March 7, 2003

MEMORANDUM TO: Christopher I. Grimes, Program Director
Policy and Rulemaking Program
Division of Regulatory Improvement Programs, NRR

FROM: Joseph L. Birmingham, Project Manager ***/RA/***
Policy and Rulemaking Program
Division of Regulatory Improvement Programs, NRR

SUBJECT: SUMMARY OF FEBRUARY 13, 2003, MEETING WITH INDUSTRY AND THE NUCLEAR ENERGY INSTITUTE (NEI) TO DISCUSS RADIATION SAFETY CORNERSTONES

On February 13, 2003, Nuclear Regulatory Commission (NRC) staff met with representatives of industry and NEI at NRC headquarters in Rockville, Maryland. Meeting participants are listed in Attachment 1 of this memorandum. Material distributed during the public radiation cornerstone portion is in Attachment 2. Material distributed during the occupational radiation cornerstone portion is in Attachment 3. The meeting was held to continue discussion on a proposed revision to the Public Radiation Safety Objective, the definition of an occurrence in the radioactive material control portion of NRC Manual Chapter 0609D, and discussion of criteria to define a minor violation.

After introductions, Steve Klementowicz, of the NRC, distributed material showing in redline/strikeout format proposed revisions to NRC Manual Chapters 0612 and 0609 (Attachment 2). One of the proposed changes was to remove the phrase “released into the public domain” from the Public Radiation Objective and add a sentence indicating that adequate protection was based on compliance with regulatory requirements. The purpose of this change was to clarify the focus and intent of the objective and to identify the NRC’s role in accomplishing the objective. There was general agreement on the proposed change. Another proposed change was wording in MC 0612 to indicate that minor findings in which radioactive material was identified in an unrestricted area should be briefly documented with the statement, “There was negligible risk associated with this finding.” This change if adopted will allow inspectors to identify and document minor findings and to appropriately indicate the level of risk to public health and safety.

There was some discussion of the definition of “minor.” From the discussion at the previous meeting, there was general agreement that the definition would be “indistinguishable from background at 30 centimeters.” Mr. Klementowicz stated that the staff needed to work with the Inspection Branch to fit the definition into MC 0612. He distributed material showing how guidance to inspectors on documenting minor findings could be placed into MC 0612. There was a brief discussion that the examples of a minor finding should include one inside the protected area and one outside the protected area. There was general agreement that the locations were appropriate and Mr. Klementowicz indicated he would work on the wording.

There was a question on the next steps required to accomplish the changes. Mr. Klementowicz indicated that the changes to MC 0609 would go quickly but the changes to MC 0612 required more coordination. A teleconference was proposed to discuss draft changes to MC 0612. However, no date was chosen for the teleconference.

There was a question from Ralph Andersen regarding the status of a Regulatory Information Summary (RIS) on, "Use of the Effective Dose Equivalent in Place of the Deep Dose Equivalent in Dose Assessments." Roger Pedersen, of the NRC, stated that the release of the RIS was imminent. The RIS has been issued as RIS 2003-04, dated February 13, 2003.

Mr. Andersen began a discussion on a new issue, the transportation significance determination process (SDP). He said that the nuclear industry would like to discuss their comments on the "low level burial ground access denied" decision box which results in a yellow finding. Mr. Klementowicz said that the staff is open to discussing any comments that they have.

This concluded the public radiation portion of the meeting.

Mr. Pedersen began the occupational portion of the meeting by distributing draft proposed frequently asked questions (FAQs) for discussion (Attachment 3). The FAQs concerned the following issues:

- Acceptability of controlling access to containment via use of a de-energized electronic lock that is controlled by security.
- A condition where an operator was inside the containment airlock (posted as a very high radiation area) when the health physics technician was outside the outer airlock door.
- Failure of an individual who enters the drywell (posted as a high radiation area) to turn on their electronic dosimeter but who does not actually enter a high radiation area.
- Work restrictions not planned outside a demineralizer vestibule because of crediting a labyrinth entrance that did not exist. After a planned crud burst, dose rates outside exceeded the criteria for a technical specification locked high radiation area.
- Temporary shielding blocked entrance to a locked high radiation area. However, workers crossed the plane of the conservatively posted barricade outside the locked high radiation area with their upper body.

Most of the FAQS asked whether the condition described constituted an occurrence against the locked high radiation area performance indicator.

Mr. Pedersen discussed each proposed FAQ with the group. He observed that many of the FAQs depended on nuances such as whether the security controlling access to containment via a de-energized door lock was under the administrative control of Operations or Health Physics. Some of the FAQs were deferred as compliance issues or were to be reworked and

resubmitted. The group discussed not having compliance issues go through the FAQ process which is not intended to resolve inspection findings.

There was a brief discussion on methods for assessing effective dose equivalent from external sources. Mr. Pedersen noted that the RIS discussed earlier referred to alternate methods.

As there were no public questions or comments and having completed the agenda the meeting was adjourned.

Project No. 689
Attachments: As stated
cc w/att: See list

List of Attendees for February 13, 2003 Meeting
Public and Occupational Radiation Safety Cornerstones

NAME	ORGANIZATION
Ralph Andersen	NEI
Roger Pedersen	NRC/NRR/IEHB
Steve Klementowicz	NRC/NRR/IEHB
Kathy Halvey Gibson	NRC/NRR/IEHB
Kathryn Brock	NRC/NRR/IEHB
Shamica Walker	NRC/NRR/IEHB
Joseph Birmingham	NRC/NRR/RPRP
Steve Schulin	NUCLEAR.COM
Joe Beer	NMC (Palisades)
Daniel Wilder	CPSES/TXU Energy
Richard L. Doty	PPL Susquehanna
Wayne Carr	So, Nuclear Co.
Michael Lantz	Arizona Public Service Co.
Lee Thomasson	Dominion
Mike Russell	SCE
Ron Cardarelli	EPRI
Sun Lee	First Energy

Region and Industry representatives via teleconference

Appendix D

PUBLIC RADIATION SAFETY
SIGNIFICANCE DETERMINATION PROCESS

This process is used in conjunction with Inspection Procedure 71122, "Public Radiation Safety," to determine the risk significance of a finding.

V. RADIOACTIVE MATERIAL CONTROL PROGRAM

A. Objective

This branch of the logic diagram focuses on the licensee's radioactive material control program. It assesses the licensee's ability to prevent the inadvertent release and/or loss of control of licensed radioactive material ~~to an unrestricted area~~ that can cause an actual or credible radiation dose to members of the public.

B. Basis

10 CFR Part 20 contains the requirements for the control and disposal of licensed radioactive material. At a licensee's facility, any equipment or material that came into contact with licensed radioactive material or that had the potential to be contaminated with radioactive material of plant origin and are to be removed from the facility must be surveyed for the presence of licensed radioactive material. This is because NRC regulations, with one exception in 10 CFR 20.2005, provide no minimum level of licensed radioactive material that can be disposed of in a manner other than as radioactive waste or transferred to a licensed recipient.

VI. SDP DETERMINATION PROCESS

Is there a finding in the licensee's radiological material control program that is contrary to NRC regulations and/or the licensee's program? If yes, the question is what is the dose impact ~~(as calculated by the licensee)~~ of the event? If the dose impact was not more than 0.005 rem total effective dose equivalent (TEDE) and there were not more than 5 of these ~~events~~ occurrences in the inspection period, then the SDP classification is GREEN. If the dose impact was greater than 0.005 rem TEDE or there were more than 5 occurrences that were not above 0.005 rem TEDE in the inspection period (i.e., two years, based on 8 rolling calendar quarters), then the SDP classification is WHITE. If the dose impact is greater than 0.1 rem TEDE (exceeds 10 CFR Part 20 public dose limit), the SDP classification is YELLOW. If the dose impact was greater than 0.5 rem TEDE, the SDP classification is RED.

An occurrence, as used in this SDP, is defined as an inspection finding in which licensed radioactive material was identified; 1) outside of a Protected area, Restricted area, or an area defined by the licensee in which licensed radioactive material is controlled and 2) an

evaluation concludes that the material was released as a result of a) not following plant procedures, b) not being in accordance with documented training, c) inadequate plant procedures, or d) inadequate training.

An occurrence that is counted in the “greater than 5 Occurrences” counter is intended to be a failure or performance deficiency of the licensee’s Radiation Protection program. The following would not be an occurrence or performance deficiency; 1) licensed radioactive material that is below the radiation detection sensitivity of the instruments used in a manner that is reasonable under the circumstances for the survey and control of licensed radioactive material, or 2) licensed radioactive material that was released in accordance with the licensee’s radioactive gaseous and liquid effluent release program.

~~Historically, these events have had calculated doses well below 0.001 rem TEDE, thus, in most cases a GREEN significance determination is likely. However, if there were more than 5 occurrences in the assessment period where licensed radioactive material was released, there is a potential for the cumulative dose from the occurrences to be 0.005 rem TEDE or greater. This will result in a WHITE classification.~~

For a finding which involves licensed radioactive material within the licensee’s Protected Area or Restricted Area (as defined in 10 CFR Part 73 and Part 20, respectively), the finding will not be counted as an occurrence by the “greater than 5 Occurrences” decision block. This is because licensed radioactive material within a licensee’s Protected Area or Restricted Area involves negligible risk to members of the public in an Unrestricted Area.

Individuals who have not been classified as receiving "occupational dose" are sometimes permitted access to a licensee's Protected or Restricted Area for job-related or public information purposes. Such individuals are either physically escorted or are granted limited unescorted access following the successful completion of appropriate orientation training and security screening. For the purposes of this SDP, such individuals are classified as "Members of the Public." Exposure received by such individuals associated with a radioactive material control finding involving licensed radioactive material in a Protected or Restricted Area will be evaluated using the dose-based criteria in the SDP (e.g., greater than 0.005, 0.1, or 0.5 rem TEDE, respectively), although, as stated above, such findings will not be counted as an occurrence.

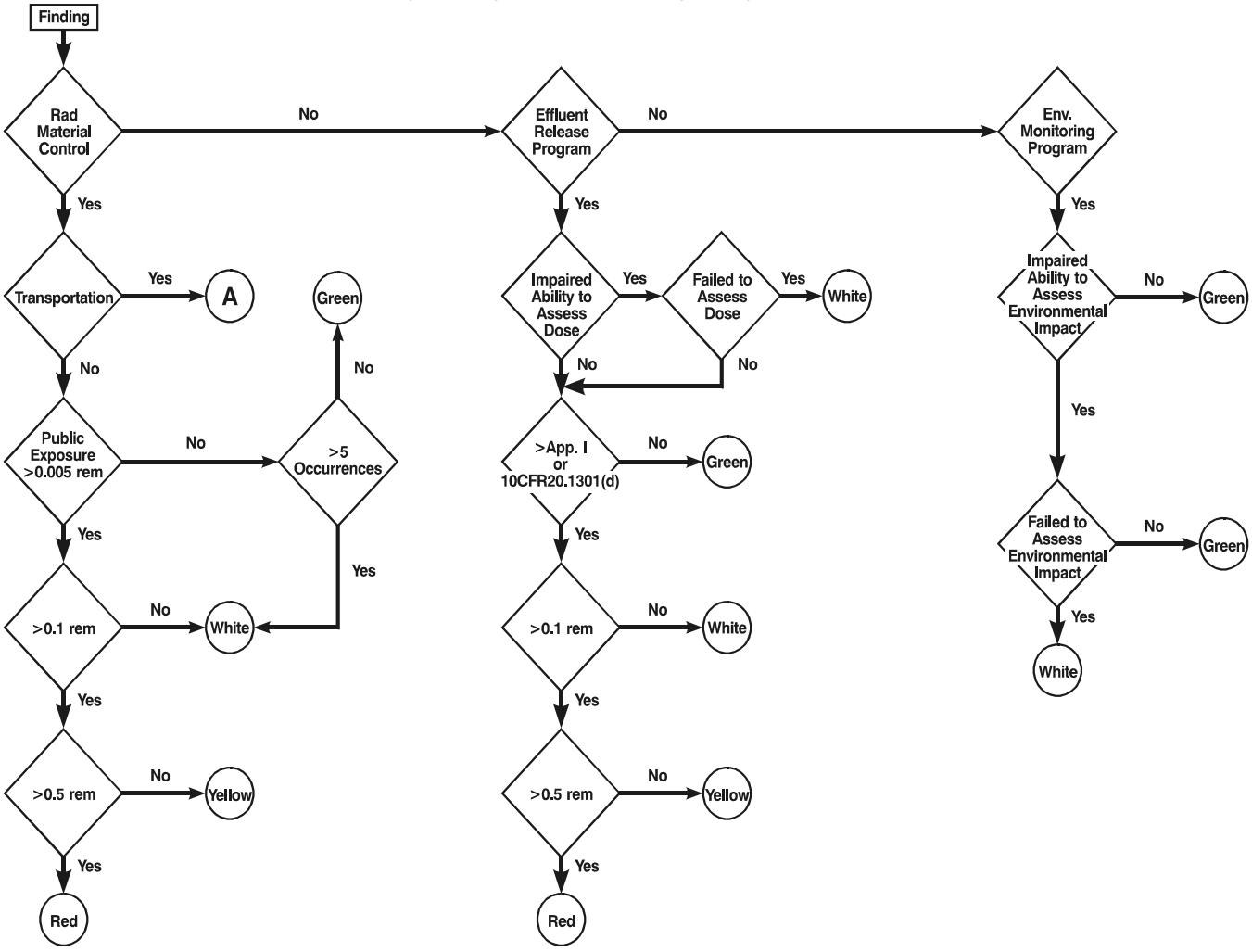
It is acceptable to document in an inspection report, multiple related instances of licensed radioactive material being identified outside of a Protected Area, Restricted Area, or an area defined by the licensee in which licensed radioactive material is controlled, as a single finding in the following circumstances; 1) instances that do not represent a performance deficiency and 2) licensee identified instances that represent a performance deficiency that stem from a common root cause or are the result of investigations and surveys conducted in conjunction with a corrective action plan.

It should be noted that discrete radioactive particles (also known as hot particles or fuel fleas) are not applicable to this program if the dose from a discrete radioactive particle does not result in a TEDE dose as defined in 10 CFR Part 20. Generally, the dose from the particle is to a very small localized area of the skin and is not equivalent to the risk of a TEDE dose. However, if the discrete radioactive particle is of such a magnitude that a

TEDE dose (i.e., equal to or greater than 1 mrem) is received, then the finding should be evaluated in the SDP. While the skin dose from discrete radioactive particle is not evaluated in the SDP, except as described above, it would still be counted as an occurrence.

END

PUBLIC RADIATION SAFETY



[This attachment contains only those sections discussed at the 2/13/03 Public meeting; all other sections were deleted to reduce the length of this attachment.]

b. Findings

General. This portion of each inspectable area of the report is used to document the inspection results. Within each inspectable area, the report should discuss the most important finding first. The degree of actual or potential safety consequence associated with a finding should be a primary consideration in determining the level of appropriate detail. Potentially significant findings merit more discussion. Uncomplicated green findings should be succinctly described in less than one page. Complex green findings should be described in not more than two pages. More significant findings may need more documentation because of their complexity and significance.

If the inspector identifies no findings during an inspection (other than minor findings), the inspector should state "No findings of significance were identified."

POSSIBLE LOCATION FOR INFORMATION ON MINOR; WHERE RADIOACTIVE MATERIAL WAS FOUND OFFSITE, BUT IT IS MINOR

Observations, licensee-identified findings of very low safety significance, and minor findings are not normally documented. However, for tracking purposes only, individual licensee-identified findings found during drill critiques or other evaluations that may be of some value as a potential future PI&R inspection sample may be listed as a cross-reference in Section 4OA2 to findings already documented elsewhere. These findings must be greater than minor, and should be listed with no more than a single sentence per item. Generally most individual green findings documented in the licensee's corrective action program are considered licensee-identified. However, repetitive occurrences of the same findings should be documented as an inspector-identified PI&R finding in Section 4OA2. MINOR FINDINGS IN WHICH LICENSED RADIOACTIVE MATERIAL WAS IDENTIFIED IN AN UNRESTRICTED AREA (I.E., PUBLIC DOMAIN) WILL BE BRIEFLY DOCUMENTED. A STATEMENT "THERE WAS NEGLIGIBLE RISK ASSOCIATED WITH THIS FINDING"

c. Minor Questions. The Minor Questions provide guidance in determining if the significance of the finding is equal to or greater than that of a green finding or a Severity Level IV NCV (i.e., greater than minor). Minor findings are not documented. The determination of whether a finding is greater than minor will always require judgement. Appendix E provides numerous examples of the types of findings and the surrounding circumstances for which the inspector may compare the identified finding to determine whether the finding is greater than minor. The basis should be documented by citing the applicable section of Appendix E, i.e., "The finding has greater significance than a similar issue described in Appendix E Section 1.b".

If the examples in Appendix E are not applicable or are not useful for the specific finding, the inspector should use the Minor Questions. In answering the last question, a greater than minor finding must be associated with an ROP cornerstone attribute and in addition affect an ROP cornerstone objective. Not all findings necessarily affect the objective of the cornerstone. If the finding is associated with a cornerstone attribute, but did not affect the respective cornerstone objective, the finding should be considered minor.

Although minor findings are not normally documented, documenting a minor violation may be necessary in several circumstances such as closing a licensee event report or when the information relates directly to an issue of agency-wide concern (e.g., in documenting the results of an NRC temporary instruction).MINOR FINDINGS IN WHICH LICENSED RADIOACTIVE MATERIAL WAS IDENTIFIED IN AN UNRESTRICTED AREA (I.E., PUBLIC DOMAIN) WILL BE BRIEFLY DOCUMENTED. A STATEMENT "THERE WAS NEGLIGIBLE RISK ASSOCIATED WITH THIS FINDING" If it is necessary to document a minor violation, then the inspector should reference Section VI.A.1 of the NRC Enforcement Policy, NUREG-1600 (e.g., "Although this finding should be corrected, it constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section VI of the NRC's Enforcement Policy."). Minor violations are not included in the summary of findings or the cover letter and are not given a tracking number.

APPENDIX B

Issue Dispositioning Screening

A. Performance Deficiency Question

A founding principal of the reactor oversight assessment process is that only those issues that are determined by the staff to be licensee performance deficiencies are entered into the licensee performance assessment process. Therefore, an issue must be a "performance deficiency" before it can be considered a finding.

If the issue is not a performance deficiency, it may still require NRC action outside of the ROP and should be addressed by other agency means as appropriate (e.g., generic communications). However, if the issue is a greater than minor violation of NRC requirements, it must be documented in accordance with applicable Enforcement Policy. These issues are rare and should be evaluated with close management oversight on a case-by-case basis.

B. Enforcement Questions

Certain issues are documented under all circumstances, even if the issue is minor. A positive response to any of the following questions require that the issue be documented as a finding. Findings related to traditional enforcement are expected to be a small fraction of all findings. The significance of these findings should be assessed by NRC management. Typically, a Severity Level would be assigned after consideration of appropriate factors for the particular regulatory process violation in accordance with the NRC Enforcement Policy. Therefore, these findings should also be evaluated by the SDP, if applicable, in order to consider the associated risk significance of the finding prior to assigning a severity level. If evaluated by an SDP the significance color should be entered into the IMC 0305 Operating Reactor Assessment Program action matrix in parallel with enforcement actions.

__(1) Does the issue have actual safety consequence (e.g.: overexposure, actual radiation release greater than 10 CFR Part 20 limits)?

__(2) Does the issue have the potential for impacting the NRC's ability to perform its regulatory function? For example, a failure to provide complete and accurate information or failure to receive NRC approval for a change in licensee activity, or failure to notify NRC of changes in licensee activities , or failure to perform 10 CFR 50.59 analyses etc. (see Enforcement Policy IV.A.3)

__(3) Are there any willful aspects of the violation?

If the answer to any of the enforcement questions is "Yes" the finding should first be discussed with regional management and may be referred to the Office of Enforcement for assignment of a Severity Level. If all answers to the above questions are "No", the inspector should next determine whether the finding is minor.

C. Minor Questions

The inspector should first compare the finding to those findings identified in Appendix E to determine whether the finding is minor. If the finding is similar to the minor findings identified, the issue should be considered minor. If the guidance in Appendix E is not applicable or is not useful for the specific finding, the inspector should then attempt to answer each of the below questions. Answering "Yes" to any of the below questions indicates that the finding should be documented as greater than minor.

(1) Could the finding be reasonably viewed as a precursor to a significant event?
(2) If left uncorrected would the finding become a more significant safety concern?
(3) Does the finding relate to performance indicators that would have caused the PI to exceed a threshold?
(4) Is the finding associated with one of the below cornerstone attributes and does the finding affect the associated cornerstone objective?

If the answer is "No" to all of the above questions, the finding should be considered minor. If the finding is associated with a below listed attribute, but did not affect the respective cornerstone objective, the finding should be considered minor. If the cornerstone objective is affected, the finding is greater than minor and warrants documenting.

In all cases, minor findings should have no actual safety consequences, little to no potential to impact safety, no impact on the regulatory process, and no willfulness. If the finding is determined to be minor, the inspector should not document the finding.

CORNERSTONE OBJECTIVES AND ATTRIBUTES:

RADIATION SAFETY CORNERSTONE

Public Radiation Safety: OBJECTIVE: ~~to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation.~~

TO ENSURE ADEQUATE PROTECTION OF PUBLIC HEALTH AND SAFETY FROM EXPOSURE TO LICENSED RADIOACTIVE MATERIALS AS A RESULT OF ROUTINE CIVILIAN NUCLEAR REACTOR OPERATION. ADEQUATE PROTECTION IS BASED ON THE LICENSEE'S COMPLIANCE WITH REGULATORY REQUIREMENTS TO SURVEY, CONTROL, EVALUATE, PACKAGE, AND TRANSPORT RADIOACTIVE MATERIALS.

Attributes: Plant Facilities/Equipment and Instrumentation:	Process radiation Monitors (RMS) (Modifications, Calibrations, Reliability, Availability), REMP Equipment, Meteorology Equipment, Transportation Packaging; Procedures (Design/Modifications, Equipment Calculations, Transportation Packages, Counting Labs)

Program & Process:	Procedures; (Process RMS &REMP, Effluent Measurement OC, Transportation Program, Material Release, Meteorological Program, Dose Estimates); Exposure and Radioactivity Material Monitoring and Control (Projected Offsite Dose, Abnormal Release, DOT Package Radiation Limits, Measured Dose)
Human Performance:	Training (Technician Qualifications, Radiation & Chemical Technician Performance

RADIATION SAFETY

CORNERSTONE — Public

(1) Does the finding involve an occurrence in the licensee's radiological effluent monitoring program that is contrary to NRC regulations or the licensee's TS, Offsite Dose Calculation Manual (ODCM), or procedures?

(2) Does the finding 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 the finding involve an occurrence in the licensee's radioactive material control program that is contrary to NRC regulations or the licensee's procedures?

(4) Does the finding involve an occurrence in the licensee's radioactive material transportation program that is contrary to NRC or Department of Transportation (DOT) regulations or licensee procedures?

Non-Performance Deficiencies.

Issues which are determined not to be licensee performance deficiencies, but which constitute a violation of NRC requirements must be documented in accordance with applicable sections of the Enforcement Policy. This includes a determination that the violation is greater than minor and may also warrant enforcement discretion per Section 06.03.a.4 of this Chapter.

Appendix E

EXAMPLES OF MINOR ISSUES

This guidance applies to thresholds for documenting findings and violations in Manual Chapter 0612. Although the following examples are all violations of requirements, ROP issues not associated with requirements should be considered minor if the issue is similar to the example guidance.

Minor issues and violations, are below the significance of that associated with green SDP findings and are not the subject of formal enforcement action or documentation. Failures to implement requirements that have insignificant safety or regulatory impact or issues that have no more than minimal risk should normally be categorized as minor. While licensees must correct minor violations, minor violations or other minor findings **do not normally warrant documentation** in inspection reports or inspection records and **do not warrant enforcement action**.

NRC Inspection Manual Chapter 0612 Appendix B, "Issue Dispositioning Screening," provides guidance to determine what findings should always be documented and what findings are applicable to analysis using an SDP. The following examples provide inspector guidance to benchmarks inspector judgement while determining whether identified issues can be considered minor. If a licensee fails to take corrective action for a minor "violation", the matter should be documented as if greater than minor in accordance with the MC0612 guidance.

In all cases, minor issues should have no actual safety consequences, little to no potential to impact safety, no impact on the regulatory process, and no willfulness. The following examples illustrate thought process that can be used in making the determination of whether an issue is minor. In all cases, this determination is based on the judgement of the inspector who identified the issue and the regional management involved and will depend on the circumstances of the particular issue.

7. (Proposed new section) Radioactive Material Control Issues

(Provide multiple examples)

a While reviewing ... the inspector finds that there...

The issue:

Minor because:

Not minor if:

DRAFT

Public Radiation Safety: OBJECTIVE: to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation.

Problem:

The Objective focuses on "... radioactive materials released into the public domain...." The narrow focus of the Objective has created confusion with the intent of the Radioactive Material Control branch of the Public Radiation Safety cornerstone. This is because the Radioactive Material Control SDP is intended to include an assessment of findings which involve a licensee's failure to control licensed radioactive material within its site as well as situations which involve the exposure of a member of the public from radioactive material inappropriately released from the site. The objective should also be broad enough to include all four branches of the Public Radiation Safety cornerstone. To achieve this broad range of programs covered by the cornerstone, the Objective needs to specifically include other aspects of the regulations while the radioactive material is still on the licensee's site; surveying, control, evaluation, and storage.

Proposed revision:

Public Radiation Safety: OBJECTIVE: to ensure adequate protection of public health and safety from exposure to licensed radioactive materials as a result of routine civilian nuclear reactor operation. Adequate protection is based on the licensee's compliance with regulatory requirements to survey, control, evaluate, package and transport radioactive materials.

DRAFT

NEI Proposed Definition of "Occurrence"

Occurrence (to be considered in the >5 occurrence block of the SDP): "An instance of licensed radioactive material found outside a Protected Area or Radiologically Controlled Area that has been released due to: (a) not following procedures or training or (b) inadequate procedures or training."

NRC Proposed Definition of "Occurrence"

An Occurrence, as used in this SDP, is defined as an inspection finding in which licensed radioactive material was identified; 1) outside of a Protected Area, Restricted Area, or an area defined by the licensee in which licensed radioactive material is controlled and 2) an evaluation concludes that the material was released as a result of a) not following plant procedures, b) not being in accordance with documented training, c) inadequate plant procedures, or d) inadequate training.

An occurrence that is counted in the "greater than 5 occurrences" counter is intended to be a failure or performance deficiency of the licensee's Radiation Protection program. The following would not be an occurrence or performance deficiency; 1) licensed radioactive material that is below the radiation detection sensitivity of the instruments used in a manner that is reasonable under the circumstances for the survey and control of licensed radioactive material, or 2) licensed radioactive material that was released in accordance with the licensee's radioactive gaseous and liquid effluent release program.

DRAFT

Documenting Multiple Related Instances as a Single Finding

Additional guidance should be provided in the SDP regarding how to document (in an inspection report) multiple related instances of licensed radioactive material being found outside a radiologically controlled area. The issue to be addressed in the guidance is when such instances should be documented as a single finding.

Concepts that should be considered in the guidance include the following:

Instances involving circumstances that do not represent a performance deficiency should be combined into a single finding for the period covered by the inspection.

Licensee-identified instances that represent a performance deficiency and arise either from a common root cause or as the result of investigations and surveys conducted in conjunction with corrective action should be combined into a single finding.

33.1	OR01	Question: Plant Technical Specifications state the following for areas with radiation levels > or = 1000 mrem/hr, referred to as Tech Spec Locked High Radiation Areas (TSLHRAs): "...areas with radiation levels > or = 1000 mrem/hr shall be provided with locked or continuously guarded doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of Operations or health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas…" Our plant is configured with a chain link cage and cage door around the outer Containment door. The cage door is secured by a chain and padlock (keys controlled by health physics supervision). Additionally, an electronic lock and card reader (ACAD) secures the door. Power to the ACAD lock is controlled by Security from a central remote location. When powered, the ACAD will open the electronic lock upon reading the badge of an individual with authorized access. When power is removed, the ACAD electronic lock cannot be opened from outside the cage and therefore acts as a locked door. The door will open from inside the cage via use of a crash bar, a feature which prevents the de-energized ACAD from locking people inside. Plant procedures state that the Shift Supervisor (Operations) authorizes each entry into Containment and assigns responsibility to the work group supervisor or entering individuals (entering Containment) to sign on and off an entry data sheet and the controlling RWP. The necessity for an access control point is determined by the Shift Supervisor and may be judged unnecessary. The typical entry without a continuous access control point (as in a nonoutage situation) requires notification to HP to remove the chain and padlock, and notification to Security, to dispatch a security officer to the cage door after which power to the ACAD is turned on. Entry into Containment is made in accordance with the RWP. If the entry duration is not brief, and no access control point is established, then the security officer may notify the central station to remove ACAD power and he departs resuming other activities. The de-energized ACAD maintains the cage door locked. Personnel inside Containment may still exit in an emergency, unassisted, using the crash bar. Add-on or subsequent entries continue to be controlled by the Shift Supervisor and RWP in accordance with plant procedures. Recently, the practice of controlling access to the Containment through the use of the de-energized ACAD electronic lock has been questioned. It has been suggested that this situation may constitute a "Technical Specification High Radiation Area Occurrence" against the Performance Indicator in that it was a "nonconformance with technical specifications … applicable to technical specification high radiation areas (>1 rem per hour) that results in loss of radiological control over access...within the respective high-radiation area (>1 rem per hour)." Is this a performance indicator occurrence? **Additional Information** Plant HP customarily places a flashing light at the containment door while entries are in progress as a signal to all personnel that a Containment entry is in progress. This practice is performed in addition to the provisions of Tech Spec 5.7.3. In the situation noted above in the FAQ, a confounding factor occurred in that the flashing light had not been turned on. Although the failure to activate the flashing light is not in accordance with plant procedures, use of the flashing light is not intended to be in lieu of conformance with the Technical Specification 5.7.3, and therefore is not considered material to the issue of performance indicator.	12/12 Introduced 1/23 Being discussed by RP group	Vogtle

		Response: No. As stated in NEI 99-02 the performance indicator associated with radiological control over access to TSLHRAs refers to measures that provide assurance that inadvertent entry into the TSHRA by unauthorized personnel will be prevented. As described above, each entry into the Containment must be authorized by the Shift Supervisor and conducted under the RWP. During periods when no access is being made, the chain link cage door around the outer Containment door is secured by a chain and padlock (keys controlled by health physics supervision). During periods when access to the Containment is being made, either a security officer is present to prevent unauthorized access or the ACAD lock is de-energized. In all cases, inadvertent entry to the Containment cannot be made and access must be authorized by the Shift Supervisor (Operations) and conducted under the RWP.		
33.6	OR01	Question: For an at-power containment entry, the containment building outer airlock door is posted as a very high radiation area, with the control point established at the outer airlock door. A procedural violation of a very high radiation area posting occurred, when an operator was stationed in the airlock with the outer airlock door closed and the inner airlock door open. The HP technician outside the outer airlock door was unable to gain access to the airlock under these conditions. This was treated as a violation of a very high radiation area posting due to the HP technician's inability to positively control the activities of the operator in the airlock. However, at no time were any personnel able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at the 10CFR20.1602 limits. All areas in containment, potentially exceeding the 10 CFR 20.1602 limits, have additional access controls in place to prevent unauthorized or inadvertent entry (i.e. Reactor Sump is a Very High Radiation Area which is locked and controlled with a separate key, access to the reactor cavity is prevented by removal of the access ladder, movable incore detectors are on a clearance to prevent operation during containment entries, etc.) The question is: Does an access control violation of a very high radiation area posting constitute a "Very High Radiation Area Occurrence" for purposes of reporting the associated NRC Performance Indicator, when there is no possibility of exposure to fields as defined by 10 CFR 20.1602?	1/23 RP group to review	Turkey Point

34.2	OR1	Question: There is no disagreement between the NRC site Resident Inspector on this interpretation, however the Resident Inspector requests NRC NRR concurrence. An individual is briefed on the radiological conditions in his work area and travel path with dose rates of 10 mr/hr- 40 mr/hr, that is located in a BWR drywell controlled and posted as a high radiation area greater than 1.0 rem/hr. The individual enters the drywell with his electronic dosimeter (ED) turned off but does not enter any area that is actually greater than 1 rem/hr nor will any of his work activities take him into any area where the actual dose rates are greater than 1 rem/hr. The worker checks his ED within 15 minutes of the entry and finds the ED turned off. He immediately exits the area and contacts Radiation Protection (RP). Does this constitute a PI occurrence ? Peach Bottom Unit 2 is shutdown for a refuel outage. The drywell is open and is controlled and posted at the main personnel entrance on Elevation 135' as "Locked High Radiation Area". An RP control point, manned 24 hours per day, is situated directly across from the entrance. The RP control point ensures access to the drywell is properly controlled from a radiological perspective. General area dose rates in the drywell range from 10-400 mr/hr. There are five locations in the drywell that have dose rates at 30 cm exceeding 1000 mr/hr. Four of the five areas are marked in the drywell with a flashing light, posting and rope boundary to control worker access to these areas based on scheduled work activities. The fifth spot is located on the 116' elevation that requires personnel to descend a ladder to gain access to it. The spot has two lead blankets around its sides and is posted in accordance with the procedural guidance for control of radiation shielding specified in NRC Regulatory Guide 8.38. With the lead shielding in place, this spot is essentially inaccessible due to the physical geometry of the pipe source and an immediately adjacent wall. There is no scheduled work in the area and it is not a normal travel path to other areas. There are several individuals on a crew working on the 135' elevation in the drywell approximately 10-15 feet inside the personnel entrance at about 110 degrees in a 10 mr/hr-40 mr/hr general area staging lead blankets for installation. The crew had an ALARA briefing and HP brief prior to physically signing the Radiation Work Permit. Prior to this entry the crew was briefed on the current radiological conditions in their work area by the RP control point. The briefing discussed general area dose rates of 10 mr/hr- 40 mr/hr, the exact work location and that the travel path was not going to expose workers to any areas greater than 1 rem/hr. There is one location on 135' elevation at about 280 degrees that is greater than 1000 mr/hr. This spot is marked with a flashing light, posting and rope boundary preventing unauthorized access. The crew had worked at the drywell earlier in the day. For the first entry the crew had obtained an RP briefing, turned on their electronic dosimeters and proceeded to work. The crew broke for lunch and turned off their electronic dosimeters when leaving the RCA. When returning from break one member of the crew entered the drywell without turning his electronic dosimeter on. After about 15 minutes in the area the individual checked his electronic dosimeter and saw that it was turned off and he immediately exited the area. Investigation by the radiation protection technician verified work area dose rates of 10 mR/hr- 40 mR/hr, co-workers electronic dosimetry indicated individuals received a maximum of 8 mR and were in a maximum dose rate field of 27 mR/hr.	2/20 Introduced	Peach Bottom

		Response: No, the area in question had been posted and controlled as a "high radiation area >1.0 rem/hour for administrative purposes based on ease of control for the whole enclosure. Individual areas within this larger area that are >1.0 rem/hour at 30 cm had been identified and controlled as described above. The work activities of the work crew and individual in question did not take place in or near any areas actually >1.0 rem/hour and numerous other rigorous controls were in place to ensure that this did not occur. FAQ # 92 is referenced based on the similarity of work activities and controls associated with this situation. The Technical Specification High Radiation Area (>1 rem) element of the PI applies to areas that are accessible to individuals, in which radiation levels from radiation sources external to the body are in excess of 1 rem (10 mSv) per hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates		

34.3	OR1	Question: The following condition was initially counted against the technical specification high radiation area PI when it initially occurred in the second Quarter of 2002. However, a visiting NRC Inspector questioned whether it should have been counted as a hit against the PI. This FAQ provides details of the event and requests clarification as to whether it constitutes a hit against the technical specification high radiation area PI. During a planned crud burst and cleanup at the start of a refueling outage, higher than anticipated dose rates were experienced outside a demineralizer vestibule. General area dose rates (measured at 30 cm) were approximately 3 rem/hr, which exceeds the criteria for a technical specification locked high radiation area (greater than 1 rem/hr). This area was found during post-crud burst surveys. The area was unposted for approximately nine hours. No electronic dosimeter alarms or unanticipated dosimetry anomalies were noted during this time period. No unanticipated dose to personnel was received due to the condition. This was the first refueling outage following steam generator replacement and as a result, a larger crud burst was experienced than in previous outages. This was an anticipated condition, and a plan to control work activities during the period of elevated dose rates was developed. Specific work restrictions in the vicinity of the demineralizer vestibule were not initially established as a part of this plan due to crediting the presence of a labyrinth entrance to the demineralizer vestibule, when no such labyrinth entrance was present, when evaluating anticipated plant conditions following the crud burst. Without the presence of the labyrinth entrance, the demineralizer vestibule would likely have been controlled as a locked high radiation area in anticipation of increased activity during the crud burst. During the crud burst, higher dose rates than anticipated were noted in some areas of the plant. As a result, more extensive surveys were performed in all letdown affected plant areas. It was during these surveys, which were in addition to those required by the shutdown plan, that the technical specification high radiation area was identified by Radiation Protection personnel. Upon discovery, the area was immediately posted and controlled as a locked high radiation area. The guidance provided in FAQ 100 appears to be applicable to this situation. This FAQ was written to address the question that if during performance of routine radiation surveys a Radiation Protection Technician identifies a Technical Specification high radiation area which results from a plant system configuration change made earlier in the shift, does this count against the Occupational Exposure Performance Indicator? The response to this FAQ states that the answer to this question depends on whether the actions taken were timely and appropriate, and whether the change in radiological conditions was anticipated, etc. In general, identifying changes in radiological conditions is an expected outcome of performing systematic and routine radiation surveys. Thus, such occurrences would not typically be counted against the PI. In this specific case, although the general area dose rates in the vicinity of the demineralizer vestibule were higher than anticipated, in part due to incorrectly crediting the presence of a labyrinth entrance to the demineralizer vestibule, it was recognized prior to the evolution that the crud burst would result in higher than normal radiological conditions in the plant. When higher than expected dose rates were noted in some areas of the plant, timely and appropriate actions were taken to identify these conditions in all areas potentially affected, and proper controls were established when conditions warranted. Should this occurrence count against the technical specification high radiation area PI?	2/20 Introduced	DC Cook

34.4	OR1	Question: During reactor head inspection activities with the reactor head supported on the head stand, temporary shielding blocked access to the actual locked high radiation area (LHRA) under the reactor head. Removal of the temporary shielding would require significant effort such as removal of scaffold hardware. The shielding and scaffold prevented inadvertent entry into the LHRA. However, the posting and barricade (including a flashing red light) for the inaccessible LHRA under the reactor head was conservatively posted where the radiation levels were less than 1 rem per hour. Several radiation workers were observed breaking the plane of the posted LHRA with portion of their whole body (upper arms and head) as they reached for equipment stored on top of the reactor head platform. The reactor head platform and surrounding areas were monitored remotely by Health Physics Technicians who were in contact with technicians located near the posted areas. A Quality Inspector observing the workers instructed them to move away from the posted area. At the same time, the remote coverage technician notified to local technician to remove the workers from the posted area. Does this count as an occurrence against the technical specification LHRA Performance Indicator?	2/20 Introduced	St Lucie
		Response No, this is not considered and occurrence against the technical specification LHRA Performance Indicator. The temporary shielding provided a robust physical barrier to the areas with radiation levels greater than or equal to 1 rem per hour. The LHRA posting was conservative to the actual conditions within the boundary because the radiation levels in accessible areas were less than 1 rem per hour (NEI 99-02, Revision 2, page 99 line 9).		

resubmitted. The group discussed not having compliance issues go through the FAQ process which is not intended to resolve inspection findings.

There was a brief discussion on methods for assessing effective dose equivalent from external sources. Mr. Pedersen noted that the RIS discussed earlier referred to alternate methods.

As there were no public questions or comments and having completed the agenda the meeting was adjourned.

Project No. 689
Attachments: As stated
cc w/att: See list

CC: Nuclear Energy Institute Project No. 689

Via email: Mr. Ralph Andersen, Sr. Proj. Mgr
rla@nei.org

Mr. Jim Davis, Director
jwd@nei.org

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