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Document

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Traits of a Healthy Nuclear Safety Culture

Addendum I: Behaviors and Actions That Support a Healthy Nuclear Safety Culture, by Organizational Level

Revision 0

INTRODUCTION

INPO 12-012, *Traits of a Healthy Nuclear Safety Culture*—developed in 2012 by INPO, an industry advisory group, regulatory representatives, and members of the international nuclear community—describes the traits, essential attributes, and behaviors and actions of a healthy nuclear safety culture. *Addendum I: Behaviors and Actions That Support a Healthy Nuclear Safety Culture, by Organizational Level* describes nuclear safety behaviors and actions that contribute to a healthy nuclear safety culture, arranged by organizational level—executive/senior manager, manager, supervisor, and individual contributor. Supplemental workers are included in the individual contributor level.

Every nuclear organization has many important behaviors and actions specified within its procedures, processes, written standards, and expectations. This document highlights some of these behaviors and actions that are most critical to creating and maintaining a healthy nuclear safety culture. This document is intended to augment INPO 12-012, *Traits of a Healthy Nuclear Safety Culture*, by providing a different perspective on the applicable behaviors and actions that support a healthy nuclear safety culture at various levels of the organization. These behavior examples, a subset of those contained in INPO 12-012, have been tailored and, in some cases, modified from INPO 12-012 to align with the four organizational levels. The behaviors and actions contained herein are representative and should not be considered comprehensive; as such, this document is not intended to be used as a checklist.

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CO.2 b. – Share information on a wide range of issues with the station groups and individuals, and periodically verify their understanding of the information.

CO.2 c. – Take steps to avoid unintended or conflicting messages that operational and strategic decisions may convey.

CO.2 e. – Communicate the reasons for resource allocation decisions, including the nuclear safety implications of those decisions.

CO.3 a. – Encourage the free flow of information.

CO.3 f. – Candidly communicate the results of monitoring and assessments throughout the organization and with independent oversight organizations.

CO.4 a. – Communicate expectations regarding nuclear safety so that individuals understand that safety is the highest priority.

CO.4 b. – Implement a strategy of frequent communication using a variety of tools to reinforce that nuclear safety is the overriding priority.

CO.4 c. – Reinforce the importance of nuclear safety by clearly communicating its relationship to strategic issues, including budget, workforce planning, equipment reliability, and business plans.

CO.4 d. – Communicate desired nuclear safety behaviors to individuals, providing examples of how behaviors positively or negatively affect nuclear safety.

LA.4 e. – Establish strategic and business plans that reflect the importance of nuclear safety over production.

LA.4 f. – Ensure corporate priorities are aligned with nuclear safety.

LA.5 b. – Ensure nuclear safety is maintained when planning, communicating, and executing major changes.

WE.3 c. – Are sensitive to the negative impact of a lack of information; and share important information in an open, honest, and timely manner such that trust is maintained.

RC.2 c. – Ensure processes for raising concerns or resolving differing professional opinions are communicated and accessible to individuals.

1.2 Executives and senior managers demonstrate safety culture behaviors.

QA.3 a. – Solicit challenges to assumptions when evaluating nuclear safety issues.

CO.3 c. – Respond to individuals in an open, honest, and nondefensive manner.

CO.3 e. – Actively solicit feedback, listen to concerns, and communicate openly with all individuals.

CO.4 e. – Routinely verify that communications on the importance of nuclear safety have been received and understood.

LA.1 a. – Ensure staffing levels are consistent with the demands related to maintaining safety and reliability.

LA.1 e. – Ensure sufficient corporate resources are allocated to the nuclear organization for short- and long-term safe and reliable operation.

LA.4 b. – Develop and implement cost and schedule goals in a manner that reinforces the importance of nuclear safety.

LA.4 d. – Use information from independent oversight organizations to establish priorities that align with nuclear safety.

LA.5 a. – Evaluate the safety impacts and potential negative effects when making decisions related to major changes, including decisions concerning changes to organizational structure and functions, leadership, policies, programs, procedures, and resources.

LA.6 a. – Ensure roles, responsibilities, and authorities are clearly defined, understood, and documented.

LA .6 d. – Ensure recommendations and feedback from corporate governance, review boards, and independent oversight organizations do not override senior managers' ultimate responsibility for decisions that affect nuclear safety.

LA.7 b. – Obtain outside perspectives of nuclear safety through the selection of qualified and critical independent safety review board members with diverse backgrounds and perspectives.

LA.7 c. – Use a variety of monitoring tools—including employee surveys, independent and self-assessments, external safety review board member feedback, and employee concern investigations—to regularly monitor station nuclear safety culture.

LA.7 d. – Support and participate in candid assessments of workplace attitudes and nuclear safety culture, and act on issues that adversely affect trust in management or that detract from a positive nuclear safety culture.

LA.8 a. – "Walk the talk" and model the correct behaviors, especially when resolving apparent conflicts between nuclear safety and production.

LA.8 b. – Act promptly when a nuclear safety issue is raised, to ensure it is understood and appropriately addressed.

LA.8 c. – Maintain high standards of personal conduct that promote all aspects of a positive nuclear safety culture.

LA.8 d. – Demonstrate interest in plant operations, and actively seek out the opinions and concerns of workers at all levels.

DM.1 b. – Demonstrate an understanding of the decision-making process, and use it consistently.

DM.1 e. – Use the results of effectiveness reviews to improve future decisions.

DM.2 c. – Consider long-term consequences when determining how to resolve emergent concerns.

DM.3 d. – Ensure that important nuclear safety decisions are made by the correct person at the lowest appropriate level.

WE.1 a. – Regard individuals and their professional capabilities and experiences as their most valuable assets.

WE.1 b. – Treat personnel at all levels of the organization and each other with dignity and respect.

WE.1 d. – Do not demonstrate or tolerate bullying or humiliating behaviors.

WE.2 b. – Are receptive to ideas, concerns, suggestions, differing opinions, and questions.

WE.3 b. – Respond to questions and concerns in an open and honest manner.

WE.3 f. – Welcome performance feedback from throughout the organization, and modify their own behavior when appropriate.

WE.4 b. – Ensure conflicts are resolved in a balanced, equitable, and consistent manner, even when outside of defined processes.

CL.1 a. – Implement a process to ensure a thorough review of operating experience provided by internal and external sources.

CL.2 b. – Value the insights and perspectives that assessments provide.

CL.2 c. – Ensure self-assessments are performed on a variety of topics, including the self-assessment process itself.

CL.2 d. – Ensure self-assessments are performed at a regular frequency and provide objective, comprehensive, and self-critical information that drive corrective actions.

CL.3 b. – Ensure the organization participates in benchmarking activities with other nuclear and nonnuclear facilities.

CL.4 d. – Ensure knowledge transfer and knowledge retention strategies are implemented effectively.

CL.4 f. – Ensure leadership and management skills are systematically developed.

CL.4 h. – Obtain the training necessary to understand basic plant operation and the relationships between major functions and organizations.

PI.3 c. – Take appropriate interim corrective actions to mitigate issues while more fundamental causes are being assessed.

PI.3 f. – Act on trends in safety performance indicators to resolve problems early.

RC.1 b. – Set and reinforce expectations for establishing and maintaining a safety-conscious work environment.

RC.1 c. – Establish effective policies and procedures that reinforce the right and responsibility of individuals to raise nuclear safety concerns.

RC.1 f. – Take ownership when receiving and responding to concerns, recognizing confidentiality as appropriate, and ensuring the concerns are addressed in a timely manner.

RC.1 g. – Receive training that behaviors or actions that could prevent concerns from being raised—including harassment, intimidation, retaliation, and discrimination—will not be tolerated and are violations of law and policy.

RC.2 a. – Establish, support, and promote the use of alternative processes for raising concerns, and ensure actions are taken to resolve concerns.

RC.2 b. – Understand their role in supporting alternate processes for raising concerns.

1.3 Executives and senior managers challenge others in the area of safety culture.

QA.1 d. – Ask probing questions to understand the implications and consequences of anomalies in plant conditions.

QA.1 e. – Challenge managers to ensure degraded conditions are fully understood and appropriately resolved, especially those that involve equipment important to nuclear safety.

CO.2 d. – Encourage individuals to ask questions if they do not understand the basis of an operational or management decision.

WE.2 c. – Promote robust discussions, recognizing that differing opinions are a natural result of differences in expertise and experience.

WE.3 a. – Promote collaboration among work groups.

CL.2 e. – Ensure targeted self-assessments are performed when a more thorough understanding of an issue is required.

CL.2 f. – Ensure a balanced approach of self-assessments and independent oversight is used and periodically adjusted based on changing needs.

CL.2 g. – Ensure self-assessment teams include individual contributors and leaders from within the organization and from external organizations when appropriate.

CL.3 c. – Seek out best practices by using benchmarking to understand how others perform the same functions.

CL.3 d. – Use benchmarking to compare station standards to the industry and to make adjustments to improve performance.

CL.4 a. – Foster an environment in which individuals value and seek continuous learning opportunities.

PI.2 e. – Ensure issues are investigated thoroughly according to their safety significance.

PI.2 f. – Ensure root cause analyses are rigorously applied to identify and correct the fundamental cause of significant issues.

PI.2 g. – Ensure the underlying organizational and safety culture contributors to issues are evaluated thoroughly and are given the necessary time and resources to be clearly understood.

PI.4 b. – Use indicators that provide an accurate representation of performance and provide early indications of declining trends.

PI.4 c. – Routinely challenge the organization's understanding of declining trends.

WP.2 c. – Ensure design and operating margins are carefully guarded and changed only with great thought and care.

1.4 Executives and senior managers motivate others to exhibit safety culture behaviors.

QA.1 a. – Ensure that activities that could affect reactivity are conducted with particular care, caution, and oversight.

CO.2 d. – Encourage individuals to ask questions if they do not understand the basis of an operational or management decision.

LA.3 c. – Foster an environment that promotes accountability, and hold individuals accountable for their actions.

LA.3 e. – Publicly praise behaviors that reflect a positive safety culture.

LA.4 a. – Reinforce nuclear safety as the overriding priority.

LA.6 c. – Ensure both corporate managers who support the nuclear organization and managers at the station understand their respective roles and responsibilities.

LA.7 a. – Ensure that board members and members of independent oversight organizations meet with leaders and individual contributors in their work environments to develop an understanding of the organization's safety culture status.

LA.8 e. – Encourage personnel to challenge unsafe behavior and unsafe conditions, and support personnel when they stop plant activities for safety reasons.

LA.8 f. – Motivate others to practice positive nuclear safety culture behaviors.

DM.1 a. – Establish a well-defined decision-making process, with variations allowed for the complexity of the issue being decided.

DM.2 e. – Reinforce the expectation that the reactor will be shut down when procedurally required, when the margin for safe operation has degraded unacceptably, or when the condition of the reactor is uncertain.

DM.3 d. – Ensure that important nuclear safety decisions are made by the correct person at the lowest appropriate level.

WE.1 e. – Monitor for behaviors that can have a negative impact on the work environment, and address them promptly.

WE.1 f. – Ensure policies and expectations are enforced fairly and consistently for individuals at all levels of the organization.

WE.1 h. – Ensure facilities are conducive to a productive work environment and housekeeping is maintained.

WE.2 a. – Encourage individuals to offer ideas, concerns, suggestions, differing opinions, and questions to help identify and solve problems.

WE.3 d. – Ensure that plant status and important work milestones are communicated throughout the organization.

WE.3 e. – Acknowledge positive performance; and address negative performance promptly and directly with the individual involved, maintaining confidentiality as appropriate.

WE.4 a. – Develop processes to ensure fair and objective resolution of conflicts and differing views.

CL.2 a. – Ensure independent and self-assessments, including nuclear safety culture assessments, are thorough and effective and are used as a basis for improvements.

CL.4 c. – Master reactor and power plant fundamentals to establish a solid foundation for sound decisions and behaviors.

CL.4 d. – Ensure the organization develops and effectively implements knowledge transfer and knowledge retention strategies.

CL.4 g. – Ensure training is developed and continuously improved using input and feedback from individual contributors and subject-matter experts.

PI.4 a. – Ensure the organization develops indicators that monitor both equipment and organizational performance, including safety culture.

RC.1 a. – Ensure individuals feel free to raise nuclear safety concerns without fear of retribution and with confidence that their concerns will be addressed.

RC.1 d. – Set policies and procedures that define the responsibilities of leaders to create an environment in which individuals feel free to raise safety concerns.

RC.1 e. – Set policies and procedures to establish the expectation that leaders will respond in a respectful manner and provide timely feedback to individuals raising concerns.

RC.1 h. – Ensure all claims of retaliation are investigated and any necessary corrective actions are taken in a timely manner, including actions to mitigate any potential chilling effect.

RC.2 d. – Ensure alternative processes for raising concerns are independent and include an option to raise concerns confidentially, and ensure these concerns are appropriately resolved in a timely manner.

WP.2 a. – Ensure the work process supports nuclear safety and the maintenance of design margins by minimizing long-standing equipment issues, preventive maintenance deferrals, and maintenance and engineering backlogs.

2.0 MANAGERS

2.1 Managers communicate the importance of safety culture.

CO.1 e. – Integrate nuclear safety messages into daily activities and meetings.

CO.2 a. – Communicate expected outcomes, potential problems, planned contingencies, and abort criteria for important operational decisions promptly.

CO.2 b. – Share information on a wide range of issues and periodically verify that personnel understand the information.

CO.2 c. – Take steps to avoid unintended or conflicting messages that operational decisions may convey.

CO.2 e. – Communicate the reasons for resource allocation decisions, including the nuclear safety implications of those decisions.

CO.3 c. – Respond to individuals in an open, honest, and nondefensive manner.

CO.3 f. – Candidly communicate the results of monitoring and assessments throughout the organization and with independent oversight organizations.

CO.4 a. – Communicate expectations regarding nuclear safety so that individuals understand that safety is the highest priority.

CO.4 d. – Communicate desired nuclear safety behaviors to individuals, providing examples of how behaviors positively or negatively affect nuclear safety.

WE.3 c. – Are sensitive to the negative impact of a lack of information; and share important information in an open, honest, and timely manner such that trust is maintained.

WE.3 d. – Ensure that plant status and important work milestones are communicated throughout the organization.

CL.1 e. – Share station operating experience in a timely manner.

CL.2 b. – Value the insights and perspectives provided through assessments.

RC.2 e. – Provide feedback to individuals in a timely manner.

2.2 Managers demonstrate safety culture behaviors.

QA.3 a. – Solicit challenges to assumptions when evaluating nuclear safety issues.

QA.4 a. – Are aware that latent conditions can exist, address them as they are discovered, and consider the extents of the conditions and their causes.

CO.3 e. – Actively solicit feedback, listen to concerns, and communicate openly with all individuals.

LA.1 a. – Ensure staffing levels are consistent with the demands related to maintaining safety and reliability.

LA.1 b. – Ensure sufficient qualified personnel are available to maintain work hours within working hour guidelines during all modes of operation.

LA.1 c. – Ensure facilities are available and are regularly maintained, including physical improvements, simulator fidelity, and emergency facilities.

LA.1 d. – Ensure tools, equipment, procedures, and other resource materials are available to support successful work performance, including risk management tools and emergency equipment.

LA.2 b. – Are involved in overseeing work activities.

LA.2 c. – Practice visible leadership in the field and during safety-significant evolutions by "placing eyes on the problem," coaching, mentoring, reinforcing standards, and reinforcing positive decision-making practices and behaviors.

LA.2 d. – Discuss observations in detail with the groups observed, and provide useful feedback on how to improve individual performance.

LA.4 b. – Develop and implement cost and schedule goals in a manner that reinforces the importance of nuclear safety.

LA.5 a. – Use a systematic process for planning, coordinating, and evaluating safety impacts and potential negative effects when making decisions related to major changes, such as organizational structure and functions, leadership, policies, programs, procedures, and resources.

LA.5 b. – Ensure nuclear safety is maintained when planning, communicating, and executing major changes.

LA.5 c. – Maintain a clear focus on nuclear safety when implementing the change management process, to avoid significant unintended consequences.

LA.5 e. – Anticipate, manage, and communicate the effects of impending changes.

LA.6 a. – Ensure roles, responsibilities, and authorities are clearly defined, understood, and documented.

LA.7 d. – Support and participate in candid assessments of workplace attitudes and nuclear safety culture, and act on issues that adversely affect trust in management or that detract from a positive nuclear safety culture.

LA.8 a. – "Walk the talk" and model the correct behaviors, especially when resolving apparent conflicts between nuclear safety and production.

LA.8 b. – Act promptly when a nuclear safety issue is raised, to ensure it is understood and appropriately addressed.

LA.8 c. – Maintain high standards of personal conduct that promote all aspects of a positive nuclear safety culture.

LA.8 d. – Demonstrate interest in plant operations and actively seek out the opinions and concerns of workers at all levels.

DM.1 b. – Demonstrate an understanding of the decision-making process, and use it consistently.

DM.1 c. – Seek inputs from different work groups and organizations, as appropriate, when making safety- or risk-significant decisions.

DM.1 d. – Reevaluate previous operational decisions to ensure they remain appropriate when new facts call these decisions into question.

DM.1 e. – Use the results of effectiveness reviews to improve future decisions.

DM.2 a. – Ensure that conservative assumptions are used when determining whether emergent or unscheduled work can be conducted safely.

DM.2 b. – Take a conservative approach to decision-making, particularly when information is incomplete or conditions are unusual.

DM.2 c. – Consider long-term consequences when determining how to resolve emergent concerns.

DM.2 e. – Implement the expectation that the reactor will be shut down when procedurally required, when the margin for safe operation has degraded unacceptably, or when the condition of the reactor is uncertain.

WE.1 a. – Regard individuals and their professional capabilities and experiences as the organization's most valuable asset.

WE.1 b. – Treat individuals at all levels of the organization with dignity and respect.

WE.2 b. – Are receptive to ideas, concerns, suggestions, differing opinions, and questions.

WE.2 d. – Value the insights and perspectives provided by quality assurance, the employee concerns program, and independent oversight organization personnel.

WE.3 b. – Respond to questions and concerns in an open and honest manner.

WE.3 f. – Welcome performance feedback, and modify their own behavior when appropriate.

WE.4 b. – Ensure conflicts are resolved in a balanced, equitable, and consistent manner, even when outside of defined processes.

CL.1 a. – Implement a process to ensure operating experience provided by internal and external sources is reviewed thoroughly.

PI.3 b. – Minimize deferrals of corrective actions; and, when required, extend due dates using an established process that appropriately considers safety significance.

PI.3 c. – Take appropriate interim corrective actions to mitigate issues while more fundamental causes are being assessed.

PI.3 f. – Act on trends in safety performance indicators to resolve problems early.

PI.4 b. – Use indicators that provide an accurate representation of performance and early indications of declining trends.

RC.1 f. – Are trained to take ownership when receiving and responding to concerns, recognizing confidentiality as appropriate, and ensuring the concerns are addressed in a timely manner.

RC.1 g. – Receive training that behaviors or actions that could prevent concerns from being raised, including harassment, intimidation, retaliation, or discrimination, will not be tolerated and are violations of law and policy.

RC.2 a. – Establish, support, and promote the use of alternative processes for raising concerns, and ensure actions are taken to resolve concerns.

RC.2 b. – Understand their role in supporting alternate processes for raising concerns.

WP.1 a. – Ensure work is planned and executed effectively by incorporating risk insights, job-site conditions, and the need for coordination with different groups or job activities.

WP.1 b. – Ensure the work process appropriately prioritizes work and incorporates contingency plans, compensatory actions, and abort criteria, as needed.

WP.1 c. – Consider the impact of changes to the work scope and the need to keep personnel apprised of the work status.

WP.1 g. – Ensure the work process limits temporary modifications.

WP.2 c. – Ensure design and operating margins are carefully guarded and changed only with great thought and care.

2.3 Managers challenge others in the area of safety culture.

QA.3 c. – Question assumptions, decisions, and justifications that do not appear to consider impacts to nuclear safety.

CO.4 e. – Routinely verify that communications on the importance of nuclear safety have been received and understood.

LA.4 c. – Ensure production requirements are established, communicated, and put into practice in a manner that reinforces nuclear safety.

LA.5 d. – Ensure that individuals understand the importance of, and their roles in, the change management process.

LA.5 f. – Actively monitor and address potential distractions from nuclear safety during periods of change.

LA.8 e. – Encourage personnel to challenge unsafe behavior and unsafe conditions, and support personnel who stop plant activities for safety reasons.

WE.1 d. – Do not demonstrate or tolerate bullying or humiliating behaviors.

WE.1 e. – Monitor for behaviors that can have a negative impact on the work environment, and address them promptly.

WE.2 c. – Promote robust discussions, recognizing that differing opinions are a natural result of differences in expertise and experience.

CL.2 e. – Ensure targeted self-assessments are performed when a more thorough understanding of an issue is required.

CL.2 f. – Ensure a balanced approach of self-assessments and independent oversight is used and periodically adjusted based on changing needs.

CL.2 g. – Ensure self-assessment teams include individual contributors and leaders from within the organization and from external organizations, when appropriate.

CL.3 a. – Use benchmarking as an avenue for acquiring innovative ideas to improve nuclear safety.

CL.3 b. – Participate in benchmarking activities with other nuclear and nonnuclear facilities.

CL.3 c. – Seek out best practices by using benchmarking to understand how others perform the same functions.

CL.3 d. – Use benchmarking to compare station standards to the industry, and make adjustments to improve performance.

PI.2 c. – Ensure apparent and root cause investigations identify primary and contributing causal factors.

PI.2 d. – Ensure extent-of-condition and extent-of-cause evaluations are completed in a timely manner, commensurate with the safety significance of the issue.

PI.2 e. – Ensure issues are investigated thoroughly according to their safety significance.

PI.2 f. – Ensure root cause analyses are rigorously applied to identify and correct the fundamental cause of significant issues.

PI.2 g. – Ensure that underlying organizational and safety culture contributors to issues are thoroughly evaluated and are given the necessary time and resources to be clearly understood.

PI.2 h. – Ensure cause analyses identify and understand the bases for decisions that contributed to issues.

PI.3 d. – Ensure corrective actions resolve and correct the identified issues, including causes and extents of conditions.

PI.3 e. – Ensure corrective actions prevent the recurrence of significant conditions adverse to quality.

PI.4 c. – Routinely challenge the organization’s understanding of declining trends.

WP.1 d. – Verify that the work process ensures individuals are aware of plant status, the nuclear safety risks associated with work in the field, and other parallel station activities.

WP.1 e. – Ensure insights from probabilistic risk assessments are considered in daily work activities and change processes.

2.4 Managers motivate others to perform safety culture behaviors.

QA.2 a. – Reinforce expectations that individuals take the time to do the job right the first time, seek guidance when unsure, and stop if an unexpected condition or equipment response is encountered.

QA.4 d. – Ensure specific contingency actions are discussed and understood during job planning and prejob briefings.

CO.2 d. – Encourage individuals to ask questions if they do not understand the basis of an operational or management decision.

CO.3 a. – Encourage the free flow of information.

CO.4 f. – Ensure supplemental personnel understand expected behaviors and actions necessary to maintain nuclear safety.

LA.2 e. – Encourage informal leaders to model safe behaviors and high standards of accountability.

LA.3 a. – Ensure disciplinary actions are appropriate and consistent and that such actions support both nuclear safety and a safety-conscious work environment.

LA.3 b. – Reward individuals who identify and raise issues that affect nuclear safety.

LA.3 c. – Foster an environment that promotes accountability, and hold individuals accountable for their actions.

LA.3 d. – Consider the potential chilling effects of disciplinary actions and other potentially adverse personnel actions, and take compensatory actions when appropriate.

LA.3 e. – Publicly praise behaviors that reflect a positive safety culture.

LA.6 b. – Promote ownership and accountability.

LA.8 f.– Motivate others to practice positive nuclear safety culture behaviors.

DM.2 d. – Take timely action to address degraded conditions commensurate with their safety significance.

DM.3 a. – Ensure that the on-shift licensed operators have the authority and responsibility to place the plant in a safe condition when faced with unexpected or uncertain conditions.

DM.3 b. – Ensure that a designated, on-shift licensed senior reactor operator has the authority and responsibility to determine equipment operability.

DM.3 c. – Maintain single-point accountability for important safety decisions.

WE.1 f. – Ensure policies and expectations are enforced fairly and consistently for individuals at all levels of the organization.

WE.1 h. – Ensure facilities are conducive to a productive work environment and housekeeping is maintained.

WE.2 a. – Encourage individuals to offer ideas, concerns, suggestions, differing opinions, and questions to help identify and solve problems.

WE.3 a. – Promote collaboration among work groups.

WE.3 e. – Acknowledge positive performance; and address negative performance promptly and directly with the individual involved, maintaining confidentiality as appropriate.

WE.4 a. – Implement processes to ensure fair and objective resolution of conflicts and differing views.

CL.1 b. – Ensure operating experience is implemented and institutionalized effectively through changes to station processes, procedures, equipment, and training programs.

CL.4 a. – Foster an environment in which individuals value and seek continuous learning opportunities.

CL.4 b. – Ensure that individuals, including supplemental workers, are trained appropriately to ensure technical competency and an understanding of standards and work requirements.

CL.4 c. – Master reactor and power plant fundamentals to establish a solid foundation for sound decisions and behaviors.

CL.4 e. – Ensure knowledge transfer and knowledge retention strategies are applied to capture the knowledge and skill of experienced individuals to advance the knowledge and skill of less experienced individuals.

CL.4 g. – Ensure training is developed and continuously improved using input and feedback from individual contributors and subject-matter experts.

PI.2 i. – Conduct effectiveness reviews of significant corrective actions to ensure that the resolution addressed the causes.

PI.3 a. – Ensure corrective actions are completed in a timely manner.

PI.4 d. – Ensure organizational and departmental trend reviews are completed in a timely manner, in accordance with program expectations.

RC.1 a. – Ensure individuals feel free to raise nuclear safety concerns without fear of retribution, with confidence that their concerns will be addressed.

RC.1 b. – Reinforce expectations for establishing and maintaining a safety-conscious work environment.

RC.1 c. – Reinforce that individuals have the right and responsibility to raise nuclear safety concerns.

WP.1 f. – Ensure work activities are coordinated to address conflicting or changing priorities across the whole spectrum of activities that contribute to nuclear safety.

WP.3 b. – Ensure design documentation, procedures, and work packages are complete, thorough, accurate, and current.

RC.2 g. – Ensure individuals assigned to respond to concerns have the appropriate competencies.

WP.2 a – Ensure the work process supports nuclear safety and the maintenance of design margins by minimizing long-standing equipment issues, preventive maintenance deferrals, and maintenance and engineering backlogs.

WP.2 b. – Ensure the work process focuses on maintaining fission product barriers, defense-in-depth, and safety-related equipment.

WP.3 d. – Ensure the backlog of document changes is understood, prioritized, and actively managed to ensure quality.

3.0 SUPERVISORS

3.1 Supervisors communicate the importance of safety culture.

CO.1 a. – Ensure communications within work groups are timely, frequent, and accurate.

CO.1 b. – Communicate work statuses with other work groups and supervisors during work activities.

CO.1 d. – Ensure communications during shift turnovers and prejob briefings provide information necessary to support nuclear safety.

CO.1 e. – Ensure work groups integrate nuclear safety messages into daily activities and meetings.

CO.2 a. – Promptly communicate expected outcomes, potential problems, planned contingencies, and abort criteria for important operational decisions.

CO.2 b. – Share information on a wide range of issues with individuals, and periodically verify understanding of the information.

CO.2 c. – Take steps to avoid unintended or conflicting messages that operational decisions may convey.

CO.3 c. – Respond to individuals in an open, honest, and nondefensive manner.

WE.3 b. – Respond to questions and concerns in an open and honest manner.

WE.3 c. – Are sensitive to the negative impact of a lack of information; and share important information in an open, honest, and timely manner such that trust is maintained.

RC.2 e. – Provide feedback in a timely manner.

WP.3 c. – Ensure components are labeled clearly, consistently, and accurately.

3.2 Supervisors demonstrate safety culture behaviors.

QA.4 b. – Verify procedure prerequisites are met, rather than assuming they are met based on general plant conditions, prior to authorizing work.

CO.3 e. – Actively solicit feedback, listen to concerns, and communicate openly with all individuals.

CO.3 f. – Candidly communicate the results of monitoring and assessments throughout the organization and with independent oversight organizations.

CO.4 d. – Communicate desired nuclear safety behaviors to individuals, providing examples of how behaviors positively or negatively affect nuclear safety.

LA.1 d. – Ensure tools, equipment, procedures, and other resource materials are available to support successful work performance, including risk management tools and emergency equipment.

LA.2 b. – Are involved in the oversight of work activities.

LA.2 c. – Practice visible leadership in the field and during safety-significant evolutions by "placing eyes on the problem," coaching, mentoring, reinforcing standards, and reinforcing positive decision-making practices and behaviors.

LA.2 d. – Discuss observations in detail with the group observed, and provide useful feedback about how to improve individual performance.

LA.5 f.– Actively monitor and address potential distractions from nuclear safety during periods of change.

LA.6 a. – Ensure roles, responsibilities, and authorities are clearly defined, understood, and documented.

LA.7 d. – Support and participate in candid assessments of workplace attitudes and nuclear safety culture, and act on issues that adversely affect trust in management or that detract from a positive nuclear safety culture.

LA.8 a. – "Walk the talk" and model the correct behaviors, especially when resolving apparent conflicts between nuclear safety and production.

LA.8 b. – Act promptly when a nuclear safety issue is raised, to ensure it is understood and appropriately addressed.

LA.8 c. – Maintain high standards of personal conduct that promote all aspects of a positive nuclear safety culture.

LA.8 d. – Demonstrate interest in plant operations, and actively seek out the opinions and concerns of workers at all levels.

DM.1 b. – Demonstrate an understanding of the decision-making process, and use it consistently.

DM.1 c. – Seek inputs from different work groups or organizations, as appropriate, when making safety- or risk-significant decisions.

DM.1 d. – Reevaluate previous operational decisions to ensure they remain appropriate when new facts call these decisions into question.

DM.2 a. – Ensure that conservative assumptions are used when determining whether emergent or unscheduled work can be conducted safely.

DM.2 b. – Take a conservative approach to decision-making, particularly when information is incomplete or conditions are unusual.

DM.2 c. – Consider long-term consequences when determining how to resolve emergent concerns.

DM.2 e. – Implement the expectation that the reactor will be shut down when procedurally required, when the margin for safe operation has degraded unacceptably, or when the condition of the reactor is uncertain.

WE.1 a. – Regard individuals and their professional capabilities and experiences as the organization's most valuable assets.

WE.1 b. – Treat personnel at all levels of the organization and each other with dignity and respect.

WE.1 e. – Monitor for behaviors that can have a negative impact on the work environment, and address them promptly.

WE.1 h. – Ensure facilities are conducive to a productive work environment and housekeeping is maintained.

WE.2 a. – Encourage individuals to offer ideas, concerns, suggestions, differing opinions, and questions to help identify and solve problems.

WE.2 b. – Are receptive to ideas, concerns, suggestions, differing opinions, and questions.

WE.2 d. – Value the insights and perspectives provided by quality assurance, the employee concerns program, and independent oversight organization personnel.

WE.3 f. – Welcome performance feedback from throughout the organization, and modify their own behaviors when appropriate.

WE.4 b. – Ensure conflicts are resolved in a balanced, equitable, and consistent manner, even when outside of defined processes.

CL.1 a. – Thoroughly review operating experience provided by internal and external sources.

CL.1 c. – Use operating experience to understand equipment, operational, and industry challenges and to adopt new ideas to improve performance.

CL.1 d. – Use operating experience to support daily work functions, emphasizing the possibility that “it could happen here.”

PI.1 c. – Ensure that issues, problems, degraded conditions, and near misses are promptly reported and are documented in the corrective action program at a low threshold.

RC.1 f. – Are trained to take ownership when receiving and responding to concerns, recognizing confidentiality as appropriate, and ensuring concerns are addressed in a timely manner.

RC.1 g. – Receive training that behaviors or actions that could prevent concerns from being raised, including harassment, intimidation, retaliation, or discrimination, will not be tolerated and are violations of law and policy.

RC.2 a. – Establish, support, and promote the use of alternative processes for raising concerns, and ensure actions are taken to resolve concerns.

RC.2 b. – Understand their role in supporting alternate processes for raising concerns.

WP.1 c. – Consider the impact of changes to the work scope and the need to keep personnel apprised of the work status.

3.3 Supervisors challenge others in the area of safety culture.

QA.2 c. – Challenge unanticipated test results rather than rationalizing them; do not automatically attribute abnormal indications to indication problems; and thoroughly investigate abnormalities before activities are allowed to continue.

QA.3 a. – Solicit challenges to assumptions when evaluating nuclear safety issues.

QA.3 c. – Question assumptions, decisions, and justifications that do not appear to consider impacts to nuclear safety sufficiently.

CO.4 e. – Routinely verify that communications on the importance of nuclear safety have been received and understood.

LA.2 e. – Encourage informal leaders to model safe behaviors and high standards of accountability.

LA.8 e. – Encourage personnel to challenge unsafe behavior and unsafe conditions, and support personnel when they stop plant activities for safety reasons.

PI.1 b. – Understand how to enter issues into the corrective action program.

PI.2 a. – Ensure issues are properly classified, prioritized, and evaluated according to their safety significance.

PI.3 f. – Act on trends in safety performance indicators to resolve problems early.

WP.1 d. – Verify that the work process ensures individuals are aware of plant status, the nuclear safety risks associated with work in the field, and other parallel station activities.

WP.2 d. – Ensure safety-related equipment is operated and maintained well within design requirements.

WP.4 c. – Review procedures and instructions prior to work to validate that they are appropriate for the scope of work and that required changes are completed prior to implementation.

3.4 Supervisors motivate others to perform safety culture behaviors.

QA.2 a. – Reinforce expectations that individuals take the time to do the job right the first time, seek guidance when unsure, and stop if an unexpected condition or equipment response is encountered.

QA.4 d. – Ensure specific contingency actions are discussed and understood during job planning and prejob briefings.

CO.2 d. – Encourage individuals to ask questions if they do not understand the basis of an operational or management decision.

CO.3 a. – Encourage the free flow of information.

CO.4 f. – Ensure supplemental personnel understand expected behaviors and actions necessary to maintain nuclear safety.

LA.3 a. – Ensure disciplinary actions are appropriate and consistent and that such actions support both nuclear safety and a safety-conscious work environment.

LA.3 b. – Reward individuals who identify and raise issues that affect nuclear safety.

LA.3 c. – Foster an environment that promotes accountability, and hold individuals accountable for their actions.

LA.3 d. – Consider the potential chilling effects of disciplinary actions and other potentially adverse personnel actions, and take compensatory actions when appropriate.

LA.3 e. – Publicly praise behaviors that reflect a positive safety culture.

LA.6 b. – Appropriately delegate responsibility and authority to promote ownership and accountability.

LA.8 f. – Motivate others to practice positive nuclear safety culture behaviors.

DM.2 d. – Take timely action to address degraded conditions commensurate with their safety significance.

DM.3 a. – Ensure the on-shift licensed operators have the authority and responsibility to place the plant in a safe condition when faced with unexpected or uncertain conditions.

WE.1 d. – Do not demonstrate or tolerate bullying or humiliating behaviors.

WE.1 f. – Ensure policies and expectations are enforced fairly and consistently for individuals at all levels of the organization.

WE.2 c. – Promote robust discussions, recognizing that differing opinions are a natural result of differences in expertise and experience.

WE.3 a. – Promote collaboration among work groups.

WE.3 d. – Ensure that plant status and important work milestones are communicated throughout the organization.

WE.3 e. – Acknowledge positive performance; and address negative performance promptly and directly with the individual involved, maintaining confidentiality as appropriate .

WE.4 a. – Implement processes to ensure fair and objective resolution of conflicts and differing views.

CL.3 e. – Are actively involved in benchmarking.

CL.4 b. – Receive sufficient training to ensure technical competency and an understanding of standards and work requirements.

CL.4 c. – Master reactor and power plant fundamentals to establish a solid foundation for sound decisions and behaviors.

RC.1 a. – Ensure individuals feel free to raise nuclear safety concerns without fear of retribution, with confidence that their concerns will be addressed.

RC.1 b. – Reinforce expectations for establishing and maintaining a safety-conscious work environment.

RC.1 c. – Reinforce that individuals have the right and responsibility to raise nuclear safety concerns.

WP.1 f. – Coordinate work activities to address conflicting or changing priorities across the whole spectrum of activities that contribute to nuclear safety.

WP.3 b. – Ensure design documentation, procedures, and work packages are complete, thorough, accurate, and current.

4.0 INDIVIDUAL CONTRIBUTORS

4.1 Individual contributors communicate the importance of safety culture.

PA.3 c. – Strive to meet commitments.

QA.2 d. – Communicate unexpected plant responses and conditions to the control room.

CO.1 a. – Communicate within work groups on a timely, frequent, and accurate basis.

CO.1 b. – Communicate work status with other work groups and supervisors during work activities.

CO.1 c. – Communicate with each other, such that everyone has the information necessary to accomplish work activities safely and effectively.

CO.1 d. – Provide information necessary to support nuclear safety during shift turnovers and prejob briefings.

CO.1 e. – Apply nuclear safety messages to daily activities and meetings.

CO.3 b. – Share information openly and candidly.

CO.3 d. – Provide complete, accurate, and forthright information to oversight, audit, and regulatory organizations.

4.2 Individual contributors demonstrate safety culture behaviors.

PA.1 c. – Hold themselves personally accountable for modeling nuclear safety behaviors.

PA.1 d. – Apply nuclear safety standards consistently across the organization.

PA.1 d. – Actively solicit and are open to feedback.

PA.2 a. – Understand their personal responsibility to foster a professional environment, encourage teamwork, and identify challenges to nuclear safety.

PA.2 c. – Take ownership for the preparation and execution of assigned work activities.

PA.2 d. – Actively participate in prejob briefings, understanding their responsibility to raise nuclear safety concerns before work begins.

PA.2 e. – Ensure they are trained and qualified to perform assigned work.

PA.2 f. – Understand the objective of the work activity, their role in the activity, and their personal responsibility for safely accomplishing the overall objective.

QA.1 b. – Recognize the special characteristics and unique hazards of nuclear technology, including radioactive byproducts, concentration of energy in the core, and decay heat.

QA.1 c. – Recognize the particular importance of features designed to maintain critical safety functions, such as core and spent fuel cooling.

QA.2 a. – Take the time to do the job right the first time, seek guidance when unsure, and stop if an unexpected condition or equipment response is encountered.

QA.4 b. – Verify procedure prerequisites are met, rather than assuming the prerequisites are met based on general plant conditions.

QA.4 c. – Perform a thorough review of the work site and planned activity every time work is performed, rather than relying on past successes and assumed conditions.

CO.2 d. – Ask questions if they do not understand the basis of an operational or management decision.

LA.5 d. – Understand the importance of, and their role in, the change management process.

DM.1 b. – Demonstrate an understanding of the decision-making process, and use it consistently.

DM.2 f. – Do not rationalize assumptions for the sake of completing a task.

WE.1 b. – Treat personnel at all levels of the organization and each other with dignity and respect.

WE.1 c. – Treat each other with respect within and between work groups.

WE.1 g. – Treat decision-makers with respect, even when they disagree with a decision.

WE.2 a. – Offer ideas, concerns, suggestions, differing opinions, and questions to help identify and solve problems.

WE.2 d. – Value the insights and perspectives provided by quality assurance, the employee concerns program, and independent oversight organization personnel.

WE.4 c. – Have confidence that conflicts will be resolved respectfully and professionally.

PI.1 d. – Describe the issues entered in the corrective action program in sufficient detail to ensure they can be prioritized, trended, and assigned for resolution appropriately.

RC.1 a. – Feel free to raise nuclear safety concerns without fear of retribution and with confidence that their concerns will be addressed.

RC.2 f. – Have confidence that issues raised will be resolved.

WP.2 d. – Operate and maintain safety-related equipment well within design requirements.

WP.4 a. – Follow procedures.

WP.4 b. – Understand and use human error reduction techniques.

WP.4 d. – Manipulate plant equipment only when appropriately authorized and directed by approved plant procedures or work instructions.

WP.4 e. – Document the status of work activity properly.

WP.3 c. – Ensure components are labeled clearly, consistently, and accurately.

4.3 Individual contributors challenge others in the area of safety culture.

PA.1 f. – Help supplemental personnel understand and practice expected behaviors and actions.

PA.2 b. – Understand their personal responsibility to raise nuclear safety issues, including those identified by others.

QA.2 b. – Maintain a questioning attitude during prejob briefings and job-site reviews[1] to identify and resolve unexpected conditions.

QA.2 c. – Challenge unanticipated test results rather than rationalizing them; do not automatically attribute abnormal indications to indication problems; and thoroughly investigate abnormalities before continuing activities.

QA.2 e. – Stop work activities when confronted with an unexpected condition; communicate with supervisors; resolve the condition prior to continuing work activities; and, when appropriate, consult system and equipment experts.

QA.2 f. – Stop work if a procedure or work document is unclear or cannot be performed as written until the issue is resolved.

QA.3 b. – Ask questions to fully understand the bases of operational and management decisions that appear to be contrary to nuclear safety.

QA.4 e. – Consider potential undesired consequences of their actions prior to performing work, and implement appropriate error reduction tools.

WE.2 d. – Do not demonstrate or tolerate bullying or humiliating behaviors.

PI.1 a. – Recognize deviations from standards.

PI.1 b. – Understand how to enter issues into the corrective action program.

PI.1 c. – Promptly report and document issues, problems, degraded conditions, and near misses in the corrective action program at a low threshold.

WP.4 c. – Review procedures and instructions prior to work to validate that they are appropriate for the scope of work and that required changes are completed prior to implementation.

4.4 Individual contributors motivate others to perform safety culture behaviors.

PA.1 a. – Encourage each other to adhere to high standards.

PA.1 b. – Demonstrate a proper focus on nuclear safety, and reinforce this focus through peer coaching and discussions.

PA.1 e. – Actively solicit and are open to feedback.

PA.3 a. – Demonstrate a strong sense of collaboration and cooperation in connection with projects and operational activities.

[1] Job-site review: an action performed by an individual or a group to improve situational awareness at the job site; also known as two-minute drill, timeout, two-minute rule, take-a-minute, and two-minute timeout.

PA.3 b. – Work as a team to provide peer-checks, verify certifications and training, ensure detailed safety practices, actively peer coach new personnel, and share tools and publications.

CL.3 e. – Are actively involved in benchmarking.

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