NCV 999/99007-01).

This condition, if left uncorrected, would become a more safety significant concern. However, because no functional problems were identified by the re-inspection, and the licensee entered the problem into its corrective action system and the finding is considered very low significance the finding is therefore considered to be green. In addition, the licensee determined that all other contract NDE personnel had valid qualifications.

- a. (Open) Unresolved Item 998; 999/98015-06: Diesel generator cooling water (DGCW). Two issues were identified: (1) the DGCW systems for both Units 1 and 2 were in unbalanced flow configurations, such that flow distribution to individual coolers could not be determined with precision; and (2) the licensee's system flow test did not demonstrate whether the DGCW pump could meet the demands of the diesel generator heat exchanger and the Unit 1 ECCS pump room coolers.

Regarding Item (1), because of silt accumulation both DGCW systems remain in unbalanced flow configurations. Using existing flow and temperature measurements, Engineering was able to demonstrate (using worst-case assumptions) that sufficient flow existed in each system to maintain system operability. However, to improve flow characteristics and the accuracy of flow distribution measurements, the licensee intended to remove silt accumulation by hydrolazing the Unit 2 DGCW piping during the upcoming Unit 2 outage. After hydrolazing, the licensee planned to retest the flows to the diesel generator and ECCS room coolers to verify sufficient flow. Flow balancing of individual coolers was not currently planned. Although Engineering Calculation XX appeared to demonstrate that adequate flow existed, this item will remain open pending licensee testing, and subsequent completion of an SDP analysis based on actual data to properly characterize the risk associated with this item and any enforcement based on this risk determination.

Regarding Item (2), the licensee had added an additional test configuration to Durojac Surveillance Test DST 640-8, "Quarterly DGCW to Unit 1 and Unit 2 ECCS Room Coolers Flow Test," Revision 2, to verify that the DGCW pump could meet necessary flow demands. On May 23, 1999, the licensee's completion of the flow test using the revised procedure successfully demonstrated the capability of the DGCW pump in meeting the flow demands specified above. This portion of the unresolved item is closed.

This item will remain open pending resolution of Item (1).

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the effectiveness of risk assessments before maintenance was conducted, and verified that upon unforeseen situations that the licensee has taken the necessary steps to plan and control the resulting emergent work activity.

b. Findings

On June 4, 1999, with Unit 1 at full power, Drywell Fan D1 tripped. Drywell temperatures rose to approximately 230 °F and stabilized. The inspectors determined that the other drywell fan was operating. The licensee determined that a secondary contact in the circuit breaker for Fan D1 had failed. On June 8, the licensee replaced the contact, completed a postmaintenance test (PMT) and restored Fan D-1 to service. Drywell temperatures stabilized at 180 °F.

The inspectors reviewed the licensee's work packages associated with Fan D1 failure and observed that the licensee had not identified that the drywell temperature had exceeded the FSAR limit of 200 °F for drywell snubbers.

The inspectors discussed the drywell temperatures with a shift supervisor, who issued a corrective action request to document and resolve exceeding the FSAR design temperature for snubbers.

The licensee determined that the increased temperature did not affect the functionality of the snubbers, but did reduce their qualification life from six years to five years. The inspectors determined that if this condition were left uncorrected that the condition would become a more significant safety concern but also considered that the increased drywell temperature did not significantly increase the risk of containment failure in response to any initiating events, and since the snubbers remained functional, the issue had no credible impact on safety. Therefore this finding was determined to be of very low safety significance (green).

1R14 Personnel Performance During Non-routine Plant Evolutions

a. Inspection Scope

The inspectors reviewed personnel performance during planned and non planned plant evolutions and selected licensee event reports focusing on those involving personnel response to non-routine conditions. The review was performed to ascertain that operator response was in accordance with the required procedures.

b. Findings

(Closed) Licensee Event Report (LER) 999/1998-004-00: Subcritical reactor trip because of inadequate procedure Following a shift change, the oncoming control room operators did not initiate auxiliary feedwater soon enough during preparations for Unit 2 startup. A procedure interface problem was identified, involving Durojac Operating Procedure (DOP) 143, "Unit Startup," Revision 2, and DOP 512, "Steam Generator Crevice Flushing," Revision 4. DOP 512 referred the operators back to the wrong portion of DOP 143, thus omitting the step requiring initiation of auxiliary feedwater.

The licensee promptly corrected this procedural inadequacy. The inspectors reviewed this LER and determined that the trip was uncomplicated, all mitigation systems were available, and reactor coolant system barrier integrity was not challenged.

This finding did have a credible impact on safety however, since only the initiating event cornerstone is affected and associated assumptions have no other impact than increasing the likelihood of an uncomplicated reactor trip, the finding is considered of very low safety significance, (green).

The inspectors determined that, at the time of the event, DOP 512 was not appropriate to the circumstances, constituting a violation of 10 CFR Part 50, Appendix B, Criterion V, "Procedures." This procedure violation is being treated as a noncited violation (NCV 999/99007-02).

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed Durojac Design Modification CCW96-1, "Addition of Instrument Wells," Revision 0, in use during power operations. The inspectors examined a sampling of six instrument wells located in the ECCS Pump room A which were associated with the modification to verify that the wells were in accordance with the modification package, and that the package was in accordance with design requirements and the licensing bases. The inspectors also verified that the modifications performed did not place the plant in an increase risk configuration

b. Findings

There were no findings identified.

a. (Closed) Violation XXX/99003-03: failure to provide adequate procedural guidance for check-valve inspection retest. Durojac Surveillance Procedure 740-2, "HPCI Torus Suction Check Valve Inspection," Revision 1, did not verify that the disc would properly seat after the check valve internals were reassembled. The licensee had revised the procedure to incorporate a seat tightness test (using a feeler gauge) after valve internals were reassembled. In addition, for check valve disassembly, the licensee completed a data sheet to document the type of seat leakage check to be performed on each valve. The inspectors reviewed three subsequent work requests involving check valve disassembly and inspection, and confirmed that a seat leakage test had been properly documented in each case.

1R20 Refueling and Outage

1. Refueling Outage Inspections

a. Inspection Scope

The inspectors reviewed the following activities related to the Unit 2 refueling outage for conformance to the applicable procedure, and witnessed selected activities associated with each evolution. Surveillance test were reviewed to ascertain completeness within the required T/S required specification, and that risk was considered in developing the outage schedule. Inspectors verified that mitigation strategies were developed in the event of a loss of key safety functions.

- reactor shutdown

- reactor cooldown and initiation of the shutdown cooling system
- refueling operations
- shutdown risk evaluations
- electrical lineup during Transformer 22 outage
- containment closeout
- reactor startup
- outage-related surveillance tests
 - ▶ DDJTS 0240-04, "Unit 2 Service Test 250 VDC Safety-Related Battery"
 - ▶ DJTS 0600-05, "Unit 2 Main Steam Line Isolation Valve Leakage Test"
 - ▶ DJTS 0920-01, "Shutdown Margin Determination"
 - ▶ DJTS 0920-02, "Estimated Critical Rod Pattern Determination and Evaluation"
 - ▶ DJOS 6600-47, "Unit Two Division I Emergency Core Cooling System Simulated Automatic Actuation and Diesel Generators Auto-start Surveillance."

b. Findings

There were no findings identified.

Too Few Intermediate Range Nuclear Instruments During Refueling

a. Inspection Scope

The inspectors observed Unit 2 operators performing refueling operations, control room activities associated with the refueling, and operation of the refueling bridge. The inspectors reviewed the root cause report for a condition related to intermediate range nuclear instruments (IRNIs) operability during fuel movements.

b. Findings

From February 1 to June 5, 1999, Unit 2 had two operable intermediate range nuclear instruments per channel where as Technical Specification 3.1.A.requires a minimum of three. This was detected by the licensee reviewing work documentation after the fuel moves. Only two of four instruments were operable on the "B" channel and three of four were operable on the "A" channel. Operators believed only one instrument on the "B" channel was inoperable at the time the mode switch was in "refuel" position for fuel moves, but found later that, one on channel A and one on channel B, were also inoperable. During this time, the reactor was in Mode 5 (Refuel) and operators performed core alterations..

Technical Specification Table 3.1.A-1 required 3 IRNIs per trip channel to be operable while in Mode 5 (refuel). Table 3.1.A-1, Action 13 required all core alterations to be suspended within 1 hour when the above Technical Specification was not met. Failure to meet this action statement requirement was a violation of Technical Specifications.

The T/S bases section indicates that IRNIs provide backup protection for any significant reactivity excursions. The function of a reactor protective system trip would be to insert all control rods if a trip signal were generated. All control rods were already inserted during the time the intermediate range nuclear instruments were inoperable. Source range nuclear instruments provided a rod block function during refueling operations. IRNI indication would not have been available until after the point where a reactivity excursion had occurred because the neutron level during refueling operations was too low for the IRNIs.

Left uncorrected, this finding would have become a more significant safety finding, however because of the above reasons, the risk for having too few IRNIs was determined to be of very low safety significance and was characterized as Green by the SDP, and therefore this

finding is considered a Non-cited Violation (NCV 50-999/99007-043). This violation is in the licensee's corrective action program as Problem Identification Form D2000-00636.

The licensee performed a root cause evaluation for this problem as part of Problem Identification Form D2000-00636. Causes included inadequate communications between work groups such that operators did not know the detector for an IRNIs would be disconnected, inadequate instructions in the work package, and work not authorized in the work package being performed on the detector. Corrective actions were documented in the root cause report.

1R22 Surveillance Testing

a. Scope.

The inspectors reviewed the below listed surveillance test procedures to verify that requirements for the boration flow path, safety injection time response, and ECCS system operability were incorporated correctly in the test procedures and to verify that test acceptance criteria were consistent with the T/S and UFSAR requirements. The inspectors also reviewed completed surveillance test data to verify that selected risk significant components in the RHR/LHSI system and the CVCS/ HHSI systems were capable of performing their intended safety within the time specified functions. The inspectors used the system descriptions, vendor manuals licensee's procedures and design basis calculations listed in the attached "List of Documents Reviewed" as criteria for the above review.

ST-1007,1A RHR Pump Operability Interval, Revision 4
ST-108, ESFAS Train B Slave Relay Test, Revision 10
ST-1111, Sequence Block Circuit and Containment Fan Cooler
Quarterly Test , Revision 3
ST-1202, ESF Safety Injection Response Time Test, Revision 12
ST-405, Surveillance of Boric Acid Concentration and Refueling Water Storage tank,
Revision 5

Findings.

There were no findings identified during inspection of this area.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiological Significant Areas

a. Inspection Scope

The inspectors accompanied an RP technician on a tour of the Unit 1 radiological protected area (RPA) and outside areas to assess licensee radiological control practices related to 10 CFR part 20 Subpart F Surveys and Monitoring, and Subpart I Storage and Control of Licensed Materials. Inspectors determined that the licensee had established and were maintaining the applicable implementing procedures.

b. Findings

During the tour of areas outside the RPA (but inside the restricted area), the RP technician discovered a yellow bag of contaminated material and several contaminated tools inside the motor-operated valve trailer, a recently released RPA. The bag was labeled as containing material with contamination levels of 3,000 - 115,000 dpm. The tools were painted purple, denoting fixed contamination. The RP technician took prompt action to secure the trailer, perform additional surveys, and post the area.

Subsequent licensee investigation found that the trailer had previously been posted as an RPA and radioactive materials storage area (RMSA), but had been released from RPA and RMSA status on June 30. The trailer had been surveyed and released by a contractor RP technician. The Unit 1 RP manager informed the inspectors that licensee policy did not normally allow contract technicians to release an area from RPA status.

The licensee performed additional surveys that demonstrated that the radioactive material contained in the yellow bag was less than 10 times the quantity of licensed material specified in Appendix C to 10 CFR 20.1001 - 20.2401. The inspectors determined that the lack of radiological posting on the motor-operated valve trailer did not constitute a violation; however, the inspectors' review of radiological problem reports disclosed two other recent instances in which the release of temporary RPAs had not been well controlled.

Left uncorrected this finding would become a more significant safety concern however, because the licensee entered all of the problems discussed above in their corrective actions system and the contamination had no actual impact the finding was considered to be very low significance (green).

4. OTHER ACTIVITIES

OA2 Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed the following performance indicators for Unit 1 and Unit 2 utilizing the performance indicator definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Revision 0:

Unplanned Scrams Per 7,000 Critical Hours

Scrams With A Loss Of Normal Heat Removal

Unplanned Power Changes Greater Than 20 Percent Per 7,000
Critical Hours

The inspectors reviewed Licensee Event Reports (LERs) and operator log entries to determine the number of scrams that occurred during the previous four quarters and compared that number to the number in the performance indicator. The inspectors also reviewed licensee Monthly Operating Reports and operator logs to verify the accuracy of the number of critical hours reported. The inspectors verified performance indicator results through independent calculation. The inspectors also reviewed the licensee's basis for crediting normal heat removal capability for each of the reported reactor scrams.

The inspectors reviewed Monthly Operating Report power history data, control room logs, and Performance Indicator data sheets to verify that the licensee had adequately identified the number of unplanned power changes greater than 20 percent that had occurred during the previous 4 quarters. The inspectors verified performance indicator results through independent calculations.

b. Issues and Findings

There were no findings identified.

4OA3 Event Follow-up

(Closed) LER 998/1998-001-00: auxiliary building ventilation actuation. This LER was a minor issue and was closed.

4OA4 Cross-cutting Issues

Human Performance Problems

a. Inspection Scope

In both mitigation and initiating event cornerstone areas the inspectors observed multiple maintenance personnel performance errors and reactor operator errors during refueling operations. Unit 2 section 1 R20.1 of this report and several sections documented in IR/99-04 document individual (green) findings which appear to be forming a trend of performance. The inspectors reviewed corrective actions for errors occurring during or near the time of the Unit 2 refueling outage.

b. Findings

The inspectors found several substantive errors in review, coordination, and implementation of planned maintenance activities affecting multiple cornerstone areas. These situations occurred this period and recent previous inspection periods. Operators were unaware that Technical Specifications or administrative limiting condition for operation action statements were entered or exceeded and in addition to section (1R20.2) involving too few nuclear instruments, automatic depressurization valves were taken out of service while required to be operable (IR/99-04 Section 1R20.2). Also, a high pressure coolant injection system was inoperable during startup because maintenance was not completed (IR/99-04 section 1R19.1), and a required emergency diesel generator was not operable during fuel movements. Another similar problem involving breaker maintenance where safe shutdown administrative requirements were not addressed was documented in Problem Identification Form 2000-00537.

Other events involved maintenance problems caused by technicians. These included one case where an incorrect procedure led to installation of electrical jumpers for emergency core cooling logic in the wrong location (Problem Identification Form D2000-00129), and one case where an electrical jumper was installed in the reactor protective system in the wrong location (Problem Identification Form D2000-00771.) There was no equipment risk significance for the specific jumper placements because the logic for the systems was unaffected. The Durojac Plant Individual Plant Evaluation did not address the risk assessment with these types of errors.

The causally linked relationship of each of these events is that all these observations were noted to have occurred on second shift and with the same operations and maintenance crews.

While the safety significance of the individual events was very low, the number of maintenance-related incidents indicated a problem with control, review, and performance of maintenance activities.

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Prue, Unit 2 Operations Manger, and other members of licensee management at the conclusion of the inspection on July 24, 1999. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

Predecisional Enforcement Conference Summary

On July 24, a predecisional enforcement conference was held at the NRC Region I office to discuss potential enforcement findings identified in NRC Inspection Report 50-998; 999/99-06. The findings related to radiological concerns over the licensee's control of access to high radiation areas. Slides used in the licensee's presentation at the conference have been included as Attachment A to this report.

KEY POINTS OF CONTACT

Licensee

J. Cramer, Outage Supervisor
J. Delphi, System Engineering Supervisor
G. Deplogle, Maintenance Manager, Unit 1
S. Nithhold, Manager, Quality Assurance
G. Picket, Radiation Protection Manager, Unit 2
D. Prue, Operations Manager, Unit 2
J. Russelville, Radiation Protection Manager, Unit 1
J. Sloaninton, Manager, Compliance
L. Smithson, General Manager, Technical Services
J. Spots, Supervisor, Mechanical Maintenance, Unit 1

NRC

D. Ackerman, Durojac Project Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

999/99007-02 EEI Apparent violation of TS 3.5.2 for ECCS operability (1R14.1)

Opened and Closed During this Inspection

999/99007-01 NCV failure to review NDE inspector qualification (1R07)
999/99007-02 NCV reactor trip because of procedure problem (1R14.1)
998/99007-03 NCV failure to maintain nuclear instruments operable during core alterations
(1R20.2)

Previous Items Closed

998/98003-03 VIO failure to provide adequate procedural guidance for check valve
inspection retest (1R19.2)
998/1998-001-00 LER missed surveillance because of personnel error (4OA4)
999/1998-004-00 LER reactor trip while subcritical because of inadequate procedure
(1R14.2)

Previous Items Discussed

998/98015-06 URI diesel generator cooling water issues (1R09)

DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

(ADD ONLY IF NOT LISTED IN THE BODY OF THE REPORT)

LIST OF ACRONYMS USED
(IF GREATER THAN 20 PAGES OF DETAIL)

ALARA	as low as reasonably achievable
CCP	coolant charging pump
CCW	component cooling water
CDP	core damage probability
CFR	Code of Federal Regulations
DGCW	diesel generator cooling water
DMP	Dirojac Maintenance Procedure
DOP	Dirojac Operation Procedure
DQAP	Dirojac Quality Assurance Procedure
ECCS	emergency core cooling system
EEI	escalated enforcement item
GP&L	Greckenshire Power and Light
HPCI	high pressure core injection
HPSI	high pressure safety injection
IPE	individual plant evaluation
LER	licensee event report
LOCA	loss of coolant accident
NCV	noncited violation
NDE	nondestructive examination
NRC	Nuclear Regulatory Commission
PMT	postmaintenance test
RAS	recirculation actuation signal
RMSA	radioactive materials storage area
RP	radiation protection
RPA	radiologically protected area
RWST	refueling water storage tank
SDP	significance determination process
SRA	senior reactor analyst
SWP	service water pump
TS	technical specification

LIST OF ACRONYMS USED IN MC 0610*

NOTE: a separate list of acronyms is given as an enclosure to Exhibit 2, the sample inspection report.

AEOD	Office for Analysis and Evaluation of Operational Data
ALARA	as low as is reasonably achievable
CFR	Code of Federal Regulations
CVCS	chemical and volume control system
EA	escalated action
EP	emergency preparedness
ESF	engineered safety feature
EW	exercise weakness
gpm	gallons per minute
GPO	Government Printing Office
IFI	inspection follow-up item
IFS	Inspection Follow-Up System
IMC	inspection manual chapter
IPAP	Integrated Performance Assessment Process
IRAM	Item Reporting and Analysis Module
ISI	in-service inspection
LER	licensee event report
LOCA	Loss of Coolant Accident
MD	management directive
MREM	Milli-roentgen equivalent man
NCV	noncited violation
NMSS	Office of Nuclear Material Safety and Safeguards
NOV	notice of violation
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
OE	Office of Enforcement
OI	Office of Investigations
PIPB	Inspection Program Branch
PPR	plant performance review
PRA	Probabilistic Risk Assessment
RA	regional administrator
RHR	residual heat removal
RP	radiation protection
RP&C	radiological protection and chemistry
SDP	Significance Determination Process
SI	International System of Units
TBD	to be determined
TI	temporary instruction
TS	technical specification

GUIDANCE FOR SUPPLEMENTAL INSPECTIONS

In general, most of the guidance contained in this inspection manual chapter applies equally to both the baseline and the supplemental portions of the power reactor inspection program. However, due to the nature of the supplemental inspections, it is expected that the associated supplemental inspection reports will contain a more complete documentation of the NRC's findings for each inspection requirement. The following guidance applies specifically to the documentation of inspections using supplemental Inspection Procedures 95001 and 95002:

- a separate inspection report will usually be generated for each supplemental inspection
- the inspection report will contain the following sections:
 - a summary of findings (to be entered into the PIM), which will provide an overall assessment of the licensee's evaluation of the performance issue, including any specific findings associated with the licensee's evaluation, or findings associated with new issues,
 - a summary of the performance issue for which the inspection is being performed (this can be taken from a previous inspection report for a inspection issue or can be a summary of the PI and the particulars associated with its crossing a threshold),
 - restatement of each inspection requirement, followed by a synopsis of the licensee's assessment related to the inspection requirement, followed by the inspector's assessment of the licensee's evaluation including a description of any additional actions taken by the inspector to assess the validity of the licensee's evaluation,
 - a list of persons contacted and all licensee documents reviewed during the inspection, and
 - a list of acronyms used in the inspection report.

The independent review of extent of condition called for in Inspection Procedure 95002 and performed using a procedure or procedures chosen from Appendix B to Inspection Manual Chapter 2515 should be documented along with the other inspection requirements contained in Inspection Procedure 95002. Portions of a sample inspection report performed in accordance with supplemental inspection procedure 95001 are provided on the following pages. Some sections of this sample report contain alternative write-ups to illustrate how both positive and negative inspection results would be documented.

Specific documentation requirements and report format for supplemental Inspection Procedure 95003 will be provided by the team leader and will generally be similar to that for supplemental Inspection Procedures 95001 and 95002.

U.S. NUCLEAR REGULATORY COMMISSION

REGION X

Docket Nos: 50-998, 50-000
License Nos: xxx-79, xxx-80

Report No: 50-998/2000-08, 50-000/2000-08

Licensee: Iowanauke

Facility: Profit Centers 1 and 2

Location: 1234 Atomic Blvd
Somewhere, USA

Dates: December 25 - December 31, 2000

Inspectors: A. Grounder, Senior Resident Inspector
R. Cause, Reactor Projects Inspector

Approved by: S. Slatkin, Projects Branch 1
Division of Reactor Projects

SUMMARY OF FINDINGS

Profit Centers 1 and 2
NRC Inspection Report 50-998/2000-08, 50-000/2000-08

ADAMS TEMPLATE: (TO BE INSERTED HERE, see previous example)

Cornerstone: Mitigating Systems

This supplemental inspection was performed by the NRC to assess the licensee's evaluation associated with the inoperability of the unit 1 diesel generator A. This performance issue was previously characterized as having low to moderate risk significance ("white") in NRC Inspection Report #XXX XXXXX. During this supplemental inspection performed in accordance with Inspection Procedure 95001, the inspectors determined that the licensee performed a comprehensive evaluation of the inoperable diesel. The inoperable diesel was identified by the licensee during a surveillance test. The licensee's evaluation identified the primary root cause of the performance issue to be poor control of vendor manuals, which resulted in the maintenance workers miscalibrating the governor speed control unit. The vendor manual control issue was not limited to the diesel generator and the licensee has taken corrective actions to ensure vendor manuals are current for all risk significant equipment. In addition, the licensee intends to review the scope of quality assurance audits to determine whether additional resources need to be provided to the quality assurance department to identify similar programmatic deficiencies.

Due to the licensee's acceptable performance in addressing this issue, white performance associated with the inoperable the unit 1 diesel generator will only be considered in assessing plant performance for a total of four quarters in accordance with the guidance in IMC 0305, Operating Reactor Assessment Program. Implementation of the licensee's corrective actions will be reviewed during a future inspection.

or

This supplemental inspection was performed by the NRC to assess the licensee's evaluation associated with the in operability of diesel generator A. This performance issue was characterized as having low to moderate risk significance ("white") in NRC Inspection Report #XXX XXXXX. During this supplemental inspection, performed in accordance with Inspection Procedure 95001, several significant deficiencies were identified with the licensee's evaluation of the inoperable diesel.

While the licensee's evaluation attributed the root cause of this issue to improper training of maintenance workers, the NRC inspectors identified that the improper maintenance was actually the result of vendor manuals that were not up to date and contained inaccurate guidance concerning the calibration of the diesel generator governor speed control unit. In addition, the inspectors determined that the vendor manual control issue does not appear to be limited to the diesel generators, as similar concerns regarding the control of vendor manuals have been documented in other NRC inspection reports. Also, the inspectors determined that the licensee's corrective actions were inadequate in that they only involved re-training the maintenance workers and failed to address the issue of vendor manual control.

As a result of these concerns, the white performance issue associated with the inoperable diesel generator will not be closed at this time. In addition, the deficiencies identified in the NRC's review of licensee's corrective actions are being considered for additional enforcement action.

Report Details

01 Inspection Scope

This supplemental inspection was performed by the NRC to assess the licensee's evaluation associated with the in operability of diesel generator A. This performance issue was previously characterized as "white" in NRC Inspection Report #XXX XXXXX and is related to the mitigating systems cornerstone in the reactor safety strategic performance area..

02 Evaluation of Inspection Requirements

02.01 Problem Identification

- a. Determine that the evaluation identifies who (i.e. licensee, self revealing, or NRC), and under what conditions the issue was identified.

The in operability of the diesel generators was identified during a routine surveillance test performed by the licensee. During testing of diesel generators A, the diesel failed to reach the required speed at which time the test was stopped and the diesel was declared inoperable.

- b. Determine that the evaluation documents how long the issue existed, and prior opportunities for identification.

The licensee determined that the diesel was likely inoperable since last performing maintenance on September 5, 1999. The inspector agreed with the licensee's evaluation.

- c. Determine that the evaluation documents the plant specific risk consequences (as applicable) and compliance concerns associated with the issue.

The licensee's evaluation assigned a core damage frequency of 5 E-6 to this condition. The inspectors reviewed the licensee's evaluation and assumptions and confirmed their validity.

02.02 Root Cause and Extent of Condition Evaluation

- a. Determine that the problem was evaluated using a systematic method(s) to identify root cause(s) and contributing cause(s).

The licensee used a combination of structured root cause analysis techniques to evaluate this issue including barrier, change, and events and causal factor analysis. The inspectors determined that the licensee followed its procedural guidance for performing level 1 root cause analysis. The procedure required conducting interviews with key personnel and the preservation of evidence associated with the issue. The licensee successfully accomplished this by quarantining the diesel until formal troubleshooting controls could be established.

- b. Determine that the root cause evaluation was conducted to a level of detail commensurate with the significance of the problem.

The licensee's root cause evaluation was thorough and identified the primary root cause of the performance issue to be poor control of vendor manuals, which resulted in the maintenance workers mis-calibrating the governor speed control unit. Furthermore, the licensee identified that the vendor manual control issue was not limited to the diesel generator but was applicable to several pieces of risk significant equipment.

Or

The inspectors determined the root cause evaluation was not conducted to a sufficient level of detail. Although the licensee correctly diagnosed the apparent cause of the diesel failure as being a mis-adjusted governor speed control unit, the licensee's evaluation incorrectly identified the root cause as being maintenance worker error. The inspectors determined that the worker errors were actually caused by out of date vendor manuals for the governor speed control units. The calibration procedure in the vendor manual was for an old speed control unit that had been replaced two years ago. In addition, the inspectors noted that problems with control of vendor manuals for other equipment had previously been documented during NRC inspections (see NRC inspection reports 50-xxx/99-08 and 50-xxx/2000-05); however, the licensee had failed to enter the concerns into their corrective action program.

- c. Determine that the root cause evaluation included a consideration of prior occurrences of the problem and knowledge of prior operating experience.

The licensee's evaluation included a review to see if similar problems had previously been reported with the diesel governor unit. This was the first known instance of a failure of this type.

The inspectors did not possess any information to the contrary.

- d. Determine that the root cause evaluation included consideration of potential common cause(s) and extent of condition of the problem.

The licensee's evaluation considered the potential for common cause and extent of condition associated with the lack of vendor manual control. The licensee determined that the issue of vendor manual control was not limited to the diesel generators and effected other safety equipment. The inspectors agreed that this problem was not limited to the diesels, as they had identified problems with vendor manual control when reviewing maintenance on the auxiliary feedwater pumps. These concerns were previously documented in NRC inspection report 50/XXX/2000-08.

02.03 Corrective Actions

- a. Determine that appropriate corrective action(s) are specified for each root/contributing cause or that there is an evaluation that no actions are necessary.

The licensee took immediate corrective actions to make the diesel generator operable. The governor control unit was re-calibrated and the diesel generator vendor was contacted to ensure that the latest technical information was available and being used. The licensee has also specified corrective actions to address the root cause of poor vendor manual control. The licensee has begun a program to re-verify that all safety significant vendor information is current, and is planning to contact each of the associated vendors. The inspectors determined that the proposed corrective actions are appropriate.

- b. Determine that the corrective actions have been prioritized with consideration of the risk significance and regulatory compliance.

The licensee's immediate corrective actions restored the diesel generators to operability within the technical specification allowed outage time. After restoring the effected diesel, the other diesel was tested to ensure that it would perform its intended functions if called upon. The inspectors witnessed this testing and observed that the diesel successfully passed the surveillance test.

- c. Determine that a schedule has been established for implementing and completing the corrective actions.

The licensee's plans for the re-verification of vendor information are being implemented according to the risk significance of the equipment. The inspectors reviewed the licensee's plans for accomplishing this activity and agreed that the risk significance of the equipment was being appropriately considered.

- d. Determine that quantitative or qualitative measures of success have been developed for determining the effectiveness of the corrective actions to prevent recurrence.

The licensee has enhanced its monitoring of the diesel generators to ensure that any additional failures are given appropriate management attention. The licensee has also scheduled a quality assurance audit to assess the adequacy of the corrective actions associated with the vendor manual control issue.

ATTACHMENT

Persons Contacted

Documents Reviewed (optional if list is publically available some other way)

Acronyms Used (optional)

GUIDANCE FOR THE PLANT ISSUES MATRIX

General Guidance for PIM Entries.

PIM: All entries in the Summary of Findings will be transferred directly to the PIM, except for the color of the finding and the section referencing the functional area. Although the PIM is not a direct part of the inspection report, instructions are included here to assist inspectors in identifying the information required for the PIM during the inspection. PIM entries should be limited to negative issues and will not include neutral or positive observations, with a few exceptions as noted below.

The PIM shall be updated within 14 days after the date of the report and shall include the following information; type, title, cornerstone, significance determination, date, who identified the finding, item description and significance description, and source (normally expected to be the inspection report number). The PIM shall be sorted by cornerstones and entries within the cornerstone shall be listed in reverse chronological order. The PIM should contain the information from the past 12 months. Data will be entered into the PIM via the Reactor Program System /Item Reporting (RPS/IR) module.

The information from the Summary of Findings shall be transferred to the PIM as written, except that minor editorial changes may be made. In addition, enforcement-related amplifying information should be added to the end of the item description. Specifically, the requirement which was violated should be included; if enforcement discretion is granted, the applicable section of the Enforcement Policy should be included, as well as the severity level if applicable. For final escalated enforcement actions, the following should be included in the PIM: (1) the severity level (which may also be in the SIGNIFICANCE column), (2) whether a civil penalty was issued and the amount, (3) mitigating or escalating factors, (4) use of discretion, etc. Apparent violations should be included in the PIM. When apparent violations and URIs are resolved, the PIM entry shall be modified to represent the final resolution.

Issues that have been identified as a violation or finding but have not yet been assigned a significance through the SDP will be entered into PIM with a significance of "TBD." These issues will also be in the Summary of Findings and upon determining the significance of the issue will be updated in the PIM accordingly.

If a PIM entry is found to be unclear after the inspection report is issued, the PIM may be edited appropriately to clarify the issue, with the goal of improving the ability of the reader to understand the issue. However, only information contained in the body of the report shall be used. Care should be taken to ensure that new or undocketed information is not inadvertently introduced into the PIM. Any changes of content shall be included within brackets, [], to clearly show the editing. Use of brackets is not required for addition of the clarifying information discussed in the previous paragraph.

Unresolved Items (URIs): URIs should be documented in the body of the inspection report, but should not be documented in the Summary of Findings or the PIM. The RPS entry for the URI should include a significance determination of "TBD", it should not be included in the PIM or the assessment process. The PIM entry should be made once the compliance question has been answered or the significance has been determined and documented in an inspection report or other docketed correspondence.

Problem Identification & Resolution and Cross-cutting Issue Findings: "Findings" related to problem identification and resolution and cross-cutting issues (PI&R and CC) identified

during routine baseline inspections should generally be tied to a specific issue and documented by cornerstone areas in the body of the inspection report. These PI&R and CC issues should have the same significance as the most significant technical issue to which they are related, and should be documented in the Summary of Findings and the PIM as such. Conclusions made on PI&R effectiveness resulting from either periodic and routine inspections may be documented in the body of the inspection report, but should not be documented in the Summary of Findings or the PIM. The results of the annual PI&R inspection (IP71152), a summary conclusion should be made about the effectiveness of the PI&R program which addresses the objectives of IP71152. This summary conclusion should be placed in the Summary of Findings and documented in the PIM under “Miscellaneous” for the cornerstone field and “N/A” for the significance determination.

PI verification: PI verification issues should be discussed in the “Other” section of the inspection report and should be coded in the cornerstone field as “Miscellaneous.” As noted above, neutral or positive PI verification issues should not be documented in the Summary of Findings or the PIM. If correction of the PI data does not cause the PI to cross a threshold, the issue is considered minor and is not required to be documented. (See SECY 00-0061 Proposed Revised Enforcement Policy To Address The Reactor Oversight Process). If correction of the data causes the PI to cross a threshold, the type should be “VIO” (violation) or “NCV” and the significance determination should be the severity level of the violation. Each PI verification issue should be a separate entry.

Detailed Data Entry

1. Updating: The PIM should be updated within 14 days after the report date
2. PIM Type: Five “*Type*” selections, listed below, are available under the revised reactor oversight process, which will be defaulted to the PIM list,. For Part 21s, LERs, and other items of interest you wish to track, use the “Independent Item” button on the tool bar and enter the appropriate data. In the “*Type*” field, select the appropriate item type from the pull down menu:
NOTE: The source of a PIM entry will normally be the inspection report number listed by year and three digit report number without spaces (i.e., 1999001) as assigned through RPS/IRTS (Inspection Report Tracking System). Multiple SOURCE codes should be used where appropriate. If used, the most significant item should be listed first, otherwise the most recent.
3. PIM Title: Enter a concise yet descriptive title for the PIM entry in the “*Title*” field in all capital letters. This title will be automatically printed on the PIM report atop the item description in the “Item Description/Significance” column for each PIM entry. The title should be concise to highlight key aspects of the issue and provide a quick synopsis of the issue for management and others who don't want/need to read the full description (except as prompted by the title). A good rule of thumb would be to limit the length of the title to fit on one line of the printed PIM (about 80 characters).
 - a. PIM Specific Type: In the “*Type Specific*” box, enter the appropriate information as prompted from your Type selection (i.e., severity level, EA case number, etc). This information will not print out on the PIM report.
4. PIM Cornerstone: Select the appropriate “*Cornerstone*” from the pull down menu. Here you are determining which aspect of safe nuclear plant operation has been challenged based on your finding. In essence, we will be capturing inspection findings by “cornerstone” as opposed to SALP functional area, as we had in the past.
 - a. *Initiating Events* -

- b. *Mitigation Systems -*
- c. *Barrier Integrity -*
- d. *Emergency Preparedness -*
- e. *Occupational Exposure -*
- f. *Public Exposure -*
- g. *Physical Protection -*
- h. *Miscellaneous -*

(For a more complete listing of inspectable areas by cornerstone, see Table 3 from Attachment 1 to SECY-99-007, "Recommendations for Reactor Oversight Process Improvements.")

5. PIM Significance: Select the appropriate "*Significance Determination*" from the pull down menu. Most inspection findings will be evaluated with the Significance Determination Process (SDP) to assess the safety significance and determine the appropriate regulatory response. As a result of the SDP, the item will be assigned a color (green, white, yellow, or red) based on its significance.
- a. *Green -- Licensee Response Band*. As a result of the SDP, the finding was determined to only warrant NRC 'baseline' oversight (cornerstone objectives fully met, no significant risk or deviation from expected performance).
 - b. *White -- Increased Regulatory Response Band*. As a result of the SDP, the finding was determined to warrant an increased regulatory response (cornerstone objectives met with minimal reduction in safety margin, outside bounds of expected performance, within technical specification limits, changes in performance but with very small effect on accident risk).
 - c. *Yellow -- Required Regulatory Response Band*. As a result of the SDP, the finding was determined to warrant a required regulatory response (cornerstone objectives met but with significant reduction in safety margin, technical specification limits reached or exceeded, changes in performance with a small effect on accident risk).
 - d. *Red -- Unacceptable Performance Band*. As a result of the SDP, the finding was determined to be unacceptable (plant performance significantly outside design basis, loss of confidence in ability of plant to provide assurance of public health and safety with continued operation, significant reduction in margins of safety).
 - e. TBD -- Significance not yet determined. Further evaluation necessary. Items with a significance of TBD should be considered draft items(see MC0610 Section 06.03.b).
 - f. N/A -- This choice is provided for those PIM findings that result from the annual Problem Identification and Resolution conclusion and Performance Indicator verification.

Not all PIM entries will be subject to the SDP, such as violations of regulatory requirements that impede our ability to regulate.. Examples of these types of items include violations of 10CFR Sections 50.5, "Deliberate Misconduct," 50.7, "Employee Protection," 50.9, "Completeness and Accuracy of Information," and 50.73, "Licensee Event Report System", or an aggregate of Cross-cutting issues. For those items and similar violations of regulatory requirements, enter the appropriate severity level of the violation in the "Significance Determination" field.

- a. *SL-I* -- Items not subject to the SDP which resulted in Severity Level I violations.
- b. *SL-II* -- Items not subject to the SDP which resulted in Severity Level II violations.

- c. SL-III -- Items not subject to the SDP which resulted in Severity Level III violations.
 - d. SL-IV -- Items not subject to the SDP which resulted in Severity Level IV violations.
6. **PIM Identification:** Select the appropriate choice as to who identified the issue from the “*Identified By*” field. The pull down menu choices include the NRC, the licensee, and self-identified. Self-identified (a.k.a. self-revealing) refers to those issues that are identified by an occurrence or action that was not an initiative of the licensee or NRC. Examples include valves misaligned identified during a TS required surveillance test, modification errors that are not identified until an actual system demand occurs, etc.
 7. **PIM Event Date:** Enter the appropriate date in the “*Event Date*” field. For PIM entries which describe an event or significant issue that has a clear date of occurrence, use this date when documenting the item in the PIM. For other entries such as LERs, use the date that the information source was issued; with the exception of NRC Inspection Reports, in which the last date of the inspection period should be used. When the LER occurrence date is significantly earlier than the report date, add the occurrence date to the item description, to put the time of the issue in context.
 8. Fill in the remaining fields on the Status and Procedures screens as you would for a standard PIM entry. Each entry in RPS/IR will need to be assigned to at least one inspection procedure (“N/A” and “None” are also valid choices). In addition, be sure to select the applicable docket/units because we will be sorting and reporting by both site and docket number.
 9. Enter a brief description of the PIM entry in the “*Item Description/Significance*” field. The text of the PIM entry should consist of 2 parts. The first should describe the issue in succinct context, including the requirement which was violated if applicable, and the second should explain the significance (and not simply mention the color). For issues that have an associated corrective action, the licensee corrective action control number should be referenced in order to facilitate subsequent retrieval of this information for the annual PI&R inspection.

The following terminology should be used to describe the colors in the significance discussion in the PIM:

- Green = very low risk significance
- White = low to moderate risk significance
- Yellow = substantial risk significance
- Red = high risk significance

10. **Cross-Cutting Issues:** The PIM Cornerstone would be “Miscellaneous” and the Significance should be not applicable (N/A).
11. **Significance To Be Determined:**
Issues initially categorized as having a potential safety significance of greater than very low significance, but whose significance has not yet been determined should be categorized in the PIM as “TBD”. After a final risk characterization is determined by the SDP oversight panel and a “Choice” letter is sent to the licensee regarding this characterization, the PIM should be updated to reflect the permanent risk color.

Note: Do not add any information in the PIM that was not included in the inspection report.

Appendix D

Thresholds for Documentation

Inspectors should use Figure 1 and group 1, 2 & 3 questions in determining if an issue should be documented in an inspection report. The decision points in this process are discussed in detail below:

a. Issues: The inspector first makes an observation or collection of observations which is believed to be an issue. The inspector should first determine whether the issue has sufficient significance to warrant further analysis or documentation. This is done by determining whether the issue is a “Minor” concern. Minor concerns should not be documented in inspection reports.

b. Minor Issues/Violations (Group One Questions):

If the answer to all the below questions is “No” the issue can be considered Minor. However, the inspector should determine whether the issue has extenuating circumstances by reviewing group 3 questions.

Group One Questions

- (1) Does the issue have an actual or credible impact on safety?
- (2) Could the issue be reasonably viewed as a precursor to a significant event?
- (3) If left uncorrected would the same issue become a more significant safety concern ?
- (4) Does the issue relate to collecting or reporting performance indicators such that a threshold may have been exceeded?

c. Issues Affecting Cornerstones (Group 2 Questions):

If the answer to any question is “yes”, the issue should be analyzed by the SDP process, assigned a color, and documented in the inspection report. If the answers to all group 2 questions are “no” then the inspector should determine whether there are extenuating circumstances by reviewing the group 3 questions.

Group Two Questions

Reactor Safety - Initiating Events, Mitigating Systems, & Barrier Integrity

- (1) Could the issue cause or increase the frequency of an initiating event?
- (2) Could it credibly affect the operability, availability, reliability or function of a system or train in a mitigating system?
- (3) Could it affect the integrity of fuel cladding, the reactor coolant system, and/or reactor containment?
- (4) Could it involve degraded conditions that concurrently influence any mitigation equipment and initiating event?

Reactor Safety - Emergency Planning

- (1) Does it involve a failure to meet or implement a planning standard (10CFR50.47(b) and Appendix E to Part 50) or other regulatory requirements?

Radiation Safety - Occupational

For ALARA issues:

- (1) Does the actual job dose exceed the projected dose by >50%, AND

- (2) Does the 3 year rolling average collective dose exceed 135 person-rem/unit for a PWR or 240 person-rem/unit for a BWR, AND
- (3) Is the actual job dose > 5 person-rem?
- (4) Does it involve a failure of one or more radiation barriers that result in, or could result in, a significant unintended or unplanned dose?

Radiation Safety - Public

- (1) Does it involve an occurrence in the licensee's radiological *effluent monitoring* program that is contrary to NRC regulations or the licensee's TS, ODCM, or procedures?
- (2) Does it involve an occurrence in the licensee's radiological *environmental monitoring* program that is contrary to NRC regulations or the licensee's TS, ODCM, or procedures?
- (3) Does it involve an occurrence in the licensee's radioactive *material control* program that is contrary to NRC regulations or the licensee's procedures?
- (4) Does it involve an occurrence in the licensee's radioactive material transportation program that is contrary to NRC or DOT regulations or licensee procedures?

Physical Protection

- (1) Does it involve a nonconformance with safeguards requirements

Fire Protection

- (1) Does it involve impairment or degradation of a fire protection feature.

d. Extenuating Circumstances (Group Three Questions):

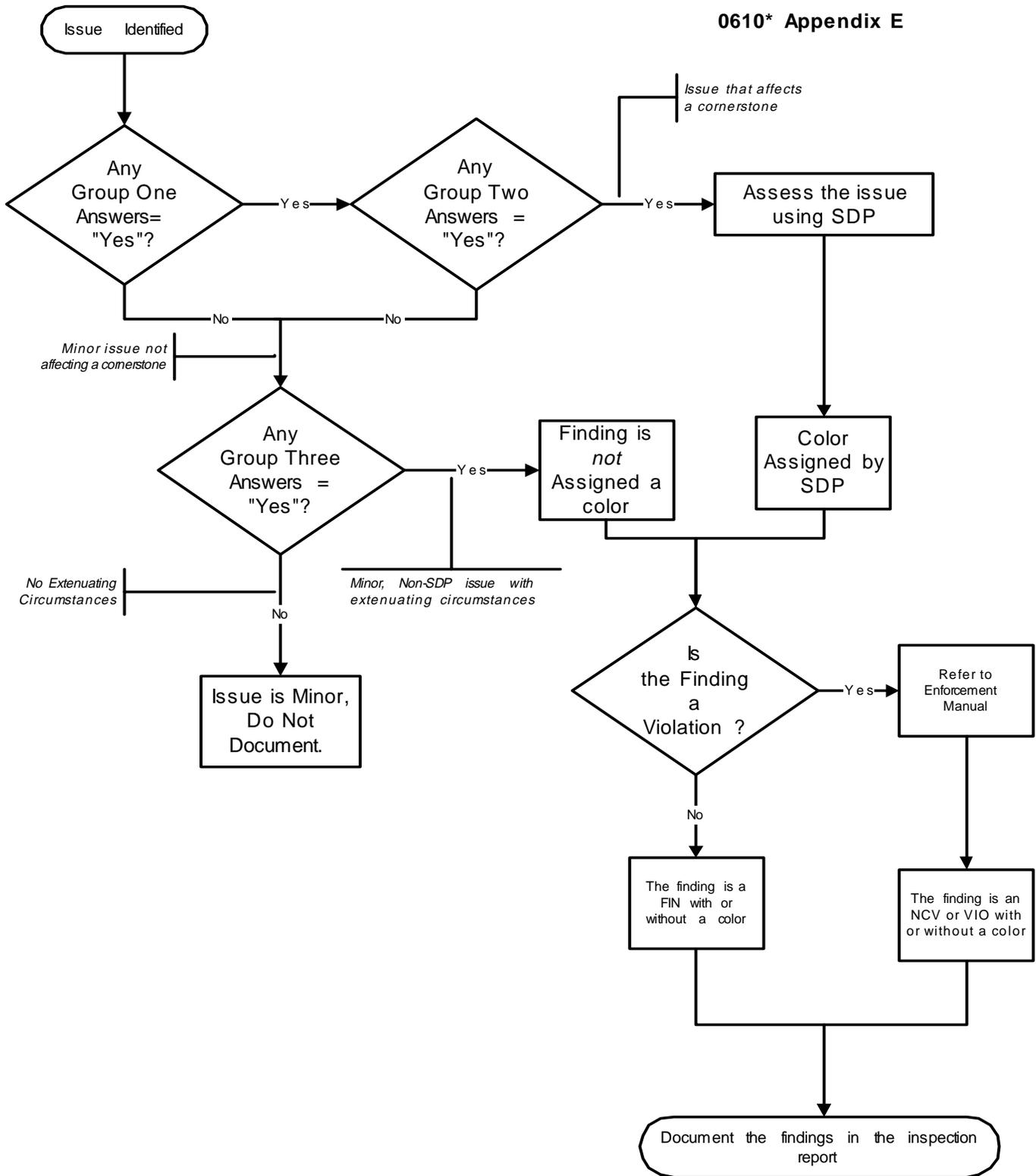
If an issue is either minor or more than minor and does not affect a cornerstone, there should be extenuating circumstances associated with the issue in order to be documented. The following questions in group 3 should be reviewed to determine whether an issue has extenuating circumstances.

- (1) Are there any associated circumstances that add regulatory or safety concerns, (i.e. apparent willfulness, licensee refusal to comply, or discrimination?)
- (2) Does the issue have potential for impacting the NRC's ability to perform its regulatory function? For example failures to: provide complete and accurate information, or failure to perform 10 CFR 50.59 analyses, etc. (see enforcement policy)
- (3) Is documenting this issue necessary to close an open item, licensee event report or allegation?
- (4) Does the associated technical information relate directly to an issue of agency-wide concern, i.e. a generic safety issue?
- (5) Does the issue provide substantive information, regarding Cross-cutting issues which is not captured in individual issues in the report or indicates performance trends or patterns?
- (6) Was the issue determined to be a violation greater than minor during the review of group one questions?
- (7) Does the issue suggest a programmatic problem that has a credible potential to impact safety and is more than isolated.

If all the answers to the above questions are "No" the issue does not have extenuating circumstances and would not normally be documented. If the answer to any question is "yes" the issue should be documented as a finding or a violation without a color.

Thresholds for Documentation

0610* Appendix E



May 24, 2000

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APPENDIX E
Guidance For Documenting Inspection Procedure 71152
Identification and Resolution of Problems

As one of the objectives of Inspection Procedure 71152 is to provide an assessment of the effectiveness of the licensee's PI & R programs, the type of documentation for this inspection should be different than that for other baseline inspections and may include more qualitative observations. Listed below are some general principles applicable to documenting the results of IP 71152 that supplement the guidance contained elsewhere in this inspection manual chapter.

- The cover letter for this report should conform to the guidance given for other baseline inspections with the exception that it should also contain a brief description of the team's overall conclusion regarding the effectiveness of the licensee's PI & R programs. An example cover letter is provided in the sample inspection report contained in this Appendix.
- The summary of findings for this report should contain the team's overall assessment of the licensee's PI & R program based upon both the annual and the routine baseline inspections. This overall assessment should also be placed in the PIM.
- The inspection report should contain an assessment for each of the major PI & R performance attributes, as indicated in the attached example report and outline.
- Negative conclusions regarding aspects of the PI & R program should be supported by examples of performance deficiencies.

Example Inspection Report Excerpts and Outline
July 7, 2000

Mr. Charles Nuke
Site Vice President
Iowanuke Power Authority
Iowanuke Unit 1
124 Atomic Blvd.
Hometown, USA

SUBJECT: IOWNANUKE UNIT 1 - NRC INSPECTION REPORT NO. 50-999/2000-003

Dear Mr. Nuke:

On June 9, 2000, the NRC completed a team inspection at the Iowanuke Unit 1 Nuclear Power Plant. The enclosed report presents the results of that inspection. The results were discussed on June 9, 2000, with Ms. Mary Atom and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations, and with the conditions of your operating license. Within these areas, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

If no findings were identified use the following:

[Based on the results of the inspection, there were no findings identified during this inspection. The team concluded that problems were properly identified, evaluated and resolved within the problem identification and resolution programs.]

If findings were identified use the following:

[There was one green finding identified during this inspection associated with the depth and effectiveness of one root cause analysis. This finding was determined to be a violation of NRC requirements. However, the violation was not cited due to its very low safety significance and because the finding was entered into your corrective action program. If you contest this noncited violation you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with a copies to the Regional Administrator, Region ___; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Iowanuke facility. With the exception of the above finding, the team concluded that problems were properly identified, evaluated and resolved within the problem identification and resolution programs.]

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

Summary of Findings

Adams Template:

NRC Inspection Report 50-99/2000-03, Iowanuke Power Authority. Iowanuke Unit 1, conducted between June 1 and June 9, 2000. The inspection was conducted as the annual baseline inspection of the Identification and Resolution of Problems. The inspection was conducted by a regional projects inspector, resident inspectors, and a regional radiation specialist. There was one green issue of very low safety significance identified during this inspection which was classified as a noncited violation. The significance of the issue is indicated by the color (green, white, yellow, red) and was evaluated using the Significance Determination Process.

Identification and Resolution of Problems:

The team identified that the licensee was effective at identifying problems and putting them into the corrective action program. The licensee's effectiveness at problem identification was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. The licensee effectively used risk in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. However, of the ten root cause evaluations reviewed, one was found to be deficient in that it was not performed to a sufficient depth to determine the primary root causes of the issue. Corrective actions, when specified, were generally implemented in a timely manner. Licensee audits and assessments were found to be effective and highlighted a similar concern in the root cause area. Based on the interviews conducted during this inspection, workers at the site felt free to input safety issues into the PI & R program.

Cornerstone: Mitigating Systems

- Green. A Non-cited Violation was identified because a deficiency was identified with the licensee's root cause evaluation RC-001 of an inoperable turbine driven auxiliary feedwater pump. The licensee's evaluation attributed the root cause of this issue to be an improper overspeed trip setpoint caused by improper training of maintenance workers. During the inspection, NRC inspectors identified that the improper setpoint was actually the result of vendor manuals that were not up to date and contained inaccurate guidance concerning the calibration of the overspeed trip device. The risk associated with the failure of the auxiliary feedwater pump had previously been determined to be of very low safety significance because of the redundancy in the auxiliary feedwater system.

Report Details

4. OTHER ACTIVITIES (OA)

40A2 Problem Identification and Resolution

c. Effectiveness of Problem Identification

Scope:

Briefly describe the scope of what was looked at to determine whether the licensee is identifying problems at the proper threshold and entering them into the corrective action system. Include samples taken from the previous 12 months of routine baseline inspection reports. For example:

[The inspectors reviewed items selected across the seven cornerstones of safety to determine if problems were being properly identified, characterized and entered into the corrective action program for evaluation and resolution. Specifically, the inspectors selected 50 Deviation & Event Reports (DERs) from approximately 2000 which had been issued between January 1999 and January 2000.

The inspectors evaluated these DERs to determine the licensee's threshold for identifying problems and entering them into the corrective action program. Also, the licensee's efforts in establishing the scope of problems were evaluated by reviewing pertinent control room logs, work requests, engineering modification packages, self assessment results, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The DERs and other documents listed in Attachment 2 were used to facilitate the review.

The inspectors also conducted walkdowns and interviewed plant personnel to identify other processes that may exist where problems and issues could be identified. The inspectors reviewed work requests and attended the licensee's daily work control meeting to understand the interface between the corrective action program and the work control process.]

Issues and Findings:

Discuss issues and findings relative to the scope and document general conclusion regarding effectiveness of problem identification. Included should be the basis for the general conclusion. The following provides an example of the minimum documentation which should be provided for instances where no findings were identified:

[There were no findings identified during this inspection. The team determined that the licensee was effective at identifying problems and entering them into the corrective action system. This was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. Also, during this inspection there were no instances identified where conditions adverse to quality were being handled outside the corrective action program.]

d. Prioritization and Evaluation of Issues

Scope:

List the documents that were reviewed to determine whether the licensee is adequately prioritizing and evaluating issues. Include pertinent reference numbers (for example NCR#s, violation #s, etc.).

Issues and Findings:

Discuss issues and findings relative to the effectiveness of the licensee's process for prioritizing issues, technical adequacy and depth of evaluations (including root cause analysis where appropriate), consideration of operability and reportability requirements, and identification of pertinent corrective actions. Include in this section any issues associated with the licensee's use of risk in prioritizing or evaluating issues. Document general conclusions regarding the above review,

3. Effectiveness of Corrective Actions

Scope:

List the documents that were reviewed to determine the timeliness and effectiveness of corrective actions. Include pertinent reference numbers (for example NCR#s, violation #s, etc.).

Issues and findings:

Discuss findings and issues relative to the subject area including the effectiveness of corrective actions to prevent recurrence. Included within this section of the report should be an assessment of the licensee's use of risk insights in prioritizing corrective actions. Document general conclusions relative to subject area.

4. Effectiveness of Licensee Audits and Assessments

Scope:

List and describe the scope and nature of the licensee audits and assessments that were reviewed.

Issues and findings:

Discuss findings and issues relative to the subject area. Document the results of the NRC's comparison review of licensee audits and self-assessments.

5. Assessment of Safety Conscious Work Environment

Scope:

Describe what actions were taken to assess this subject area.

Issues and findings:

This portion of the report should be more general in nature, as the procedure does not contain any specific inspection requirements with regard to this subject area. Discuss findings and issues relative to the subject area. Document general conclusions relative to the subject area.

LIST OF PERSONS CONTACTED

LIST OF DOCUMENTS REVIEWED (optional if documents identified in the body of the report)