UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 19, 2000

MEMORANDUM TO: Edwin F. Fox Jr., Acting Chief
Emergency Preparedness and Health Physics Section
Operator Licensing, Human Performance & Plant Support Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

FROM: Stewart Schneider, Health Physicist
Emergency Preparedness and Health Physics Section
Operator Licensing, Human Performance & Plant Support Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MARCH 30, 2000, PUBLIC MEETING WITH NUCLEAR INDUSTRY REPRESENTATIVES REGARDING PERFORMANCE INDICATORS AND THE SIGNIFICANT DETERMINATION PROCESS IN THE AREAS OF OCCUPATIONAL AND PUBLIC RADIATION SAFETY

On March 30, 2000, a public meeting was conducted at the offices of the Nuclear Energy Institute(NEI) in Washington, DC. The purpose of this meeting was for NRC staff to present the current versions of the Significance Determination Processes (SDPs), Performance Indicators (PIs) and related procedures as they will appear on April 2, 2000, the implementation date of the NRC's revised reactor oversight process for all power reactor licensees. Attendees included Ralph Anderson from NEI and twelve representatives from the nuclear power industry (see Attachment 1).

An outline of the agenda for this meeting was handed out by the NRC (Attachment 2). NRC first discussed the development of the revised reactor oversight process and the cooperation with stakeholder's that lead to the successful development of this process. Discussion centered around the evolution of the PIs and the use of licensee data during the pilot program. Based on this data, the rating period for the Occupational Radiation Safety PI was changed from a 12-rolling quarter sum to a 4-rolling quarter sum. The revised thresholds are 1) green to white: > 2 hits and 2) white to yellow: > 5 hits. NRC also stated that a review of historical data for plant operations indicates that about 5 percent of the plants could have a white finding at any time.

Licensee data (PI hits) and inspection findings will be available to the public on the NRC web site and routinely updated. NRC added that stakeholders could expect to see changes in the new oversight process with time, since the process (SDPs, inspection procedures, etc.) will be refined as experience is gained with implementation.

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The NRC next discussed the issue of implementing a sliding scale for the unintended dose portion of the Occupational Radiation Safety PI. The industry had expressed a need for increasing the 100 mrem hit threshold (assuming barrier failure) for work in certain high dose rate areas. This was an issue considered and discussed during the pilot process and at prior public meetings. NRC stated that no change was warranted to the current 100 mrem value for unintended exposures. However, the NRC noted that there could be cases where a person could receive unintended doses greater than 100 mrem which do not involve the breaching of a barrier, and, therefore, would not be considered PI hits. It is more likely that these cases would occur for work done in high dose rate areas where 100 mrem could be accrued in a very short time period. NRC Headquarters staff will work with the regions and review these cases and ensure that consistency in making decisions is maintained. NRC and NEI agreed that a frequently asked question (FAQ) would be crafted that captures this issue.

NEI asked if NRC has established a formal process by which licensees could request changes to the new oversight program once full implementation has begun. NRC staff indicated that no such mechanism is currently in place, but the responsible organization will be identified once the procedure is established. NRC reiterated that the process is still evolving and that NRC will be in a mode of constant data gathering to further improve the tools needed for implementation. The NRC also stated that it is committed to doing a self assessment of the program which will probably be the driving force for any changes after the first full year of implementation. NRC's goal is to ensure that the new oversight program is a true indicator of plant performance.

Next the meeting discussed a clarification of the PI definition. A list of 10 CFR Part 20 (see Attachment 3) was developed to clarify which regulations are the "comparable requirements in 10 CFR Part 20 applicable to the technical specification high radiation area" referred to in the PI definition in NEI 99-02 rev. 0. It was agreed that an FAQ would be developed to communicate this clarification to interested stakeholders.

Regarding the Transportation leg of the Public Radiation Safety SDP, changes were made to the Certificate of Compliance (COC) branch. The basic COC branch has not changed (i.e., no changes to the color findings) but title changes were made to some of the diamonds. Supporting text explains each decision diamond in detail with examples. A change to the Notification branch (10 CFR 20.2202) increased the surface contamination level to 5x the limit to be consistent with the other SDPs.

For the radioactive material control portion of the Public Radiation Safety SDP, discrete radioactive particles (DRPs) will not be counted against the total effective dose equivalent. However, consistent with past practice, a white finding will result if there are greater than 5 DRP occurrences during the two year assessment period. Also discussed was the need to craft a FAQ to clarify how an occurrence will be counted for contaminated material or equipment that is still on the licensee site, but where no additional radiation surveys would be done(beyond barriers to screen materials before unconditional release). The focus of this FAQ will be on equipment and materials, not on workers.

Flow charts showing the draft Occupational Radiation Safety SDP, and related ALARA prefilter component were presented by NRC (see Attachment 4). The ALARA prefilter (screening tool) is being incorporated into the generic issue inspection filter. This is a generic filter which will be in Manual Chapter 0609 and will provide a minimum threshold for inspection findings. NEI and industry questioned NRC as to how the 3 year rolling average collective doses for PWRs/BWRs

are determined for use in the decision criteria under the ALARA component and prefilter. NRC agreed to craft a FAQ that explains how the 3 year rolling average collective dose is determined (using latest NUREG-0713 data).

NRC discussed recent changes that were made to the Occupational Radiation Safety inspection procedures. In Attachment 2 of the ALARA planning and controls procedures, much of the source term data for ALARA has been moved from the Baseline Inspection Procedure to the supplemental inspection procedures. NRC stated that 10 hours of annual ALARA inspection time was moved from the Occupational Radiation Safety cornerstone to the Public Radiation Safety cornerstone. The total time devoted to ALARA inspection is now 120 hours biannually on a per site basis.

Finally, NRC provided an overview of the supplemental inspection procedures in the Occupational Radiation Safety area that licensees should expect when risk significant performance issues are identified (i.e., performance outside the green band) and their relationship to the action matrix for licensee performance (see Attachment 5).

The meeting was adjourned.

Attachments: As stated

cc w/att: See next page

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Attachment 1

NEI/NRC MEETING ON OCCUPATIONAL/PUBLIC RADIATION SAFETY PI/SDP
LIST OF ATTENDEES
3/30/00

NAME	ORGANIZATION
Ralph Anderson	NEI
Charles Hinson	NRC/DIPM
Roger Pedersen	NRC/DIPM
Jim Wigginton	NRC/DIPM
Steve Klementowicz	NRC/DIPM
Stewart Schneider	NRC/DIPM
Mike Russell	SCE
Richard Doty	PPL
Mark Rigsby	BGE
L.A. Blue	SCE&G
Russell Gray	PG&E
Wayne Carr	So. Nuclear
Lee Thomasson	Va. Power
Travis Beard	NSP
Joe Danek	FPL
Charles Kent	TVA
Terry Cellmer	PSEG
Larry Haynes	Duke Power

PUBLIC MEETING AGENDA
RADIATION SAFETY CORNERSTONES
OF THE NRC RISKED INFORMED
REACTOR OVERSIGHT
March 30, 2000

A. Performance Indicator:

1. Changes to time frame and thresholds.

2. Implementation date.

   - 99-02 draft rev. 4 vs. 99-02 rev.0

3. High dose/ high dose rate job considerations.

4. Clarification of PI definition.

B. SDP:

1. Changes to the ALARA SDP flow diagram.

2. Approach to pre-screening "minor issues" before applying the SDP

   - Manual Chapter 0609 vs. MC 0610*

C. Assessment (changes or issues?)

D. Inspection Procedures

1. Changes to the Baseline Inspection Procedure (BIP).

2. Scope and use of the Supplemental Inspection Procedures (SIPs).

3. Event Follow-up Procedures (Special, AITs, and IITs).

E. Hold over issues for the first year of implementation?

F. Additional implementation guidance (FAQs) needed?

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Part 20 Requirements Related to HRA Controls/Requirements & Performance Indicators

1. **1201(c)** [assigned dose measured at body part receiving highest dose]

2. **1501(a)** [Survey requirement]

3. **1501(b)** [Calibrated dose rate instruments]

4. **1502(a)(4)** [individual monitoring requirement]

5. **1601(a)(3)** [continuously guarded]; (d) [don't lock anyone inside]

6. **1902(b)** [posting]

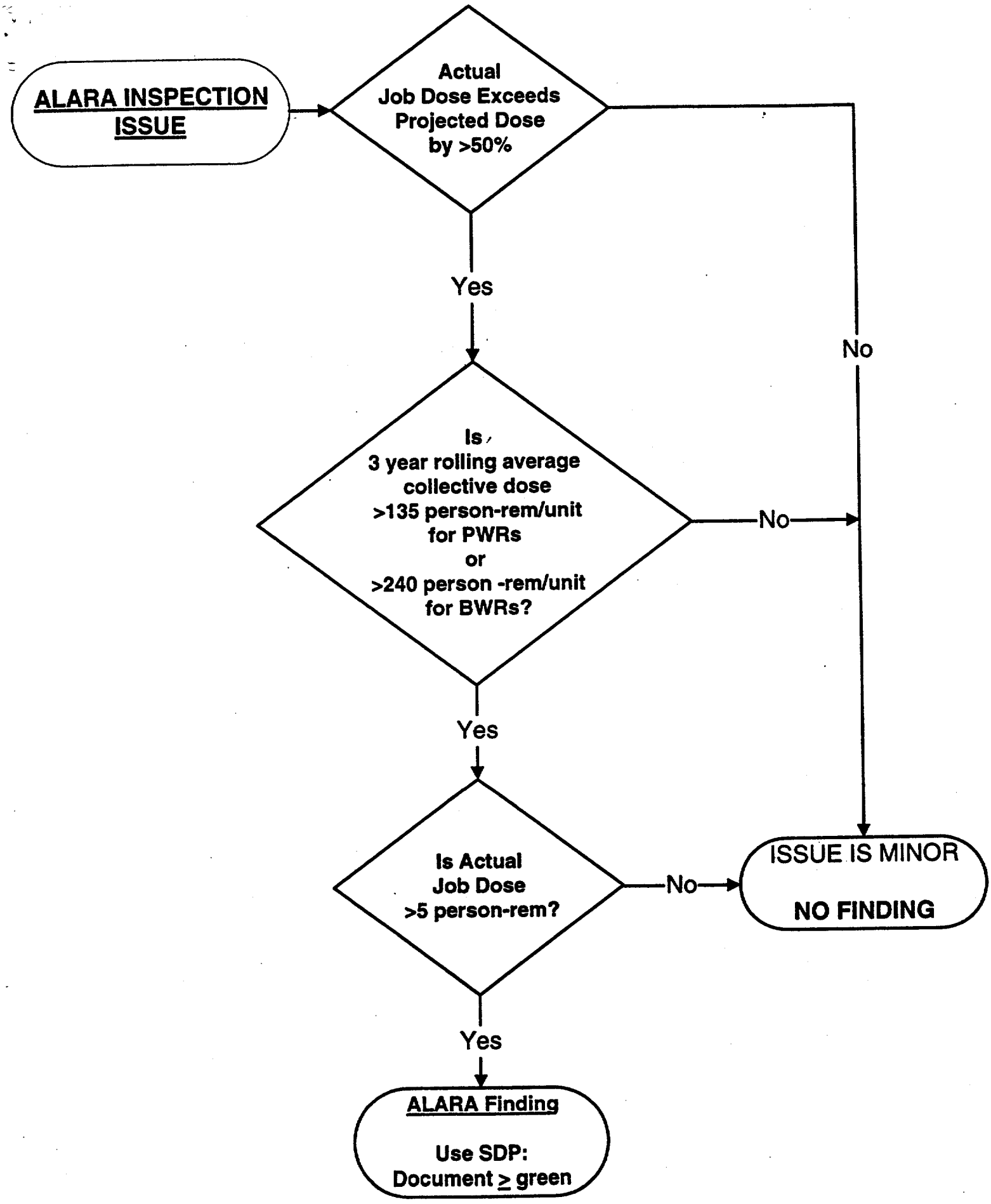

Figure 2: Logic for designating an ALARA inspection issue as an ALARA finding or as a minor issue

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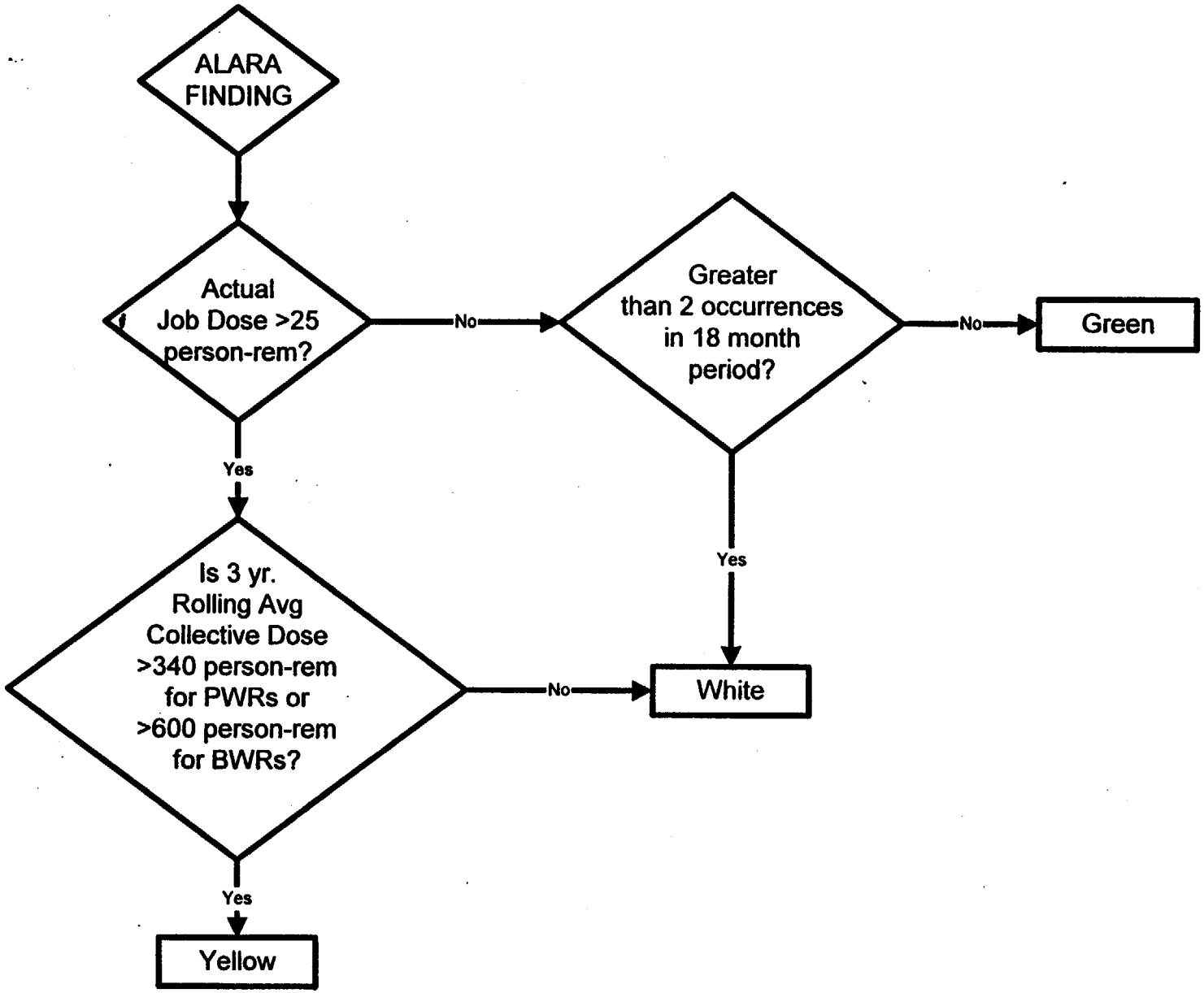
Occupational Radiation Safety (ALARA)



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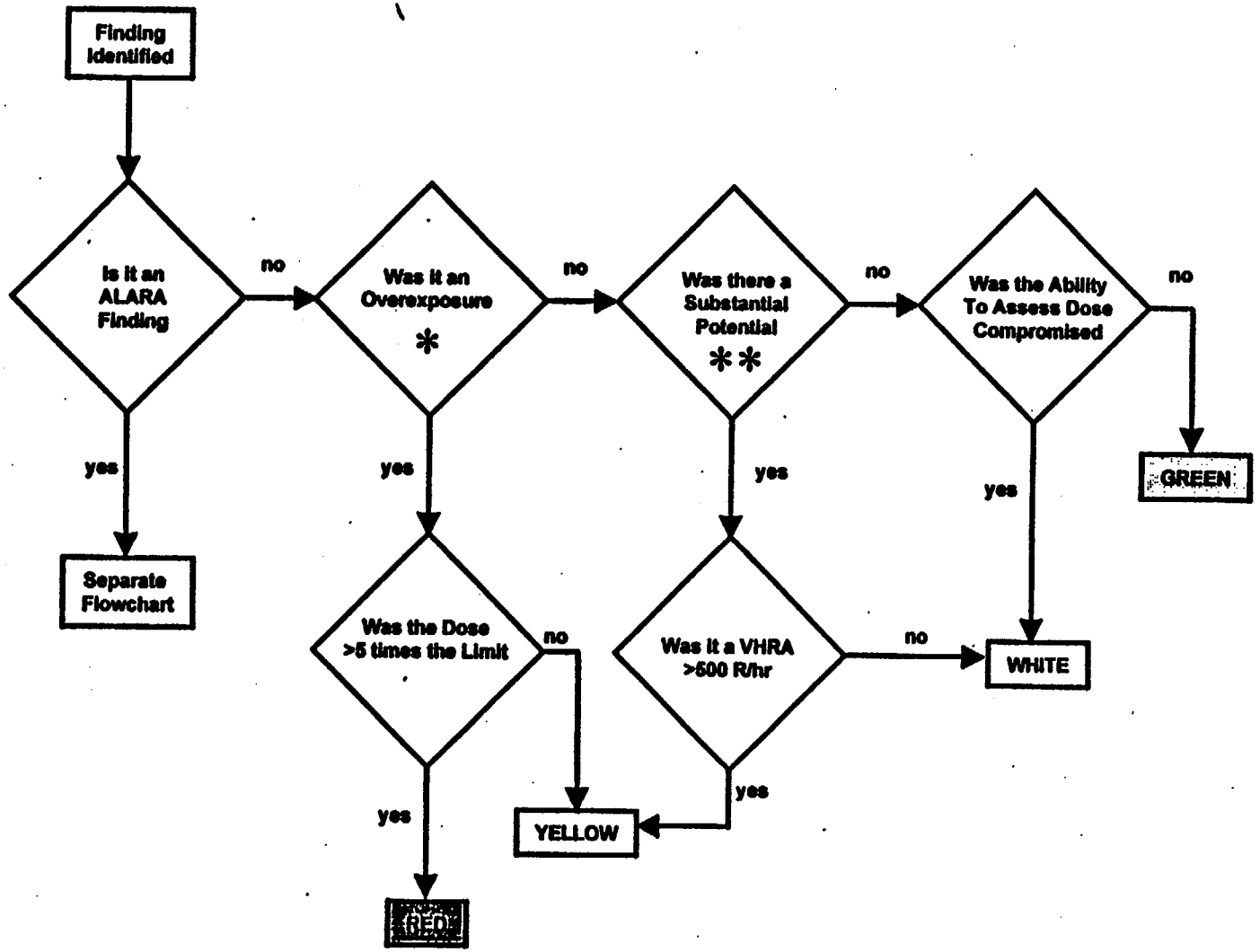

* If it is an overexposure attributable to a DRP (Hot Particle), then the finding is WHITE.

** There is no Substantial Potential for Overexposure (SPO) Finding for a DRP. Such a possibility is outside the scope of the SDP.

INSPECTION PROCEDURES FOR PERFORMANCE OUTSIDE GREEN BAND

- Inspection Program applies inspection assets in an increasing manner when risk significant performance issues are identified.

- Three procedures provide the framework: 95001, 95002, and 95003.

- IP 95001, "INSPECTION FOR ONE OR TWO WHITE INPUTS IN A STRATEGIC PERFORMANCE AREA

  -assure root cause are understood
  -assure extent of condition is properly identified
  -assure licensee corrective actions are sufficient to prevent recurrence

- IP 95002, "INSPECTION FOR ONE DEGRADED CORNERSTONE OR ANY THREE WHITE INPUTS IN A STRATEGIC PERFORMANCE AREA

  -assure root causes are understood
  -<u>independently</u> assess extent of condition
  -assure licensee corrective actions are sufficient to prevent recurrence

- IP 95003, " SUPPLEMENTAL INSPECTION FOR REPETITIVE DEGRADED CORNERSTONES, MULTIPLE DEGRADED CORNERSTONES, MULTIPLE YELLOW INPUTS, OR ONE RED INPUT.

  -provide additional information to help decide continued operations and addition actions
  -independent assessment of extent of condition
  -independent assessment of licensee's PI & CAP
  -independent evaluation of adequacy of program and processes in affected areas
  -get insight into overall root and contributing causes
  -determine in NRC Oversight Process provided sufficient warning to safety reductions

- To provide breadth and scope, SIPs are used for 95001 and 95002

- 95003 has its own Occupational and Public guidance within the procedure

SUPPLEMENTAL INSPECTION PROCEDURES

OCCUPATIONAL CORNERSTONE

- IP 83501, "Significant Uncontrolled Radiation Exposures"
- IP 83723, "General Employee, Radiation Safety, Plant Chemistry, Radwaste, and Transportation Training"
- IP 83724, "External Occupational Exposure Control and Personal Dosimetry"
- IP 83725, "Internal Exposure Control and Assessment"
- IP 79702, " Control and Monitoring of Radiological Source Term"
- IP 83728, "Maintaining Occupational Exposures ALARA"
- IP 86730, "Transportation of Radioactive Materials"

Table 3.2. Action matrix.

		LICENSEE PERFORMANCE INCREASING SAFETY SIGNIFICANCE --------->				
RESULTS		**I. All Assessment Inputs (PIs and Cornerstone Inspection Areas) Green; Cornerstone Objectives Fully Met**	**II. One or Two Inputs White (in different cornerstones); Cornerstone Objectives Fully Met**	**III. One Degraded Cornerstone (2 Inputs White or 1 Input Yellow) or any 3 White Inputs; Cornerstone Objectives Met with Minimal Reduction in Safety Margin**	**IV. Repetitive Degraded Cornerstone, Multiple Degraded Cornerstones, or Multiple Yellow Inputs; Cornerstone Objectives Met with Significant Reduction in Safety Margin**	**V. Overall Red (Unacceptable) Performance; Plants Not Normally Permitted to Operate Within this Band, Unacceptable Margin to Safety**
RESPONSE	**Management Meeting**	Routine Resident Inspector Interaction	SRI/BC Meet with Licensee	DD/RA Meet with Licensee Management	EDO Meet with Senior Licensee Management	Commission meeting with Senior Licensee Management
	Licensee Action	Licensee Corrective Action	Licensee Corrective Action with NRC Oversight	Licensee Self Assessment with NRC Oversight	Licensee Performance Improvement Plan with NRC Oversight	
	NRC Inspection	Risk-Informed Baseline Inspection Program	Inspection Follow-up	Inspection Focused on Cause of Degradation	Team Inspection Focused on Cause of Overall Degradation	
	Regulatory Actions	None	-Document Response to Degrading Area in Inspection Report	-Docket Response to Degrading Condition *(Consider N+1 Inspection for 2 Consecutive Cycles in This Range)*	-10 CFR 50.54(f) Letter - CAL/Order *(Consider N+1 Inspection for 2 Consecutive Cycles in This Range)*	Order to Modify, Suspend, or Revoke Licensed Activities
COMMUNICATION	**Assessment Report**	DD review/sign assessment report (w/ inspection plan)	DD review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)
	Public Assessment Meeting	SRI or Branch Chief Meet with Licensee	SRI or Branch Chief Meet with Licensee	RA Discuss Performance with Licensee	EDO Discuss Performance with Senior Licensee Management	Commission Meeting with Senior Licensee Management to Discuss Licensee Performance
		<--------- Regional Review / Agency Review --------->				

are determined for use in the decision criteria under the ALARA component and prefilter. NRC agreed to craft a FAQ that explains how the 3 year rolling average collective dose is determined (using latest NUREG-0713 data).

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