APPENDIX D

PLANT STATUS

1. OBJECTIVES AND PHILOSOPHY OF PLANT STATUS ACTIVITIES

The Fuel Cycle Oversight Process recognizes that resident inspectors have a specific responsibility, outside of discrete inspection activities, to be aware of plant conditions on a routine basis. In addition, for licensees without resident inspectors, the project inspectors are tasked with maintaining a degree of awareness of plant conditions. This appendix provides guidance regarding these plant status activities.

Resident and project inspectors' knowledge of plant activities and status is important in the risk-informed inspection process for determining how to select and implement the appropriate baseline inspection procedures. Plant status activities will focus on being aware of emergent plant issues, potential adverse trends, current equipment problems, and ongoing activities, including their impact on plant risk. Based on the knowledge gained through the plant status review, the inspectors are expected to make or recommend adjustments to their inspections so that they can inspect activities which are of higher risk-significance.

The resident inspector should transition into the appropriate inspection procedure whenever their effort shifts from collecting status information to evaluating a potential inspection issue. The resident inspector should transition into the appropriate inspection procedure if the information collection activity exceeds about ½ hour for any single issue.

The frequency of the plant status review effort will be determined by the inspector based on current plant conditions and activities. Inspectors should use, where appropriate, plant specific risk information (generally from integrated safety analyses [ISAs] or safety analysis reports [SARs]) to determine what systems and activities are of higher risk significance given the present plant configuration. Resident and project inspectors do plant status reviews during plant walkdowns and observation of activities. Since a project inspector is not at his or her assigned licensee full-time, a project inspector supplements this with discussions with other inspectors when they return from inspections at the project inspector's assigned site and through periodic communications with licensee representatives.

2. FACILITY WALKDOWN

The purpose of the control room or control station walkdown is to help enable the inspector to stay current of plant status as well as to identify unexpected plant conditions that warrant additional inspection under the baseline inspection program. Evaluate the status of the safety or risk important systems by observing the indicated parameters and equipment configuration indications on system screens or equipment read out locations. This walkdown is intended to be general (not detailed) in nature.

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Review control room logs, equipment out-of-service or clearance logs, standing orders, and night orders several times each week to become aware of potential risk-related problems that occurred since the previous review. A review of the operator shift logs and standing orders may provide insights regarding equipment operability.

3. STATUS MEETINGS

Select and attend licensee meetings, on a routine basis, that provide an overall status of the plant and pertinent ongoing activities. These meetings could include the licensee's plan of the day meeting, shift turnover meeting, emergent work meeting, equipment prioritization meeting, and corrective action document review meeting. Note that during or in preparation phases of maintenance outages, licensees may conduct additional meetings. Inspectors should attend these meetings to understand the scope, schedule, and risk-significant activities of these outages. This will enable the inspectors to plan or recommend and implement applicable baseline inspection procedures that are best conducted during an outage.

The purpose of attending the status meetings is to gather information about overall site activities in order to determine what activities will be or are being conducted so that inspection resources can be appropriately focused on those activities with the higher safety significance.

4. PLANT TOURS

On a weekly basis, resident inspectors tour accessible areas of the plant containing items relied on for safety (IROFS) or nuclear criticality safety (NCS) controls, areas that contain significant radiological hazards, and areas with important physical security equipment and material control and accounting (MC&A) controls. Focus on areas of the plant that inspectors have not entered while performing other inspections on a weekly basis. Project inspectors, when on site conducting baseline inspections, should include plant tours as noted above as part of their inspection.

Inspectors shall coordinate with the licensee to tour areas which become accessible on an infrequent basis and for short period of time to assess the material condition and status of IROFS physical protection equipment, and MC&A controls. The inspectors should review and discuss normally inaccessible areas with the licensee to ensure the inspectors are aware of their existence (some areas may not be obvious) and any special arrangements needed for entry (i.e., special training for fall protection or confined space entry).

Inspectors shall plan to tour all areas not normally accessible at minimum once every two years and these inspections should coincide with the licensee’s schedule for accessing the area. Inspectors should place the highest priority on areas that contain risk significant or safety, physical protection, or MC&A equipment, but may take into account areas which contain IROFS, NCS controls or which could initiate a radioactive release. The inspectors can also review the results of licensee’s direct observations (video movies and digital photographs) when direct inspections by inspectors were not possible or if other factors such as personnel safety or the radiation or airborne

radioactivity levels in the area to be inspected warrant use of licensee's direct observations. It is not the intent of this guidance to force licensees to make every inaccessible area of the plant accessible for the U.S. Nuclear Regulatory Commission inspection.

During changing plant conditions (such as process startup or shutdown), the frequency and scope of plant status tours may be increased to tour areas not normally accessible and to observe material condition and equipment in an abnormal lineup.

Plant tours should occasionally include emergency response facilities. In addition, the inspector may accompany a plant operator for an assigned set of systems and equipment to gain insights regarding undocumented plant deficiencies, work arounds, or temporary modifications.

The purpose of the tours is to provide an independent perspective of ongoing plant activities that may affect plant performance in the cornerstones. In performing the tours the inspector should keep in mind the integrated effect of plant problems on plant safety or security. Areas to note include:

a. Plant activities are taking place that may affect the operability of the required IROFS and/or increase plant risk including maintenance activities, such as isolating or deactivating IROFS as part of maintenance.

b. The overall status of plant IROFS, including general material condition or the installation of unauthorized modifications that could affect the IROFS' function.

   Obvious signs of degraded material condition of piping or other components such as substantial corrosion, loose anchor bolts, or other conditions that may call into question operability or design margins of IROFS or other safety or security controls. Inspectors shall ensure that identified material condition deficiencies are captured in the licensee's corrective action program. Inspectors should consult with appropriate regional and headquarters specialists if there are any questions regarding the operability or adequate design margin associated with degraded IROFS. Inspectors should attempt to obtain video movies and/or digital photographs of the degraded equipment (either on their own or through the licensee) to assist the specialists in evaluating the degraded material condition.

c. Fire hazards that could increase risk, and overall status of fire protection equipment.

d. Situations that could result in unfavorable geometry accumulations of enriched uranium or plutonium.

e. Storage and use of hazardous chemicals.

f. Status of on-site and off-site emergency response facilities.

g. Status of physical security equipment (additional guidance for plant safety/plant security interface is available in section 5 of this Appendix).

h. The status of doors to locked high radiation areas and required radiation postings.

i. Any leakage involving radioactive liquids, particulates, or gases.

j. Implementation of MC&A controls for unusual or “one of” operations.

5. PLANT SAFETY/PLANT SECURITY INTERFACE

The events of September 11, 2001, led to significant changes in the security programs at nuclear facilities. With the increased attention to security, it is also recognized that the maintenance of both plant security and safety requires coordination of activities. Such coordination is needed to ensure that actions taken to address security concerns do not adversely affect safety, including emergency preparedness (EP), and that maintenance, operations, or engineering activities do not introduce security concerns.

Examples include:

a. The addition of locks or other barriers to improve security that impedes the ability of operators to take actions included in emergency or abnormal operating procedures

b. Maintenance or construction activity that interferes with security barriers or intrusion detection devices

c. Temporary conditions warranting compensatory measures from either security or operations because the conditions differ significantly from plant or risk profiles assumed in either the operating or security procedures

d. Changes in site layouts, ingress or egress routes, or security procedures that impact EP in areas such as site assembly or staff augmentation times

In observing security activities and especially the addition or modification of security features, the inspector should consider and, as appropriate, question the licensee regarding possible safety/security interface issues. In particular, the inspector should look for changes that might adversely affect facility structures, systems, and components which may affect plant safety or operator actions credited in:

a. ISA Summary or other risk-informed information (such as SARs) for those licensees without ISAs

b. Emergency Operating Procedures

c. Radiation Protection

d. Emergency Plan & Emergency Plan Implementing Procedures

In observing plant activities such as maintenance, operations, emergency preparedness, and engineering, the inspector should consider and, as appropriate, question the licensee regarding possible safety/security interface issues. In particular, the inspector should look for changes that might adversely affect:

a. barriers and fences

b. intrusion detection systems

c. alarm and communication systems security event response

d. assumptions for and access to readily available equipment for responding to conditions described in each licensee's ISA

6. PROBLEM IDENTIFICATION

Periodically observe licensee management's review of plant deficiencies by attending meetings such as the plant safety review committee or corporate nuclear review board meetings. The inspector should be knowledgeable of major findings from licensee self-assessment activities.

7. RESOURCE ESTIMATE

The yearly resource expenditures for plant status activities are estimated to be on average, 240 hours for a Category I licensee and for a gaseous diffusion plant with resident inspectors, and 100 hours for other licensees. Inspectors' time spent on review of activities associated with safety should be changed to TAC XXXXX Inspectors' time spent on review of activities associated with the security inspections as described in IMCs 2681 and 2683, should be charged to the security inspection report and to activity code as specified in current HRMS guidance.

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Revision History Sheet for IMC RFCOP-2600 Appendix D

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