

Building a Smarter Fuel Cycle Inspection Program

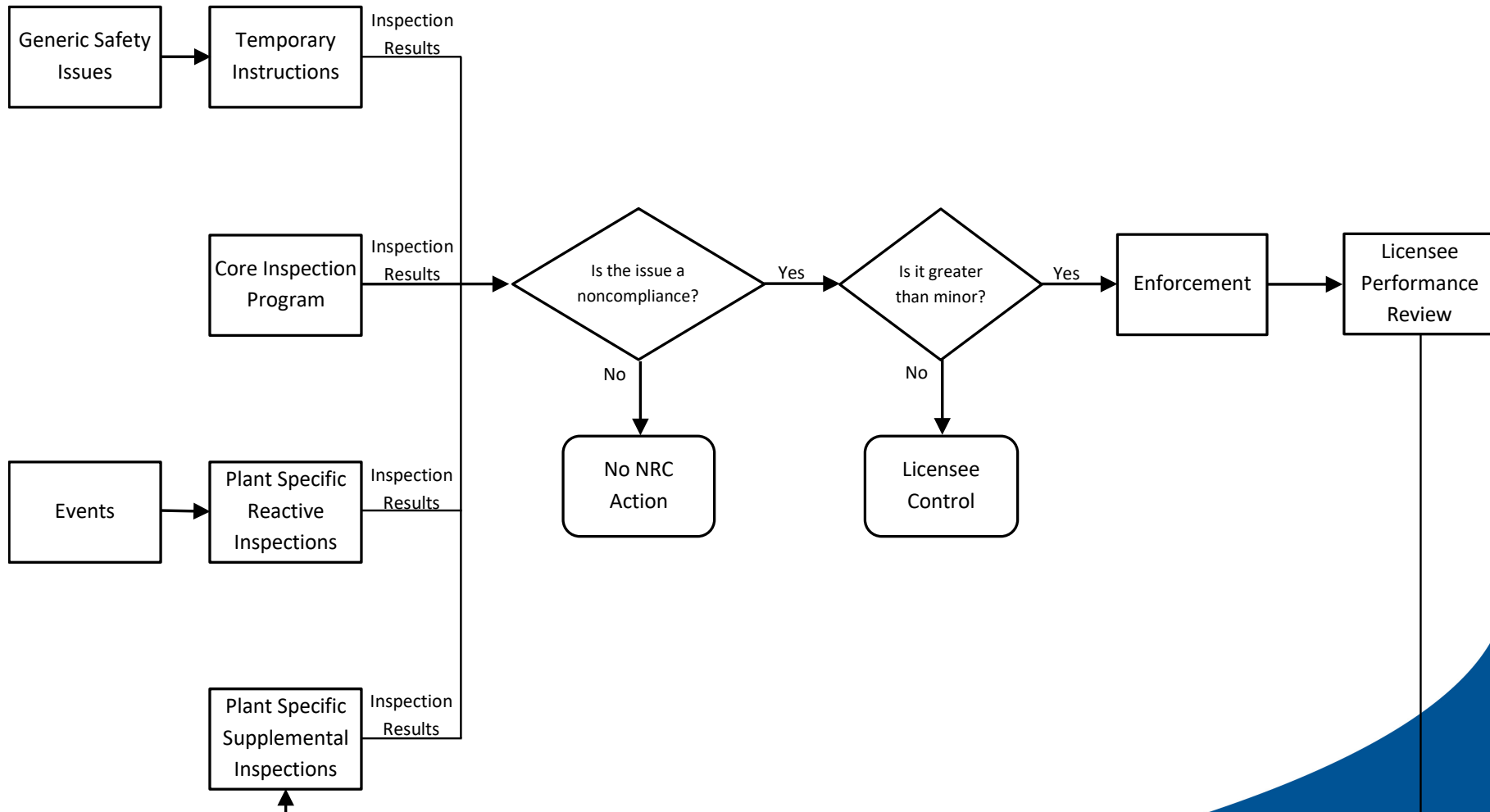
Division of Fuel Cycle Safety,
Safeguards, and Environmental
Review

Purpose

- Summary of feedback from NEI and the public
- Options currently under consideration
- Stakeholder discussion
- Questions

Note: *The information included in this presentation is being shared in draft form for the purpose of gathering insights from our external stakeholders on a range of ideas and recommendations to improve the inspection program. The working group will evaluate all feedback provided and will document any final recommendations to the inspection program.*

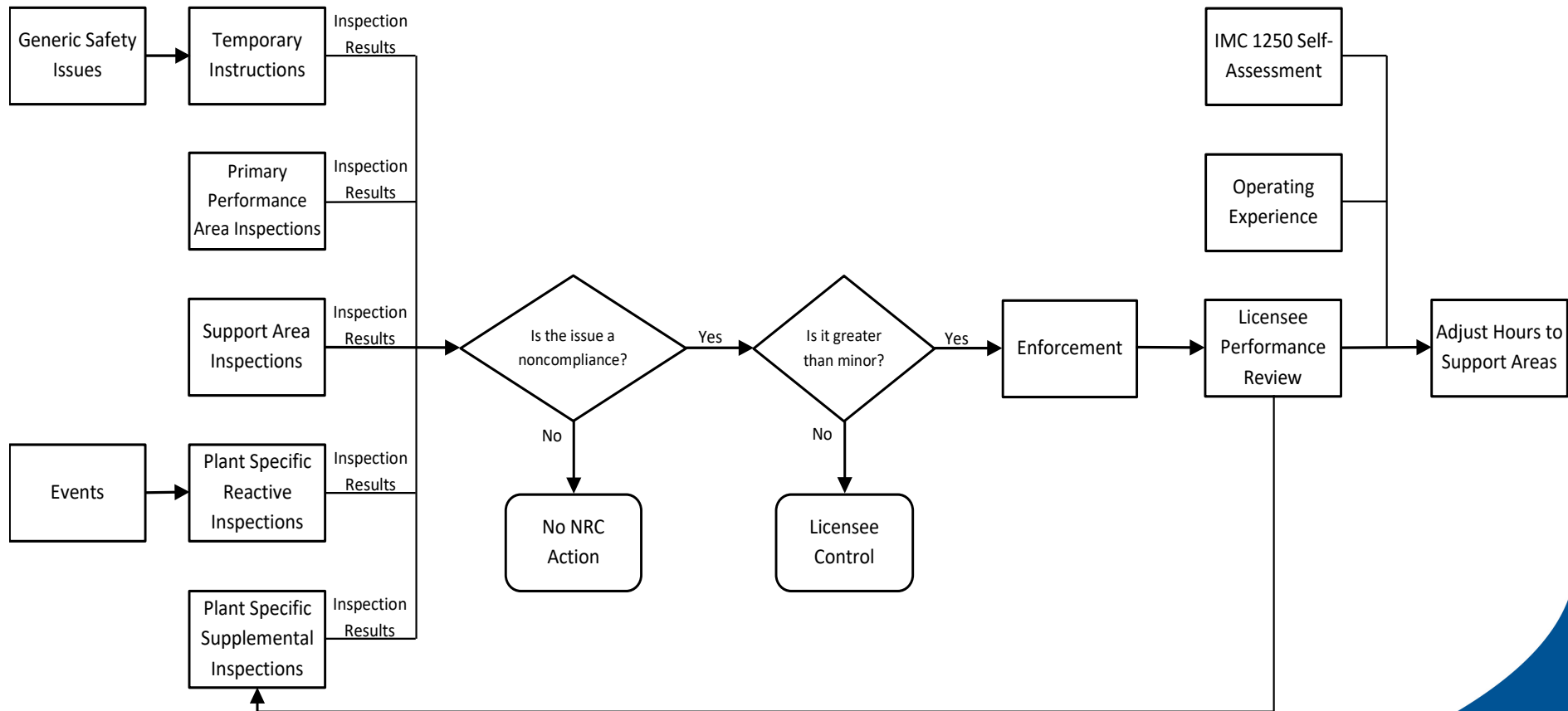
Current Inspection Framework



Option 1

- Core inspection program consists of static baseline hours plus flexible hours
- The baseline hours are static and applied equally to each licensee
- Flexible hours can be applied differently to each licensee based on operating experience and history of compliance in the support performance areas

Option 1 - Inspection Framework



Option 1 - Pros

- Uses operating experience and licensee history of compliance in the determination of inspection hours and frequency
- Incorporates feedback from Westinghouse Lessons Learned
- Further risk informs the program by performance areas

Option 1 – Pros

- Flexibility for the inspection program to meet future needs through the use of focused annual inspections and quinquennial comprehensive inspections in the support functional areas
- Results in a reduction of inspection procedures
- Reduces resources needed to implement the inspection program

Option 1 – Cons

- Fundamental change in how the NRC staff implements the inspection program
- Requires development of generic guidance to consistently apply the flexibility
- Requires NRC staff effort to ensure we maintain clarity on the implementation of the inspection program
- Effort to train inspectors

Option 1 – Draft Core Inspection

		Category I Fuel Facility		Category III Fuel Fabrication Facility		Uranium Conversion Facility		Gas Centrifuge Facility		Laser Enrichment Facility	
Key Function/Program Areas	Procedure or Procedure Suite	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)
SAFETY OPERATIONS											
Plant Operations	88020 (OPR)	Annual	30	Annual (2 per year)	60	Annual (2 per year)	60	Annual (2 per year)	60	-	-
	88135 ⁺ (Resident Inspection Program)	Annual	797	-	0	-	0	-	0	-	-
Criticality Safety	88015	Annual (3 per year)	180	Annual (2 per year)	60	-	0	Annual (2 per year)	60	-	-
Plant Modifications (Annual)	88070	Annual unless 88072 is performed	30	Annual unless 88072 is performed	30	Annual unless 88072 is performed	30	Annual unless 88072 is performed	30	-	-
Plant Modifications (Triennial)	88072	Triennial	90	Triennial	90	Triennial	90	Triennial	90		

Option 1 – Draft Core Inspection

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SAFEGUARDS											
MC&A	Procedures as in IMC 2683	Annual	90	Annual	30	-	-	Annual	30	-	-

Option 1 – Draft Core Inspection

		Category I Fuel Facility		Category III Fuel Fabrication Facility		Uranium Conversion Facility		Gas Centrifuge Facility		Laser Enrichment Facility	
Support Function/ Program Areas	Procedure or Procedure Suite	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)
RADIOLOGICAL CONTROLS											
Radiation Protection	88030 (RP)	Minimum quinquennial	60	Minimum quinquennial	60	Minimum quinquennial	60	Minimum quinquennial	60	-	-
Environmental Protection	88045 (Effluent Control and Env.)	Minimum quinquennial	60	Minimum quinquennial	60	Minimum quinquennial	60	Minimum quinquennial	60	-	-
Waste Management	88035 (WM)	Minimum quinquennial	30	Minimum quinquennial	30	Minimum quinquennial	30	Minimum quinquennial	30	-	-
Transportation	86740 (T)	Minimum quinquennial	30	Minimum quinquennial	30	Minimum quinquennial	30	Minimum quinquennial	30	-	-

Option 1 – Draft Core Inspection

FACILITY SUPPORT											
Maintenance of Surveillance	88025 (MS)		0		30		30		30	-	-
Emergency Preparedness	88050 (EP)	Minimum quinquennial	120	Minimum quinquennial	120	Minimum quinquennial	120	Minimum quinquennial	120	-	-
	88051 (Exercise Observation)									-	-
Fire Protection	88055 (FPA)	Minimum quinquennial	30	Minimum quinquennial	30	Minimum quinquennial	30	Minimum quinquennial	30	-	-
	88054 (FPT)									-	-
Flexible Baseline Hours	Support/Procedures	Maximum quinquennial	300	Maximum quinquennial	420	Maximum quinquennial	420	Maximum quinquennial	420	-	-
Comprehensive Inspection	Support/Procedures	Quinquennial	150	Quinquennial	150	Quinquennial	150	Quinquennial	150	-	-

Option 2

- Follows the current established inspection program framework
- Core inspection program is static and is applied equally to each type of licensee

Option 2 - Pros

- Reduces resources needed to implement the inspection program
- Maintains NRC's ability to achieve inspection program goals
- Risk informs by reducing inspection effort in functional areas analyzed to have reduced need, and increasing in those areas where appropriate
- No impacts on clarity of inspection program requirements due to consistency with current inspection framework
- Maintains regional inspector proficiency and knowledge base
- Overall reduction in administrative burden

Option 2 - Cons

- Less flexible / responsive to changing conditions
- Does not directly incorporate Operating Experience into core inspection hours
- High regulatory threshold for program adjustment

App B Markup

OPTION 2

		Category I Fuel Facility		Category III Fuel Facility		Uranium Conversion Facility		Gas Centrifuge Facility	
Function / Program Areas	Procedure or Procedure Suite	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)	Inspection Frequency	Estimated Resources per IP (hrs)
SAFETY OPERATIONS									
Plant Operations	88020 (OPR)	Biennial	0 30	Annual	60 90	Annual	60 90	Annual	60 90
	88135 (Resident Inspection Program)	Annual	797	-	-	-	-	-	-
Criticality Safety	88015	Annual	196 180	Annual	64 90	-	-	Annual	64 90
Fire Protection	8805X (FPB)	Annual Biennial	0 30	Annual Biennial	32 60	Annual Biennial	32 60	Annual Biennial	32 60
Fire Protection (Triennial)	88072	Triennial	90	Triennial	90	Triennial	90	Triennial	90

App B Markup Option 2

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SAFEGUARDS									
MC&A	Procedures as in IMC 2683	Annual	196 120	Annual Biennial	64 60	-	-	Annual Biennial	64 60
MC&A (observation)	Procedures as in IMC 2683	Triennial	30	Triennial	30	-	-	Triennial	30

App B Markup Option 2

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RADIOLOGICAL CONTROLS									
Radiation Protection	88030 (RP)	Annual	32 30	Annual	32 30	Annual	32 30	Annual	32 30
Environmental Protection	88045 (Effluent Control and Env.)	Annual	32 30	Annual	32 30	Annual	32 30	Annual	32 30
Waste Management	88035 (WM)	Biennial	32	Biennial	32	Biennial	32	Biennial	32
Transportation	86740 (T)	Biennial Triennial	32 30	Biennial Triennial	32 30	Biennial Triennial	32 30	Biennial Triennial	32 30

App B Markup Option 2

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FACILITY SUPPORT									
Maintenance / Surveillance	88025 (MS)	-	-	Annual	30	Annual	30	Annual	30
Emergency Preparedness	88050 (EP)	Annual Biennial	32 30	Annual Biennial	32 30	Annual Biennial	32 30	Annual Biennial	32 30
	88051 (Exercise Observation)	Biennial	48	Biennial	48	Biennial	48	Biennial	48
Plant Modification (Annual)	88070	Annual	32 30	Annual	32 30	Annual	32 30	Annual	32 30
Plant Modification (Triennial)	88072	Triennial	96 90	Triennial	96 90	Triennial	96 90	Triennial	96 90

Questions

