INSPECTION MANUAL CHAPTER 1245 APPENDIX C12

# SAFETY CULTURE ASSESSOR TRAINING AND QUALIFICATION JOURNAL

Effective Date: 11/09/16

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Introduction:

The Office of Nuclear Reactor Regulation (NRR) developed this training document to certify individuals to be Safety Culture Assessors (SCAs) for Inspection Procedure (IP) 95002 or 95003 inspections or general safety culture assessments. Any questions related to qualification as a SCA should be directed to the Branch Chief of the Safety Culture Staff, in NRR.

Training and qualification guidance associated with developing safety culture skills is contained in Attachment 1, "Safety Culture Skills." Training and Qualification guidance associated with developing inspection skills come from IMC 1245 Appendix A and B.

The SCA does not necessarily need fully developed inspector skills since he/she functions as part of a team of inspectors. Therefore, the SCA qualification only requires partial completion of Appendix A and B as stipulated herein.

Safety Culture Assessor Competencies

Qualification as a SCA requires that you complete a variety of activities, each of which is designed to help you gain information or practice a skill that may be important during an IP 95002 or IP 95003 inspection. When you have completed the entire qualification journal, you will have demonstrated each of the competencies listed below for a Safety Culture Assessor.

Competencies

1. Understand the legal basis for and the regulatory processes used to achieve the NRC's regulatory objectives by:
   - Understanding the basis for the authority of the agency (regulatory framework); and
   - Understanding the processes established to achieve the regulatory objectives (regulatory framework).

2. Master the techniques and skills needed to collect, analyze, and integrate information using a safety culture focus to develop a supportable regulatory conclusion by:
   - Independently gathering information through objective review, observation, and open communications (safety culture assessment);
   - Determining acceptability of information by comparing to established criteria (safety culture assessment);
   - Approaching problems objectively, gathering and integrating information, and developing a comprehensive understanding before reaching a conclusion (problem analysis); and
   - Objectively analyzing and integrating information using a safety culture focus to identify the appropriate regulatory conclusion and regulatory response (safety culture assessment).

3. Demonstrate the personal and interpersonal skills needed to carry out assigned regulatory activities, either individually or as part of a team by:

- Clearly expressing ideas or thoughts, carefully listening, and speaking and writing with appropriate safety focus and context (communication);
- Working collaboratively with others toward common objectives (teamwork); and
- Working independently, exercising judgment, and exhibiting flexibility in the completion of activities that include difficult or challenging situations (self-management).

Qualification Interview

All inspectors are required to complete an inspector qualification interview with the Branch Chief of the Safety Culture staff in NRR and a qualified Level I Safety Culture Assessor. The inspector qualification interview is used to evaluate how well an individual can integrate and apply inspector competencies to field situations. Upon an individual's completion of all requirements identified in the qualification journals, an inspector qualification interview will confirm that the individual has the necessary knowledge, skills, and abilities to independently conduct the prescribed NRC inspections. Assessors certifying as a SCA must successfully pass a qualification interview even if previously qualified as an IMC 1245 inspector. Successful completion of the Level II qualification interview will allow the assessor to participate in supplemental IP 95002 or IP 95003, and any other Safety Conscious Work Environment or Safety Culture inspection at a licensed or vendor facility. Successful completion of the Level I qualification interview will allow the assessor to lead safety culture team inspections.

Equivalency Justification Requirements

Previous work experience and training may be accepted as evidence of an equivalency justification for SCA qualification, provided that you already possess the required knowledge and skills normally achieved by completing the training activities. The Branch Chief of the Safety Culture staff in NRR has the authority to accept previous experience and training as an alternate method for meeting the training activities contained in this training plan. In granting an equivalency justification, the Branch Chief of the Safety Culture staff in NRR should consider your ability to perform inspection activities without the benefit of the additional knowledge and regulatory perspective that would be gained by completing the specific training activities outlined in this plan. You should discuss your equivalency justifications with either a designated SCA, or the Branch Chief of the Safety Culturee staff in NRR. Justifications can be documented using Form 1, "Safety Culture Assessor Equivalency Justification."

Review of Completed Training

Training activities must be discussed with a qualified Level I or Level II SCA designated by the individual's supervisor, or with the Branch Chief of the Safety Culture staff in NRR. Descriptions of the Level I and Level II SCAs are found in Attachment 1 of this qualification card.

Documentation

Documentation of completed training is recorded on the SCA Signature Card. Equivalency justification for formal training courses, individual study activities, and on-the-job activities are recorded on Form 1.

Safety Culture Assessor Individual Study Activities (ISA)
Safety Culture Assessor Training

TOPIC: ISA-1: Safety Culture Background

PURPOSE: The purpose of this activity is to become familiar with safety culture assessment and assessment methodologies.

COMPETENCY AREA: Safety Culture Assessment

LEVEL OF EFFORT: 40 Hours

REFERENCES:

1. May 14, 1996 policy statement, “Freedom of Employees in the Nuclear Industry to Raise Safety Concerns without Fear of Retaliation,” Federal Register, volume 61, no. 94, page 24336
http://www.gpoaccess.gov/fr/
http://www.nrc.gov/about-nrc/regulatory/allegations/scwe-frn-5-14-96.pdf

2. June 14, 2011 policy statement, “Final Safety Culture Policy Statement,” Federal Register, volume 76, no. 114, page 34773
http://www.gpoaccess.gov/fr/
http://www.gpo.gov/fdsys/pkg/FR-2011-06-14/pdf/2011-14656.pdf

3. Davis-Besse Special Inspection Report 05000346/2004003, “Management and Human Performance Corrective Action Effectiveness”

4. Regulatory Issue Summary (RIS) 2005-018, “Guidance for Establishing and Maintaining a Safety Conscious Work Environment”

5. RIS 2006-13, "Information on the Changes Made to the Reactor Oversight Process to More Fully Address Safety Culture"

6. Inspection Manual Chapter (IMC) 1245, Appendix B, ISA-General-4, “Safety Culture”

7. International Nuclear Safety Advisory Group (INSAG)-15, “Key Practical Issues in Strengthening Safety Culture.”
http://www-pub.iaea.org/MTCD/publications/PDF/Pub1137_scr.pdf

8. Institute of Nuclear Power Operations (INPO), 12-012 “Traits of a Healthy Nuclear Safety Culture,” (ML14073A617, ML14073A620, ML14073A635, and ML14073A638)

9. The Report of the B.P. U.S. Refineries Independent Safety Review Panel (concerning the BP Texas City Refinery Process Accident), January 2007: http://www.csb.gov/assets/1/19/csbfinalreportbp.pdf

10. Deep Water Horizon Gulf Oil Spill Disaster: http://www.csb.gov/macondo-blowout-and-explosion/

11. NUREG-2165, "Safety Culture Common Language."

12. Inspection Manual Chapter 0310, "Aspects Within the Cross-Cutting Areas"

13. Safety Culture Training module in iLearn: http://papaya.nrc.gov/safetyculture/index.html

EVALUATION CRITERIA:

At the completion of this activity, you should be able to:

1. Understand the evolution in the approach NRC has taken to address safety culture for nuclear power reactor licensees.

2. Understand how the NRC uses safety culture in the ROP framework

3. Understand the international approach to addressing safety culture.

4. Understand the nuclear power industry's (i.e., INPO's) approach to addressing safety culture.

5. For the B.P. Texas City refinery process accident, understand the safety culture assessment methodology used and the assessment results.

TASKS:

Perform the following activities:

1. Read the documents listed under the References section of ISA-1," and complete IMC 1245, Appendix B, ISA-General-4, "Safety Culture," to understand how a licensee's safety culture has been treated historically by NRC and how the Reactor Oversight Process (ROP) currently treats safety culture.

2. Read INSAG-15 to understand the international approach to addressing safety culture.

3. Read INPO's "Traits for a Healthy Nuclear Safety Culture" to understand INPO's approach to addressing safety culture.

4. For the B.P. Report under "Other Industries," read the following sections to become familiar with an example of safety culture assessment methodology and the assessment results:

- Executive Summary
- Corporate Safety Culture
- Findings: Corporate Safety Culture

5. Meet with either your supervisor or a designated Level I or Level II SCA to discuss the items listed in the evaluation criteria section.

RECOMMENDED READINGS/ ADDITIONAL REFERENCES:

The following documents are listed for additional information:


1. INSAG-4; "Safety Culture": http://www-pub.iaea.org/MTCD/publications/PDF/Pub882_web.pdf

2. INSAG-13; "Management of Operational Safety in Nuclear Power Plants": http://www-pub.iaea.org/MTCD/publications/PDF/P083_scr.pdf

3. Center for Chemical Process Safety; "Building Process Safety Culture: Tools to Enhance Process Safety Performance"; 2005: http://www.aiche.org/CCPS/PSCulture.aspx

4. Health and Safety Executive (HSE); Safety Assessment Principles for Nuclear Facilities; United Kingdom: http://www.hse.gov.uk/nuclear/saps/

5. IAEA, Safety Culture Assessment Review Team (SCART) Guidelines: http://www-pub.iaea.org/MTCD/publications/PDF/svs_016_web.pdf

6. IAEA SCART Report on Mission to the PBMR (Pty) Ltd., Republic of South Africa; February 27 to March 10, 2006.

7. Carroll, J. S., and Hatakenaka, S.; Driving Organizational Change in the Midst of Crisis; MIT Sloan Management Review; Spring 2001.

8. Reason, James; Managing the Risks of Organizational Accidents; Ashgate; 1997.
- Chapter 1: "Hazards, Defenses and Losses"
- Chapter 9: "Engineering a Safety Culture"

9. Ghosh, S.T. and Apostolakis, G.E.; "Organizational Contributions to Nuclear Power Plant Safety," Nuclear Engineering and Technology; June 2005.

10. Wiegmann, D.A. et.al; "A Synthesis of Safety Culture and Safety Climate Research;" Technical Report ARL-02-3/FAA-02-2; June 2002.

TOPIC: ISA-2: Survey Overview

PURPOSE: The purpose of this activity is to become familiar with survey methodology and how to evaluate the quality of surveys.

COMPETENCY AREA: Safety Culture Assessment

LEVEL OF EFFORT: 6 Hours

REFERENCES:

1. American Association for Public Opinion Research, "Best practices for Survey and Public Opinion Research": http://www.aapor.org/AAPORKentico/Standards-Ethics/Best-Practices.aspx

2. Scheuren, F., "What is a Survey": http://www.whatisasurvey.info/

3. NRC Inspection Procedure 95003 and its appendix 95003.02

EVALUATION CRITERIA: At the completion of this activity, you should be able to:

1. Describe what a survey is.

2. Describe the strengths and limitations of surveys.

3. Explain the main steps in developing and administering a survey.

4. Understand what factors to consider in evaluating the quality of surveys.

TASKS:

1. Read the guidance provided in "Best practices for Survey and Public Opinion Research."

2. Read the following chapters from the "What is a Survey?" booklet:

- Chapter 1, "What is a Survey"
- Chapter 2, "How to Plan Survey"
- Chapter 3, "How to Collect Survey Data"
- Chapter 4, "Judging the Quality of a Survey"
- Chapter 6, "Designing a Questionnaire"
- Chapter 7, "How to Conduct Pretesting"
- Chapter 10, "What is a Margin of Error"

3. Review the guidance in Inspection Procedure 95003 and 95003.02

4. Meet with either your supervisor or a designated Level I or Level II SCA to discuss the items listed in the evaluation criteria section.

TOPIC: ISA-3: Focus Group Overview

PURPOSE: The purpose of this activity is to learn how to conduct focus groups to gather desired information while reducing potential biases in the responses.

COMPETENCY AREA: Safety Culture Assessment

LEVEL OF EFFORT: 24 Hours

REFERENCES:

1. Obtain training material (handouts, booklets, class notes) from the required focus group training course.

EVALUATION CRITERIA: At the completion of this activity, you should be able to:

1. Describe what a focus group is.
2. Describe the strengths and weaknesses of using focus groups.
3. Explain how to prepare for conducting a focus group.
4. Explain facilitation techniques.
5. Explain “best practices” to reduce potential biases in responses.

TASKS:

1. Complete a focus group training class.. (Suggested training: http://www.gdiworld.com/)
2. Meet with either your supervisor or a designated Level I or Level II SCA to discuss the items listed in the evaluation criteria section.

TOPIC: ISA-4: Inspection Procedure 95003

PURPOSE: The purpose of this activity is to become familiar with prior 95003 inspections to gain appreciation for how the inspections were implemented and the inspection results.

COMPETENCY AREA: Safety Culture Assessment

LEVEL OF EFFORT: 12 Hours

REFERENCES:

1. Palo Verde 95003 IR (ML080320562 and ML080320590)
2. Browns Ferry 95003 IR (ML13234A539)
3. Browns Ferry Confirmatory Action Letter (ML13232A105)
4. Arkansas Nuclear One 95003 IR (ML16161B279)
5. Arkansas Nuclear One Confirmatory Action Letter (ML16169A193)
6. Additional Palo Verde 95003 documentation at: http://nrr10.nrc.gov/rop-digital-city/PV/index.html

EVALUATION CRITERIA: At the completion of this activity, you should be able to:

1. Understand how prior 95003 inspections have been implemented based on the site-specific issues.
2. Discuss what types of inspection and safety culture assessment issues have arisen for prior 95003 inspections.

TASKS: Perform the following activities:

1. Search the above 95003 inspection reports for the relevant sections on safety culture and review the information. (Note: In the event further information is desired, contact the cognizant 95003 team leader.)

2. Meet with either your supervisor or a designated Level I or Level II SCA to discuss the items listed in the evaluation criteria section.

ADDITIONAL READINGS/ REFERENCES: The following document is listed for additional information:

1. Browns Ferry Inspection Plan (ML13070A377)

Safety Culture Assessor On-the-Job Training (OJT)

TOPIC: OJT-1: Inspection Activity

PURPOSE: The purpose of this activity is to familiarize you with safety culture-related inspection tasks. This OJT will prepare you to independently plan and conduct safety culture-related inspections.

COMPETENCY AREA: Safety Culture Assessment

LEVEL OF EFFORT: 40 – 80 Hours

REFERENCES:

1. IP 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input"

2. IP 95002, “Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area

3. IP 71152, "Identification and Resolution of Problems"

4. IP 40100, “Independent Safety Culture Assessment Follow-up”

EVALUATION CRITERIA: At the completion of this activity, you should be able to:

1. Describe the safety culture related inspection and assessment activities performed.

2. Demonstrate safety culture assessment skills.

TASKS:

1. Complete ISA-3 prior to beginning this OJT.

2. Participate as a note-taker for a safety culture focus group on an IP 95003 inspection or a safety conscious work environment focus group on an IP71152 inspection.

OR

3. Participate on any other ROP baseline, supplemental, or special inspection that has a specific focus on safety culture related activities, such as, a follow-up of a repetitive SCCI, IP 95002, or IP 40100 inspection that warranted the NRC to request the licensee to perform an independent safety culture assessment.

4. Meet with either your supervisor or a designated Level I or Level II SCA to discuss the items listed in the evaluation criteria section.

Safety Culture Assessor Training

TOPIC: OJT-2: Conduct Non-technical Interviews

PURPOSE: The purpose of this activity is to familiarize you with performing non-technical interviews that are typically done as part of safety culture related inspection tasks.

COMPETENCY AREA: Safety Culture Assessment

LEVEL OF EFFORT: 8 Hours

REFERENCES: 1. "Interview Techniques for Assessing Safety Culture," ML071830168.

EVALUATION CRITERIA: At the completion of this activity, you should be able to:

1. Describe differences between normal inspection interviews involving technical items, and safety culture interviews.

2. Describe techniques to establish rapport with interviewees.

3. Describe interviewer techniques to avoid introduction of bias that could affect responses.

4. Describe techniques to elicit responses from hesitant or nervous interviewees.

TASKS: 1. Complete required focus group training. (Recommended training contractor: http://www.gdiworld.com/)

2. Perform a practice in-office safety culture interview.

3 Participate on any ROP baseline, supplemental, vendor inspection, or special inspection that includes a specific focus on safety culture related activities. Under the supervision of an inspection team leader, conduct several non-technical interviews.

4 Alternatively, perform an in-office non-technical interview of several coworkers under the supervision of the inspection team leader.

5. Meet with either your supervisor or a designated Level I or Level II SCA to discuss the items listed in the evaluation criteria section.

TOPIC: OJT-3: Shadow an Inspection Team Lead

PURPOSE: The purpose of this activity is to familiarize you with leading a safety culture assessment functional team.

COMPETENCY AREA: Safety Culture Assessment

LEVEL OF EFFORT: 120 Hours

REFERENCES: 1. IP 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input"

EVALUATION CRITERIA: At the completion of this activity, you should be able to:

1. Describe effective techniques to direct the conduct of safety culture assessment activities. Describe any situations observed during the inspection where alternative approaches could have been employed to achieve a more desirable outcome.

2. Describe techniques employed to achieve open and effective communications with the team leader, the assistant team leaders, other inspection team members, regional management, and senior plant management.

3. Describe approaches for dealing with unforeseen issues during the inspection and lessons learned.

TASKS: 1. Participate on an IP 95002 (safety culture portion) or IP 95003 inspection (or a combination of other Safety Culture assessments, allegation follow-ups, etc. using IP 93100 or IP 40100. Please discuss with the Branch Chief of the safety culture staff in NRR) and shadow the inspection team leader during the on-site inspection phase. Alternatively, if you are a qualified inspector, you may lead an IP71152 biennial inspection, specifically the safety-conscious work environment assessment portion.

2. Meet with either your supervisor or a designated Level I or Level II SCA to discuss the items listed in the evaluation criteria section.

Signature Card for Safety Culture Assessor Qualification

| Employee Name: _____ | Employee Initials/Date | Supervisor's/ Subject Matter Expert Signature/Date |
|---|---|---|
| A. For qualified reactor inspectors, indicate the date of completing all inspector training requirements in IMC 1245 Appendix A and B; and skip section B below. For candidates who are not qualified reactor inspectors, if IMC 1245 Appendix A and Appendix B are not complete, complete sections B-D of this qualification card below. | | |
| B. Training Courses: | | |
| 1. H-100 Site Access Training | | |
| 2. R-100 Reactor Concepts | | |
| 3. G-105 Conducting Inspections | | |
| 4. Effective Communication for NRC Inspectors | | |
| 5. Gathering Information for Inspectors through Interviews | | |
| 6. G-205 Root Cause and Incident Investigation workshop | | |
| 7. Safety culture ROP training (web-based) Located in iLearn http://papaya.nrc.gov/safetyculture/index.html | | |
| 8. Ethics Training (web-based) | | |
| 9. Focus Group Facilitation Training (Recommended course: http://www.gdiworld.com/) | | |

| C. Inspection Individual Study Activities from IMC 1245 Appendix A and B (ISA): All candidates should complete this section. | | |
|---|---|---|
| (ISA-3) Inspector Objectivity, Protocol, and Professional Conduct | | |
| (ISA-4) Fitness for Duty Rule | | |
| (ISA-6) NRC's Response to an Emergency at a Nuclear Facility | | |
| (ISA-16) Contacts with the Media | | |
| (ISA-18) Freedom of Information Act and the Privacy Act | | |
| (ISA-20) Documenting Inspection Findings | | |
| (ISA-21) Open Collaborative Working Environment & Ways to Raise Differing Views"<br>1. OCWE http://www.internal.nrc.gov/HR/ocwe/index.html<br>2. NCP http://www.internal.nrc.gov/OE/NCP/<br>3. DPO http://www.internal.nrc.gov/OE/DPO/<br>4. Open Door Policy http://www.internal.nrc.gov/ADM/DAS/cag/Management_Directives/md10.160.pdf | | |
| (ISA-22) Overview of 10 CFR Part 50 | | |
| (ISA-23) Overview of Parts 19 and 20 | | |
| | | |
| Complete the following elements from ISAs in IMC 1245, Appendix A | | |
| (ISA-5) Allegations: tasks 1, 2, 3, 4, 6, 8, 9, and including completion of the web based allegation training and review of applicable guidance documents. Complete evaluation criteria. | | |
| (ISA-9) Exploring the Operator Reactor Inspection Program: tasks 1, 2, 4, and 7. Complete evaluation criteria 1, 2, 3, 4, 5, and 9. | | |
| (ISA-15) Interaction with the Public: tasks 1, 2, 3, 6, and 7, including review of applicable information regarding interacting with the public. Complete evaluation criteria 1, 2, 3, 7, 8 and 9. | | |
| (ISA-19) Entrance and Exit Meetings: tasks 1 and 4. Complete evaluation criteria 1 and 2. | | |

| | | |
|---|---|---|
| (ISA-24) Licensee Specific Regulatory Documents and Procedures: all tasks. Complete evaluation criteria 6. | | |
| (ISA-26) Exploring the Operating Reactor Assessment Program: task 2. Complete evaluation criteria 4 and 5. | | |
| Complete the following ISA in its entirety from IMC 1245 Appendix B, "General Proficiency-Level Training and Qualification Journal:"<br>(ISA-4) Safety Culture | | |
| Complete the following ISAs in their entirety from this qualification card | | |
| (ISA-1): Safety Culture Background | | |
| (ISA-2): Survey Overview | | |
| (ISA-3): Focus Group Overview | | |
| (ISA-4): Inspection Procedure 95003 | | |
| D. Inspection On-the-Job Training (OJT) Activities<br><br>Participate on an inspection focusing on safety culture, organizational factors, Employee Concerns Program (ECP) evaluation, allegation follow-up, and/or human performance. (IP71152, 95002, 95003, 40100, AIT, etc.) | | |
| (OJT-1): Inspection Activity | | |
| (OJT-2): Conduct Non-technical Interviews | | |
| (OJT-3): Shadow an Inspection Team Lead | | |

| | | |
|---|---|---|
| E. Qualification Interview for Level I and Level II:<br>Complete a Qualification Interview on the topics below to qualify as a Level II Safety Culture Assessor | | |
| Demonstrate knowledge of methods for gathering safety culture data and their appropriate strengths and weaknesses, including:<br>1. Individual and group interviews (Review ISA-3)<br>2. Structured and unstructured interviews (Review OJT-2)<br>3. Questionnaires and surveys (Review ISA-2)<br>4. Behavioral observations and checklists<br>5. Case Studies | | |
| For a Qualification Interview, demonstrate the ability to determine the applicability and likely usefulness of various data-gathering methods under different circumstances | | |
| Demonstrate the ability to implement the different methods correctly, including but not limited to:<br>1. Conducting focus groups and interviews in a manner that elicits the desired information while reducing potential biases in the responses,<br>2. Conducting reliable (i.e., repeatable) structured behavioral observations<br>3. Conducting content analysis of written documentation and verbal communication<br>4. R~~r~~eviewing ECP and Allegation files for completeness and accuracy of licensee's evaluation | | |

| | | |
|---|---|---|
| Demonstrate ability to integrate results from applying the different methods to arrive at defensible conclusions | | |
| Demonstrate knowledge of the NRC's Reactor Oversight Process and applicable inspection requirements and techniques. (Not applicable for Previously Qualified Inspectors.) | | |
| F. Complete Additional Qualification Activities below to qualify as a Level I Safety Culture Assessor | | |
| 1. iLearn Training course: ID_166144<br>Resolving Conflict Through Effective Communication | | |
| 2. iLearn Training Course: 1151<br>Motivating Others and Team Development | | |
| Demonstrate knowledge of statistical and conceptual constraints on determining appropriate sample sizes for each method | | |
| Demonstrate knowledge of the rationale for a multi-measures approach and ability to assess the limitations of a single-method safety culture assessment. | | |
| Demonstrate knowledge of the alternatives for selecting samples for the assessment and the biases introduced by different sample selection strategies. | | |
| Demonstrate knowledge of theories and research in organizational and human behavior. | | |

| | | |
|---|---|---|
| G. Level I Qualification Interview:<br>For Level I Qualification Interview, demonstrate knowledge of the requirements for developing, administering, and analyzing the results of surveys and questionnaires, including:<br><br>1. The strengths and weaknesses of different item types (Likert, BARS, forced-choice, etc.)<br><br>2. The requirements for administering a survey to reduce potential biases in the responses.<br><br>3. Behavioral statistics and the appropriate methods, and their constraints, for analyzing survey data.<br><br>4. Statistical requirements for the different types of validity and reliability, and appropriate techniques to assess/measure/establish them. | | |
| Demonstrate~~d~~ leadership skills: (This requirement can be waived for qualified inspectors who routinely lead inspections.)<br><br>1. Ability to direct the safety culture assessment activities.<br><br>2. Ability to supervise and train Level 2 Safety Culture Assessors.<br><br>3. Ability to coordinate and communicate effectively with the Team Leader(s), other members of the inspection team, Regional management, and plant senior management.<br><br>4. Ability to deal with unforeseen issues as they arise.<br><br>5. Ability to effectively articulate and respond to any questions/challenges from internal and external stakeholders on the safety culture assessment and findings. | | |

Supervisor's signature indicates successful completion of all required courses and activities listed in this journal. *

*Supervisor may delegate this authority to a qualified SCA in NRR or the Regional Office, or to the Branch Chief of the Safety Culture staff in NRR.

*Supervisor's Signature: _____ Date: _____

The appropriate Form 1, "Safety Culture Assessor Equivalency Justification," if applicable, must accompany this signature card and certification.

Copies: Assessor, Human Resources Office, Supervisor

# Safety Culture Assessor Certification

_____

Has successfully completed all of the requirements
to become a

## Safety Culture Assessor

❏ Level II ❏ Level I

Branch Chief, Safety Culture staff/NRR Signature: _____
Date:_____

Division Director Signature:_____ Date:_____

Form 1: Safety Culture Assessor Equivalency Justification

Office/Region/Division Branch:_____
Employee Name: _____
Position: _____
Supervisor: _____

Training Journal Requirement(s) to be Waived:_____

Justification for Waiving Requirement(s) (identify equivalent training and/or experience for which the employee is to be given credit):_____

Qualifying individuals should discuss the basis for equivalency justification with a qualified SCA before bringing this to supervisor for approval.
Branch Chief's Recommendation

Signature/Date:_____

Division Director's Approval

Signature/Date:_____

Copies to:
Employee
Employee Branch Training File
Human Resources
Branch Chief for the Safety Culture staff, NRR

Attachment 1: General Information: Safety Culture Skills

This attachment ensures that Safety Culture Assessors (SCAs) have the necessary knowledge and experience to perform the safety culture activities in an Inspection Procedure 95003 inspection. SCAs are certified as level I or II based on experience and education in the areas of safety culture, human factors, and/or organizational factors.

If it is determined that you do not meet the experience or education requirement listed in the core document and you would like to be able to become a Safety Culture Assessor, contact your supervisor and the Branch Chief of the Safety Culture staff in NRR, to discuss developmental options to fulfill the qualification prerequisites.

Level I and II Assessors

Safety Culture Assessors are divided into two levels based on education/experience level. Level I are senior staff who meet all the knowledge, skills, and abilities (KSAs) needed to carry out the inspection activities listed in IP 95003 for Safety Culture Assessors through education, experience or a combination of both. In addition, Level I Assessors should also demonstrate the ability to perform in a leadership role on safety culture inspection teams. Level II assessors are staff who meet some, but not all of the KSAs through education and experience.

Level I qualifications: An individual qualifying as a Level I Safety Culture Assessor should demonstrate all of the KSAs listed in the table below and have hands-on experience conducting the types of tasks required by IP 95003 in similar environments. This requirement may be satisfied in several ways, including finishing formal education in the social or behavioral sciences, or by having hands-on inspection experience at licensed facilities performing the duties of a Level I Assessor, as described above. In addition, because of the responsibilities involved, a Level I Safety Culture Assessor must have demonstrated leadership skills (e.g., have led activities of similar scope or significance).

Level II qualifications: To qualify, an individual should have recent (i.e., within the last 5 years), training and/or hands-on experience in the KSAs required for a Level II Safety Culture Assessor.

Attachment 2: Level Specific Knowledge and Skills

The table below illustrates level specific knowledge and skills.

| IP 95003 KSA | Level I | Level II |
|---|---|---|
| Knowledge of appropriate methods for gathering safety culture data and their strengths and weaknesses, including:<br>- Individual and group interviews<br>- Structured and unstructured interviews<br>- Questionnaires and surveys<br>- Behavioral observations and checklists<br>- Case studies | X | X |
| Ability to determine the applicability and likely usefulness of various data-gathering methods under different circumstances | X | |
| Ability to implement the different methods correctly, including, but not limited to:<br>- Conducting focus groups and interviews in a manner that elicits the desired information while reducing potential biases in the responses<br>- Conducting reliable (i.e., repeatable) structured behavioral observations<br>- Conducting content analyses of written documentation and verbal communications | X | X |
| Knowledge of the requirements for developing, administering, and analyzing the results of surveys and questionnaires, including:<br>- The strengths and weaknesses of different item types (Likert, BARS, forced-choice, etc.)<br>- The requirements for administering a survey to reduce potential biases in the responses<br>- Behavioral statistics and the appropriate methods, and their constraints, for analyzing survey data<br>- Statistical requirements for the different types of validity and reliability, and appropriate techniques to assess/measure/establish them | X | |
| Knowledge of the rationale for a multiple-measures approach and ability to assess the limitations of a single-method safety culture assessment | X | |
| Knowledge of statistical and conceptual constraints on determining appropriate sample sizes for each method | X | |
| Knowledge of the alternatives for selecting samples for the assessment and the biases introduced by different sample selection strategies | X | |
| Knowledge of theories and research in organizational and human behavior | X | |
| Ability to integrate results from applying the different methods to arrive at defensible conclusions | X | X |

| | | |
|---|---|---|
| Knowledge of the NRC's Reactor Oversight Process and applicable inspection requirements and techniques | X | X |
| Knowledge of theory and research in safety culture | X | |
| Additional KSAs | Level I | Level II |
| Knowledge of principles underlying safety culture assessment and assessment methodologies | X | X |
| Ability to lead safety culture assessment activities, including:<br>-Supervise and train Level II Safety Culture Assessors<br>-Coordinate and communicate effectively with the Team Leader, Assistant Team Leader, other members of the inspection team, Regional management, and plant senior management<br>-Effectively manage unforeseen issues as they arise<br>-Effectively articulate and respond to any questions/challenges from internal and external stakeholders on the safety culture assessment and findings | X | |

## Attachment 3: Certification

Branch Chief of the Safety Culture staff in NRR certifies candidates as a Level I or II, and document certification in the qualification signature card. The factors to be considered in assessing a candidate's readiness will vary on a case-by-case basis. The supervisor should meet with the candidate and the Branch Chief of the Safety Culture staff in NRR to discuss relevant knowledge and experience to determine qualification level or if the candidate needs additional training. The supervisor may choose to delegate this discussion to a qualified SCA in NRR or the Regional office.

Note: In determining certification, special consideration should be given to the ability of the individual to effectively carry out the IP 95003 safety culture activities, such as conducting interviews and focus groups.

Attachment 4: Improving Safety Culture Skills

If an individual does not meet the education and experience requirements listed in the qualification card above, but would like to be eligible for that level, he/she should take additional training or gain relevant experience as described below.

To meet Level II: The individual should take the following required training courses/sessions:
NRC Courses

-Root cause/incident investigation workshop (see NRC iLearn webpage)
-Applied statistics (see NRC iLearn webpage)
-Columbia self-study (see
https://ilearnnrc.plateau.com/learning/user/catalogsearch/catalogSearchDispatchAction.do?searchType=filteredSearch&keywords=Columbia+shuttle)
-
- Safety Culture iLlearn Training (Placeholder: training is being updated and will be available in summer of 2015)

To meet Level I: In addition to the Level II activities above, the individual should undergo advanced training in focus group facilitation, interviewing techniques, and should demonstrate an understanding of the underlying theories and principles of organizational culture. This can be achieved by gaining experience in all of the KSAs listed, and conducting the types of tasks required by IP 95003 for safety culture assessments in similar environments. In addition, he/she should gain experience in leading activities that are of similar scope or significance as IP 95003 safety culture activities.

Recommended External Courses
-A course covering psychological/organizational research methods
-A course covering survey administration and research
-A course covering statistics in social or behavioral science applications
-A course covering organizational or human behavior

- Seminars though ProAct Safety, Inc.: http://www.proactsafety.com/
- National Training Lab Institute: Diagnosing organizations with impact course: http://www.ntl.org/?page=dowi
- Center for Chemical Process Safety: Building process safety culture: tools to enhance process safety performance (see case studies for self-study): http://www.aiche.org/CCPS/PSCulture.aspx
- National Safety Council: Building a work class safety culture course: http://www.scnsc.org/#!creating-a-world-class-safety-culture/cg4b
- George Mason University Department of Psychology courses: http://www.gmu.edu/catalog/courses/psyc.html

- Ashford University Online:
  http://www.ashford.edu/degrees/online/ba-applied-behavioral-science-courses.htm#IntroductoryCourses
    - Introduction to Applied Behavioral Sciences (ABS 200)
    - Statistics for the Behavioral Sciences (PSY 325)
    - Research Methods in Psychology (PSY 326)

- University of Maryland Department of Psychology courses:
  http://psychology.umd.edu/

- Johns Hopkins University Department of Psychology courses:
  http://www.psy.jhu.edu/

- Catholic University Department of Psychology courses:
  http://psychology.cua.edu/

- University of Michigan Human Factors Short Course (1-2 weeks)
  http://www.umich.edu/~driving/shortcourse

The individual is also strongly encouraged to take additional courses on relevant topics such as organizational psychology, human factors/performance, psychometrics, and safety culture, depending on his/her experience level in these areas. Although not required, such courses provide additional coverage of the KSAs needed to perform the safety culture activities of IP 95003.

Any questions related to qualification as a SCA should be directed to a qualified SCA in NRR or the Regional Office, or to the Branch Chief of the Safety Culture staff in NRR.

END

ATTACHMENT 5

Revision History for IMC 1245 Appendix C-12, "Safety Culture Assessor Training and Qualification Journal"

| Commitment Tracking Number | Accession Number Issue Date Change Notice | Description of Change | Description of Training Required and Completion Date | Comment and Feedback Resolution Accession Number (Pre-Decisional, Non-Public) |
|---|---|---|---|---|
| N/A | 10/13/11<br>CN 11-020 | This is a new document issued for training and qualifications for safety culture assessors. | N/A | ML11102A124 |
| N/A | ML12166A543<br>09/26/12<br>CN 12-022 | Updated to add in specific ISAs and OJTs | N/A | ML12166A508 |
| N/A | ML14084A152<br>04/03/14<br>CN 14-009 | Updated to change Human Factors Branch Chief information and to add in new documents related to the Safety Culture Common Language | N/A | FBF 1245C12-1889<br>ML13275A321<br>FBF 1245C12-1890<br>ML13275A330<br>FBF 1245C12-1891<br>ML13275A355 |
| N/A | ML15114A460<br>07/01/15<br>CN 15-013 | Editorial changes. Resolution of comments from internal NRC and Regional Offices. Closure of feedback form 1245C12-2010 | N/A | ML1512A195<br>FBF 1245C12-2010<br>ML15182A106 |
| NA | Ml16020a397<br>02/01/16<br>CN 16-004 | Addition of new Safety Culture Training link | NA | NA |
| N/A | ML16259A016<br>11/09/16<br>CN 16-029 | Addition of 2 training courses which were agreed upon by the IMC 1245 working group, as well as editorial changes | N/A | ML16259A018 |