

CONTROL FORM FOR DOE/ORO DIRECTIVE

PART A (To be completed by the ORO DIRECTIVES MANAGEMENT GROUP, AD-440):

1. DIRECTIVE NUMBER, TITLE, AND DATE:

ORO M 220.1, OAK RIDGE OFFICE ASSESSMENT PROGRAM MANUAL, dated 06/20/2006

2. PURPOSE OF TRANSMITTAL: New Directive Revised Directive Revised Control Form

3. DOES THIS DIRECTIVE CANCEL OR EXTEND ANY OTHER DIRECTIVES? Yes No
If "Yes," list what action (cancel or extend) and list the Directive(s) number(s), title(s), and date(s):

This Directive cancels and replaces ORO O 220, Chapter XI, OAK RIDGE OPERATIONS ASSESSMENT PROGRAM, dated 06/01/2004.

The attached Directive is forwarded for review and action. Complete Part B and forward a completed hard copy of this form to ORO DMG, AD-440, by 07/05/2006.

PART B (To be completed by the DIVISION OF PRIMARY INTEREST [DPI]):

COMPLETE FOR DOE DIRECTIVES ONLY:

4. SUPPLEMENTAL ORO DIRECTIVE REQUIRED?

Is a new or revised supplemental ORO Directive required? Yes No

If "Yes," target date for submission of supplemental ORO Directive is _____.

COMPLETE FOR BOTH DOE AND ORO DIRECTIVES:

5. CONTRACTOR APPLICABILITY.

Does this Directive affect the work performed by ORO Contractors? Yes No

If "Yes," whom? Bechtel Jacobs Company LLC ORAU

UT-Battelle, LLC ISOTEK (Bldg. 3019, ORNL)

FWENC

Other Contractors (list by name)

6. SUBJECT MATTER EXPERT: Teresa Perry / Telicia Mims Technical Support and Assessment Div.
Name Organization

Original Signed By

7. APPROVED BY: H. J. Monroe, Acting Dir. Technical Support and Assessment Div., SE-31 06/20/2006
Signature Organization Date

PART C (To be completed by the ORO DIRECTIVES MANAGEMENT GROUP, AD-440):

APPROVED FOR DISTRIBUTION IN ACCORDANCE WITH OFFICIAL DIRECTIVE DISTRIBUTION LIST:

Original Signed By

Wayne H. Albaugh

DMG Team Leader, AD-440

06/20/2006

Date

INSTRUCTIONS TO ADDRESSEES: THIS FORM IS TO BE FILED WITH THE DIRECTIVE AND RETAINED.

(Revised 02/10/2006)

U.S. Department of Energy

Oak Ridge Office

ORO M 220.1

DATE: 06/20/2006

SUBJECT: OAK RIDGE OFFICE ASSESSMENT PROGRAM MANUAL

1. PURPOSE. This Manual describes the roles, responsibilities, and basic processes to be used for implementing the Oak Ridge Office (ORO) Assessment Program. The objectives of this program are to ensure effective, efficient ORO programs and operations through application of comprehensive and integrated assessment activities. This Manual includes the following assessment elements:

- (1) *Three-Year Assessment Plan.*
- (2) *Integrated Assessment Schedule.*
- (3) Assessments/reviews.
- (4) Corrective action plans.
- (5) Walkthroughs.
- (6) Performance indicators and trending.
- (7) Feedback and improvement of the ORO Assessment Program.

Nothing in the issuance of this document changes any requirements contained in any Department of Energy (DOE) Directive. However, in the event there is a conflict between this Manual and a DOE Directive, the DOE Directive takes precedence.

2. CANCELLATION. This Manual cancels and replaces ORO O 220, Chapter XI, OAK RIDGE OPERATIONS ASSESSMENT PROGRAM, dated June 1, 2004.
3. APPLICABILITY. The provisions of this Manual apply to ORO Federal staff and oversight activities (not contractors and leasees/regulates).
4. RESPONSIBILITIES. The responsibilities are delineated in Attachment 1 to this Manual.
5. REQUIREMENTS AND PROCEDURES.
 - a. Requirements.
 - (1) DOE O 226.1, IMPLEMENTATION OF DEPARTMENT OF ENERGY OVERSIGHT POLICY, Attachment 3, "DOE Line Management (Both Headquarters and Field Elements) Oversight Processes," ORO shall ensure that "line management maintain sufficient knowledge of site and contractor activities to make informed decisions about hazards, risks and resource allocation, provide direction to contractors, and evaluate

contractor performance. The effectiveness of contractor assurance systems, the hazards at the site/activity, and the degree of risk are factors in determining the scope and frequency of DOE line management assessments and operational awareness activities.”

- (2) DOE O 226.1, IMPLEMENTATION OF DEPARTMENT OF ENERGY OVERSIGHT POLICY, Attachment 3, ”*DOE Line Management (Both Headquarters and Field Elements) Oversight Processes*,”: Assessments must include reviews of site qualification standard programs, training programs, and individual training and qualifications as they relate to environment, safety, and health; safeguards and security; emergency management; cyber security; and business practices.”
 - (3) DOE O 414.1C, QUALITY ASSURANCE, “*Criterion 3*,” and ORO O 410, Chapter III, ORO QUALITY ASSURANCE PROGRAM (ORO QAP), “*Quality Improvement*”: ORO . . . “shall establish and implement processes to detect and prevent quality problems; identify, control, and correct items, services, and processes that do not meet established requirements; identify causes of problems and include prevention of recurrence as a part of corrective action planning; and review item characteristics, process implementation, and other quality-related information to identify items, services, and processes needing improvement.”
 - (4) DOE O 414.1C, QUALITY ASSURANCE, “*Criterion 9*,” and ORO QAP, “*Management Assessments*”: ORO shall . . . “ensure that managers assess their management processes and identify and correct problems that hinder the organization from achieving its objectives.”
 - (5) DOE O 414.1C, QUALITY ASSURANCE, “*Criterion 10*,” and ORO QAP, “*Independent Assessments*”: ORO’s independent assessments . . . “will be planned and conducted to measure item and service quality, the adequacy of work performance, and to promote management process improvements; teams will be established with sufficient authority and freedom from line management; and persons conducting independent assessments will be technically qualified and knowledgeable in the areas to be assessed.”
 - (6) DOE P 450.4, SAFETY MANAGEMENT SYSTEM POLICY, “*Core Function 5*”: ORO shall ensure . . . “feedback information on the adequacy of controls is gathered, opportunities for improving the definition and planning of work are identified and implemented, line and independent oversight is conducted, and if necessary, regulatory enforcement actions occur.”
- b. Procedures. The procedures are delineated in Attachment 1 to this Manual.
6. REFERENCES. References pertaining to each assessment activity are further delineated in Attachment 1 to this Manual.
- a. DOE P 226.1, DEPARTMENT OF ENERGY OVERSIGHT POLICY, dated June 10, 2005.
 - b. DOE O 226.1, IMPLEMENTATION OF DEPARTMENT OF ENERGY OVERSIGHT POLICY, dated September 15, 2005.

- c. DOE G 414.1-1A, MANAGEMENT ASSESSMENT AND INDEPENDENT ASSESSMENT GUIDE, dated May 31, 2001.
- d. DOE O 414.1C, QUALITY ASSURANCE, dated June 17, 2005.
- e. DOE O 420.1B, FACILITY SAFETY, dated December 22, 2005.
- f. DOE O 440.1A, WORKER PROTECTION MANAGEMENT FOR DOE FEDERAL AND CONTRACTOR EMPLOYEES, dated March 27, 1998.
- g. DOE P 450.4, SAFETY MANAGEMENT SYSTEM POLICY, dated October 15, 1996.
- h. DOE G 450.4-1B, INTEGRATED SAFETY MANAGEMENT SYSTEM GUIDE (VOLUME 1 AND 2) FOR USE WITH SAFETY MANAGEMENT SYSTEM POLICIES (DOE P 450.4, DOE P 450.5, AND DOE P 450.6); THE FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES MANUAL; AND THE DOE ACQUISITION REGULATION, dated March 1 2001.
- i. DOE O 470.2B, INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE PROGRAM, dated October 31, 2002.
- j. ORO M 100, ORO MANAGEMENT SYSTEM DESCRIPTION, dated September 9, 2005.
- k. ORO O 410, Chapter III, Change 4, QUALITY ASSURANCE, dated March 21, 2006.
- l. ORO O 450, Chapter V, Change 2, ORO INTEGRATED SAFETY MANAGEMENT PROGRAM, dated June 16, 2005.
- m. *“ORION Usage Guide,”* dated May 2006.
- n. *“Safety Attainment Board Charter”*
- o. EM Policy Memorandum, *“Policy for Content and Implementation of Corrective Action Plans (CAP),”* dated October 4, 2001.
- p. Office of Science *“Manager’s Walkthrough Guide”*
- q. *“Three-Year Assessment Plan Working Group Charter”* (DM ID Number 204546)
- r. *“Three-Year Assessment Plan”*
- s. *“Integrated Assessment Schedules”*
- t. Complex, Corporate-Level ORO CAP example, *“2005 ORO Integrated Safety Management System Review”* (DM ID Number 250421)
- u. Simple ORO CAP example, *“Safety System Oversight Program Implementation Review”* (DM ID Number 224840)

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- v. Memorandum that established the DOE Nuclear Criticality Safety Improvement Initiative, dated November 11, 1999.
 - w. EH CATS “*Data Change Request Form*”
 - x. ORO and NNSA “*Stop Work/Suspend Work*” Responsibility Declaration, dated October 2000.
7. DEFINITIONS. Definitions are delineated in Attachment 1.
8. CONTRACTOR REQUIREMENTS DOCUMENT. None.
9. ATTACHMENTS.
- a. Attachment 1 – U.S. Department of Energy, Oak Ridge Office, ORO Assessment Program Description, dated June 2006.

U.S. Department of Energy Oak Ridge Office



Oak Ridge Office Assessment Program Description

June 2006

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ACRONYMS

AMESH	Assistant Manager for Environment, Safety, and Health
CA	Corrective Action
CAP	Corrective Action Plan
CATS	HQ Corrective Action Tracking System
DARTS	Departmental Audit Report Tracking System
DM	Documents Management
DOE	U.S. Department of Energy
EH	HQ Office of Environment, Safety and Health
EM	Environmental Management
ES&H	Environment, Safety, and Health
FY	Fiscal Year
HQ	Headquarters
IAS	<i>Integrated Assessment Schedule</i>
LL	Lesson(s) Learned
ORO	Oak Ridge Office
ORION	Oak Ridge Issues, Open Items, and Nonconformances System
ORR	Operational Readiness Review
QA	Quality Assurance
SME	Subject Matter Expert
SSA	HQ Office of Security and Safety Performance Assurance
Working Group	Three-Year Assessment Plan Working Group

DEFINITIONS

ASSESSMENT. Also referred to as a “review,” an assessment is the act of reviewing, evaluating, inspecting, testing, checking, performing surveillance, auditing, or otherwise determining and documenting whether items, processes, or systems meet specified requirements and are performing effectively. (Department of Energy [DOE] O 414.1C)

ASSESSMENT CATEGORY. The categories of assessments performed on the Oak Ridge Reservation are independent assessments and management assessments. Independent assessments include external assessments, oversight assessments, and any other review considered to be “independent” of the assessed organization or work activity. Management assessments include functional assessments and self-assessments. (DOE O 414.1C)

ASSESSMENT TEAM LEADER. An individual who ensures that personnel performing technical assessments possess suitable qualifications commensurate with the nature and type of assessment to be conducted. The Assessment Team Leader also ensures proper execution of the approved assessment plan. Assessments are led by qualified person(s), normally using an assessment plan approved by the responsible manager.

ASSESSMENT TYPE. The types of assessments performed on the Oak Ridge Reservation include but are not limited to program assessments, effectiveness reviews, external reviews, assist visits, for-cause reviews, and management/self-assessments.

CORRECTIVE ACTION. A measure taken to rectify and prevent recurrence of conditions that adversely affect quality and mission accomplishments. (DOE G 430.1-1, Appendix A)

DOE OVERSIGHT. “DOE Oversight” encompasses activities performed by DOE organizations to determine whether Federal and contractor programs and management systems, including assurance and oversight systems, are performing effectively and/or complying with DOE requirements. Oversight programs include operational awareness activities, on-site reviews, assessments, self-assessments, performance evaluations, and other activities that involve evaluation of contractor organizations and Federal organizations that manage or operate DOE sites, facilities, or operations.

EFFECTIVENESS REVIEW. A follow up evaluation of the completed corrective actions to verify they are closed, ensure all findings were effectively resolved, and ensure the same or similar findings will not recur. Effectiveness reviews are intended to:

- 1) Determine whether completed corrective actions have or have not effectively resolved and prevented recurrence of the same or similar findings at the performance level;
- 2) Identify additional actions necessary to effectively resolve the findings and prevent recurrence; and
- 3) Collect effectiveness data for subsequent analyses and sharing of lessons learned.

(DOE O 414.1C, Attachment 4)

EVIDENCE Closure documentation that shows that work specified by the action or the issue has been completed and/or has been verified.

EXTENT OF CONDITION REVIEW. An evaluation to determine if an issue has potential or actual applicability to other activities, processes, equipment, programs, facilities, operations or organizations.

The evaluation should focus on the breadth of the problem (e.g. whether it involves a single or multiple facilities) not simply whether the issue exists site wide.

EXTERNAL ASSESSMENT. This type of assessment is performed on the Oak Ridge Office (ORO) and/or its contractors by external entities that have no reporting relationship to ORO (e.g., Office of Inspector General, Headquarters (HQ), and the Office of Personnel Management). (DOE O 470.2B)

FINDINGS. Noncompliances with procedural, contractual or regulatory requirements identified during an assessment. They are used to indicate significant inadequacies or safety issues that warrant a high level of attention on the part of management. Findings require resolution by management through a formal corrective action (CA) process. (DOE O 470.2B)

Findings are categorized as Priority 1, 2, or 3. Other terms that have been used interchangeably depending upon the type of review are Deficiencies, Judgments of Need, and Opportunities for Improvement. However, when those terms are used, a Priority (1, 2, or 3) category must be assigned to each one in the assessment report to enable ORO to track and trend the issues. See PRIORITY 1 FINDING, PRIORITY 2 FINDING, and PRIORITY 3 FINDING in this section for the definitions.

FOR-CAUSE REVIEWS. These reviews are unscheduled assessments in response to any condition, incident, or trend that poses or may pose an imminent danger to people, property, the environment, or the operational integrity of a facility within the ORO complex or as requested by the ORO Manager, line management, or other authorized program personnel. The chartering official appoints the Assessment Team Leader, as a minimum, and may appoint the members of the team. (ORO O 450, Chapter V)

FUNCTIONAL ASSESSMENTS. These assessments are conducted of the contractor's management/functional systems (e.g., business systems). Management/functional assessments may be performed by the support organization that has cognizance of that service function as defined in ORO M 100, *ORO Management System Description*.

INDEPENDENT ASSESSMENTS. These reviews are conducted of ORO line and support organizations and are initiated by the assessing organization or by the ORO Manager, and they are coordinated with the cognizant ORO organization. Independent assessments are scheduled and conducted to measure item and service quality, to measure the adequacy of work performance, and to promote improvement. Persons performing independent assessments should have sufficient authority and freedom from the line management to carry out their responsibilities. Persons conducting independent assessments should be technically qualified and knowledgeable in the areas assessed. "Freedom from the line management organization" means that the reviewers are not directly responsible for the work activity being assessed.

Through defined assessment methodologies and techniques, which include the review and evaluation of organization-specific management assessments, independent assessments ensure that the following goals are achieved by performing independent assessments:

- Problems preventing ORO from meeting its established goals, including potential or fundamental causes, are identified.
- Actions are taken to correct identified problems.
- Actions to prevent recurrence are identified and documented.

- Lessons learned (LL) are applied, where applicable.
- Actions are taken to improve the condition(s) causing the problem.
(DOE O 414.1C, DOE O 470.2B; ORO O 450, Chapter V)

INDEPENDENT OVERSIGHT. Independent oversight is the objective evaluation of the Department's performance without being subject to or influenced by the Department's policy or line management organizations. Within DOE, the sole responsibility for independent oversight resides with the Office of Independent Oversight and Performance Assurance, reporting directly to the Office of the Secretary of Energy. (DOE O 470.2B)

INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE APPRAISALS. The HQ Office of Independent Oversight and Performance Assurance has the responsibility for independent oversight within DOE reporting directly to the Secretary. Appraisals (e.g., inspections, safety management evaluations, special reviews, special studies, and follow-up reviews) are used to evaluate the status of safeguards and security; cyber security; emergency management; business operations; and environment, safety, and health (ES&H) at DOE-owned or DOE-leased sites or facilities or for DOE operations or organizations. (DOE O 470.2B)

INTEGRATED ASSESSMENT SCHEDULE. An annual schedule used by ORO management to gain an overview of ORO assessment activity. The *Annual Integrated Assessment Schedule* flows from the *Three-Year Assessment Plan*, is the detailed list of upcoming assessments for the fiscal year (FY), and provides more detail than the plan (i.e., the organization owning the assessment, subject, assessment type, assessment category, team lead, driver, and review dates). It is comprised of those assessments that meet the criteria established by senior management and assist in compliance with Criteria 9 and 10 of ORO O 414.1C, *Quality Assurance*. (ORO M 100)

MANAGEMENT ASSESSMENTS. These assessments encompass those activities by which ORO organizations collect and evaluate information on their own performance, as well as the performance of their contractors. These assessments are used to assess the management processes and to identify and correct problems that hinder the organization from achieving its objectives. These assessments focus on identifying management problems that prevent effective implementation of ES&H and quality requirements. This process not only assists ORO in achieving its objectives but also allows ORO to evaluate customer and employee perceptions relative to the following key issues:

- The organization's mission and strategic objectives.
- The employees' role in the organization.
- Customers' expectations and the degree to which those expectations are being met.
- Opportunities for improving quality and cost-effectiveness.
- Recognizing and enhancing human resources capabilities.
(DOE O 414.1C)

OPERATIONAL AWARENESS. Activities performed by ORO line management by conducting routine day-to-day monitoring of work performance through facility tours/walkthroughs, work observation, document reviews, meeting attendance and participation, and ongoing interaction with contractor workers, support staff, and management. Walkthroughs, as well as any follow-up, should be documented.

(DOE O 226.1 and ORO O 450, Chapter V)

ORION. ORION stands for Oak Ridge Issues, Open Items, and Nonconformances and is designed to be the enterprise safety management system for DOE-ORO. This system tracks assessments, reports, corrective action plans, issues, actions, walkthroughs, and lessons learned. (ORO M 100)

OVERSIGHT. Activities performed by DOE organizations to determine whether Federal and contractor programs and management systems, including assurance and oversight systems are performing effectively and/or complying with DOE requirements. Oversight programs include operational awareness activities, onsite reviews, assessments, self-assessments, performance evaluations, and other activities that involve evaluation of contractor organizations and Federal organizations that manage or operate DOE sites, facilities, or operations. (DOE O 226.1)

PERFORMANCE INDICATORS. Data that is collected to help line management identify adverse trends and promote improvements. (DOE P 226.1)

PRIORITY 1 FINDING. Findings of major significance (e.g., imminent threats to worker protection, public safety, or environmental quality or the presence of a major risk or vulnerability). Such findings can be a systematic breakdown in, or a failure to implement, a major work control element necessary for safety, quality, or the environment or a significant noncompliance with requirements.

Priority 1 findings should have management buy-in and a rapid contractor CA, with compensatory measures during the interim. All ORO senior managers will be informed of the Priority 1 finding with a one-time electronic mail message from Oak Ridge Issues, Open Items, and Nonconformances System (ORION), when it is initially entered into the system. The extent of the condition should be considered in development of the resolution. ORO or the contractor should also consider developing a LL based on the finding and its resolution. (Assessment Improvement Group and Safety Advocates)

PRIORITY 2 FINDING. Findings that represent nonconformances, deviations, and/or deficiencies in the implementation of requirements, procedures, standards, and/or regulatory requirements. Priority 2 findings should require CAs. (Assessment Improvement Group and Safety Advocates)

PRIORITY 3 FINDING. Observations that the assessor deems to be an isolated, minor, quick fix or nonadherence to best practices/internal procedures/accepted standards. In ORION, Priority 3 findings always default to “trend only” status for existing and new walkthroughs and assessments. Actions cannot be assigned to Priority 3 findings in ORION. (Assessment Improvement Group and Safety Advocates)

PROFICIENCY. A performance item that exhibits a level of performance deemed worthy of communicating to other ORO organizations since it is innovative or may be indicative of the highest level of excellence. (Formerly-used terms that meant essentially the same thing were Noteworthy Practice and Strength. Use of these terms is discouraged unless the item is also identified as a Proficiency in the assessment report.) In ORION, the status of a Proficiency defaults to “Closed.” (Assessment Improvement Group and Safety Advocates)

ROOT CAUSE. The causal factor(s) that, if corrected, would prevent recurrence of the accident. (DOE G 225.1A-1)

ROOT CAUSE ANALYSIS. Any methodology that identifies the causal factors that, if corrected, would prevent recurrence of the accident. (DOE G 225.1A-1). Root cause analysis is any method used to identify the root cause(s) of performance problems or adverse trends and associated corrective action. (INPO 90-004 Good Practice OE-907). Refer to Appendix E of this Manual for guidance on performing root cause analysis.

SAFETY ADVOCACY GROUP. The Safety Advocates are part of the core members of the Safety Attainment Board. The mission of the Safety Advocates and the Safety Attainment Board is to develop ORO's corporate safety strategy, ensure appropriate mechanisms are in place, and provide analysis of safety data. The Directors of the Technical Support and Assessment Divisions in the Assistant Manager for Science, Assistant Manager for Environmental Management, and Assistant Manager for Environment, Safety, and Health, as well as representatives from the Assistant Manager for Nuclear Fuel Supply comprise the Safety Advocacy Group. (ORO M 100 and *Safety Attainment Board Charter*)

SAFETY ATTAINMENT BOARD. The Safety Attainment Board is comprised of the ORO Manager, the Deputy Manager for Laboratory Operations, the Chief Operating Officer, and the Safety Advocacy Group comprised of the Directors of the Technical Support and Assessment Divisions in AMS, AMEM, and AMESH, as well as other selected Assistant Managers. The Board is responsible for developing ORO's corporate safety strategy, ensuring appropriate assessment mechanisms are in place, and providing analyses of safety data. (ORO M 100 and *Safety Attainment Board Charter*)

SELF-ASSESSMENT. These reviews are conducted by an organization of itself to ensure effective implementation of requirements. (DOE O 226.1)

THREE-YEAR ASSESSMENT PLAN. This plan is a high-level scoping document that identifies the assessment commitments for the upcoming three FYs to ensure all required assessments are performed. The *Three-Year Assessment Plan* is evaluated at least annually, prior to the start of the FY to ensure that it is up-to-date. (Three-Year Plan Working Group Charter and ORO M 100)

THREE YEAR PLAN WORKING GROUP. A working group composed of representatives from all ORO organizations and chartered by the ORO Manager to develop the *Three-Year Assessment Plan* and assist in development of the IAS. (*Three-Year Plan Working Group Charter*)

VERIFICATION OF ACTION CLOSURE. Issues management should include "ensuring that corrective actions are complete." (DOE O 226.1, Contractor Requirements Document)

VALIDATION OF EFFECTIVENESS. Issues management should include "ensuring that corrective actions are effectively implemented and accomplish their intended purposes, using a graded approach based on risk." (DOE O 226.1, Contractor Requirements Document)

WALKTHROUGH. The act of physically observing a contractor area/facility or activity or facility to verify that safe working conditions exist and applicable requirements are being followed during work implementation. (Assessment Improvement Group and Safety Advocates)

WALKTHROUGH SURVEILLANCE PROGRAM. Periodic inspection visits or tours by management and senior staff of facilities and operations. (DOE O 226.1)

1.0 PURPOSE.

This U.S. Department of Energy (DOE) Oak Ridge Office (ORO) Manual provides the responsibilities, requirements, and procedures for implementing the ORO Assessment Program. The assessment elements covered in this document are as follows:

- ORO *Three Year Assessment Plan*.
- ORO *Integrated Assessment Schedule (IAS)*.
- Assessments/reviews.
- Corrective action plans (CAPs).
- Walkthroughs.
- Performance indicators and trending.
- Feedback and improvement of the ORO Assessment Program.

2.0 RESPONSIBILITIES.

A. Manager, ORO.

- (1) Ensures that appropriate processes are in place to oversee effective execution of mission activities and implementation of requirements.
- (2) Ensures that line management develops effective, documented programs for conducting oversight assessments of their contractors' programs.
- (3) Ensures that management assessments are conducted of ORO activities.
- (4) For ORO-wide assessments requested by the ORO Manager, ensures the development of CAPs consistent with Departmental expectations and this Manual.
- (5) Controls and approves changes to CAPs and individual due dates where approval authority resides with ORO. Approves the CAPs within 60 calendar days of issuance of the final report.
- (6) For CAPs that require Headquarters (HQ) approval, submits the CAPs to the appropriate DOE HQ offices for approval or approves the CAPs if approval has been delegated.
- (7) Approves and issues the ORO IAS prior to the start of each FY and any changes, which may result in quarterly updates, as required.
- (8) Requests independent assessments to be conducted of ORO and contractor activities, as necessary, and ensures they are included on the IAS.
- (9) Approves the charter for the Three-Year Assessment Plan Working Group (Working Group).
- (10) Approves and issues the *Three-Year Assessment Plan* prior to the start of the FY and the annual updates, as required.

(11) Sets expectations for ORO line managers Walkthrough Surveillance Program.

B. Organizations (Assistant Manager for Science; Assistant Manager for Environmental Management; Assistant Manager for Administration; Assistant Manager for Nuclear Fuel Supply; Assistant Manager for Environment, Safety and Health [AMESH]; Assistant Manager for Financial Management; Assistant Manager for Security and Emergency Management; Office of Chief Counsel; Office of Partnerships and Program Development; Public Affairs Office; and Diversity Programs and Employee Concerns Manager).

- (1) Ensure that an organizational assessment plan is developed to identify assessment commitments for the upcoming three FYs to ensure that required assessments are performed. The organization's assessment plan information shall be submitted to the ORO Manager to be included in the *Three-Year Assessment Plan*. The *Three-Year Assessment Plan* is updated, as required, prior to the start of the FY.
- (2) Ensures unfettered access to information and facilities in order to implement an effective oversight program consistent with applicable laws and requirements.
- (3) Ensure required assessments for their organization are captured in the *Three-Year Assessment Plan*.
- (4) Review and concur on annual and quarterly (if required) updates to the *Three-Year Assessment Plan*.
- (5) Assign an organizational representative to participate on the Three-Year Plan Working Group. The representative should be empowered to speak for their organization.
- (6) Ensure that the organizational assessment schedule is developed to identify planned assessments for the FY. Formal assessments (including external assessments) that are low-volume, high-threshold shall be submitted to the ORO Manager to be included in the ORO IAS, which is updated quarterly, as required.
- (7) Ensure the qualifications and independence of assessment team members who perform independent assessments.
- (8) Ensure appropriate assessments are captured in the IAS, and approve their organizations' IAS.
- (9) Ensure IAS assessments are completed as scheduled or obtain the ORO Manager's approval of the schedule changes.
- (10) Ensure the IAS is consistent with the *Three-Year Assessment Plan*.
- (11) Ensure the effectiveness of Federal and contractor programs (as applicable) and management systems, including assurance and oversight systems.
- (12) Ensure their organization's implementation of requirements via a documented management assessment (self-assessment) program.

- (13) Ensure a management assessment is conducted of their organization, at least annually, to measure the effectiveness of the management systems and processes and the ability of the organization to meet its objectives.
- (14) Maintain qualified staff to conduct assessments, as applicable.
- (15) Ensure all assessments (including management, independent, and IAS) are entered and kept current in the Oak Ridge Issues, Open Items, Nonconformances System (ORION).
- (16) Ensure that key assessment information (i.e., subject, type, category, team leader, driver, start and end dates, status, final report, etc.), findings, corrective actions (CAs), and proficiencies are documented and entered into ORION for all assessments in the appropriate fields.

NOTE: Corrective Actions tracked in HQ databases and/or contractor tracking system are not intended to be tracked in ORION.

- (17) Ensure that key walkthrough information (e.g., organization performing the walkthrough, assessor(s), site, contractor, facility, project, and functional areas covered), and findings are documented and entered into ORION in the appropriate fields.
- (18) For organizations overseeing contractors, ensure that oversight programs and processes are in place to assess contractor performance.
- (19) For organizations overseeing contractors, ensures that operational awareness activities and a Walkthrough Surveillance Program are implemented.
- (20) Ensure findings (Priority 1, Priority 2, or Priority 3) or proficiencies are appropriately categorized in the assessment report and prior to being entered into ORION.
- (21) Perform root cause analysis on recurring or significant findings, as applicable.
- (22) Ensure root cause analysis is performed for Priority 1 findings.
- (23) Ensure validation is performed for closure of Priority 1 findings.
- (24) Ensure that the reports for all assessments are loaded into ORION.
- (25) Ensure that CAs for Priority 1 and Priority 2 findings are tracked to closure, that findings (Priority 1, Priority 2, Priority 3) are trended, and performance measures are established to support continuous improvement.
- (26) Ensure that CAs for Priority 1 and Priority 2 findings are approved, prioritized, and completed in a timely manner consistent with their significance.
- (27) Ensure apparent causes are assigned in ORION for Priority 1 and Priority 2 findings.

- (28) Ensure verifiable evidence is attached or referenced in ORION for closure of findings Priority 1 and Priority 2 and CAs.
- (29) Ensure Federal staffs prepare and submit CAPs consistent with this Manual.
- (30) Ensure CAPs are developed for assessments that they “own” within 30 calendar days of receipt of the final report and that these are approved within 60 calendar days of receipt of the report.
- (31) Control and approve changes to CAPs and individual due dates for reviews that they own.
- (32) Ensure that Federal staff prepare, as applicable, and submit CAPs consistent with Departmental expectations.
- (33) Ensure that completion of CAs and resolution of issues are implemented as stated in the CAP and that changes to CA commitments and to CAPs are approved by the member of management that approved the initial CA or CAP.
- (34) Perform effectiveness reviews of CAP implementation, as appropriate. Effectiveness reviews are required for findings entered in the HQ Corrective Action Tracking System (CATS).
- (35) Identify any applicable lessons learned (LL) as a result of conducting assessments and walkthroughs.
- (36) Establish formal mechanisms and processes for collecting both qualitative and quantitative information on performance and use this information to improve performance.

C. AMESH

- (1) Manages the ORO Assessment Program for the ORO Manager by developing ORO command media, leading/coordinating the development of the *Three-Year Assessment Plan* and the IAS, administering ORION, and performing analysis of ORO assessment information.
- (2) Supports the ORO Manager and the line organizations in conducting assessments and walkthroughs, as requested.
- (3) Manages the execution of Environment, Safety and Health (ES&H) assessments of ORO contractors and of ORO line and support organizations, as requested.
- (4) Coordinates the ORO Lessons Learned and Operating Experience Program activities for ORO.
- (5) Conducts performance analysis activities in order to provide feedback to the ORO Manager and the line organizations for tracking and trending ES&H and quality issues, occurrences, and CAs associated with findings identified in internal and external assessments of ORO activities.

- (6) Provides an ORO system and tools for planning, scheduling, conducting, and tracking ORO assessments, walkthroughs, findings, and CAs.
- (7) Serves as the point of contact for the DOE Office of Environment, Safety and Health (EH) Corrective Action Management Program Team.
- (8) Assigns an organizational representative who leads the annual ORO effort to develop the *Three-Year Assessment Plan* and who also serves as the Working Group Chair.
- (9) Provides the template for the *Three-Year Assessment Plan* to the Working Group.
- (10) Ensures that the final updated *Three-Year Assessment Plan* is consolidated and provided to the ORO Manager for approval.
- (11) Ensures the IAS is consolidated from ORION and provided to the ORO Manager for approval.
- (12) Prepares a monthly report for ORO senior management on the status of CAs.
- (13) Reports on progress and changes to the approved IAS as part of the Data Display Capability (War Room Concept) senior staff discussions.
- (14) Ensures a one-time notification is sent to the Assistant Managers and Safety Advocates when a Priority 1 finding is entered into ORION (enforced by the system).

D. Working Group.

- (1) Implements the *Three-Year Assessment Plan Working Group Charter* (Document Management [DM] 204546).
- (2) Collects assessment requirements from their respective organizations.
- (3) Ensures all assessments are documented consistently across the organizations in the template provided by the Working Group Chair.
- (4) Annually evaluates planned assessment schedules from each organization to:
 - Check for consistency with the *Three-Year Assessment Plan*.
 - Assist their organization in determining which assessments will be included in the IAS. The Working Group members evaluate their respective organizations' draft IAS to ensure that it is consistent with the *Three-Year Assessment Plan*.
 - Make recommendations with respect to assessment topics, assessment gaps, and independent assessments.
 - Identify opportunities for ORO-wide consolidation to minimize redundancy, enhance assessment quality, and optimize subject matter expert (SME) resource use.
- (5) Annually develops a draft update to the *Three-Year Assessment Plan*.
- (6) Submits the draft update to the ORO Senior Board for comments.

- (7) Dispositions comments received on the *Three-Year Assessment Plan*.
- (8) Prepares the final updated *Three-Year Assessment Plan* to be submitted to the ORO Manager for approval.
- (9) Develops LL on the process and recommend improvements to ORO management.
- (10) Keeps track of the status of ORO's adherence to the final updated *Three-Year Assessment Plan* and update the plan as needed.

E. Management Review Committee (Composed of the Safety Advocates).

- (1) Meets on a periodic basis (generally quarterly) with Trending Review Team to discuss trends from assessment, walkthrough, and event-driven data and may adjust trending code assignments to improve consistency and usability of data.

F. Trending Review Team (Technical Staff assigned by Safety Advocates).

- (1) Meets on a periodic basis (generally monthly) to evaluate and discuss trends from assessment, walkthrough, and event-driven data.
- (2) Reports results of trending analysis to Safety Advocates.
- (3) Adjusts ORION trending code assignments, as appropriate, to improve consistency and usability of data for trending.
- (4) Advises ORION users on how to input data to improve consistency and usability for trending.

3.0 ORO THREE-YEAR ASSESSMENT PLAN.

A. General.

The *Three-Year Assessment Plan* is a high-level scoping document that identifies the assessment commitments for the upcoming three FYs to ensure all required assessments are performed. The Three Year Plan Working Group is composed of representatives from all ORO organizations and is chartered by the ORO Manager to develop the *Three-Year Assessment Plan* and assist in development of the IAS.

B. Development of the Three-Year Assessment Plan.

- (1) The *Three-Year Assessment Plan* document is updated annually, prior to the start of the FY.
- (2) The *Three-Year Assessment Plan* is implemented through organizational assessments contained on the organization's assessment calendar, as well as those assessments contained on the ORO IAS.

- (3) Initial updates to the *Three-Year Assessment Plan* for the FY are initiated with a memorandum from the ORO Manager.
- (4) The Working Group Chair provides the Working Group with an electronic template and instructions on how to complete the template.
- (5) Once each organization has populated the template, the *Three-Year Assessment Plan* is formatted by the AMESH organization. The plan is sent to the members of the Working Group for approval. Once the Working Group agrees on the plan, the Working Group Chair prepares the transmittal package to be approved by the ORO Manager.

4.0 ORO INTEGRATED ASSESSMENT SCHEDULE.

A. General.

The ORO IAS, along with other organizational assessments captured on each organization's schedule, provides for implementation of the approved *Three-Year Assessment Plan*. The IAS was established to provide emphasis on those assessments meeting the criteria set by ORO senior managers. The assessments included on the IAS are low-volume, high-threshold assessments and include but are not limited to those assessments that are:

- Sensitive to mission, organizational, or legal vulnerabilities.
- Special reviews that are mandated by an internal or external entity.
- Independent assessments.
- Broad-scope reviews that provide information regarding overall program performance effectiveness.
- External reviews.

B. Development of the ORO IAS.

- (1) The IAS is developed from the organizational input entered into ORION. The *ORION Usage Guide* provides instructions on how to enter assessments, including identifying the required and optional data fields and marking an assessment as part of the IAS. It can be accessed using the "About" button in ORION. ORION is available at the following internet address: <http://www-internal.oro.doe.gov/esq/ORION3/index2.htm>.
- (2) ORO personnel are informed of the date that all input is expected to be entered into ORION for the IAS. After the ORO organizations have populated ORION with their assessments, the AMESH prints the IAS and sends it to the ORO Manager for approval.
- (3) Any changes to the approved IAS are discussed with and approved by the ORO Manager, and the justification for the Change is documented in ORION.
- (4) The AMESH reports on changes to the approved IAS as part of the Data Display Capability (War Room Concept) senior staff discussions.

5.0 ASSESSMENTS/REVIEWS.

A. General.

Assessments are conducted to ensure effective and efficient programs and operations and to identify and correct problems that hinder the organization from achieving its objectives. An assessment (also called a “review”) is the act of reviewing, evaluating, inspecting, testing, checking, performing surveillance, auditing, or otherwise determining and documenting whether items, processes, or systems meet specified requirements and are performing effectively. Appendix H provides a process summary diagram for the assessment process. Process inputs and outputs are shown in Appendix I.

There are two categories of assessments: independent and management. Independent assessments include external assessments, oversight assessments, business operations, and any other review considered to be “independent” of the assessed organization and the work being performed. Management assessments include self-assessments. There are several types of assessments, including but not limited to program assessments, effectiveness reviews, external reviews, assist visits, for-cause reviews, and managers (M-1) independent assessments.

DOE HQ conducts independent oversight assessments of ORO and its contractors. ORO line organizations conduct local oversight assessments to ensure that contractors are meeting the intent and requirements of their contracts with DOE. Requirements for contractor oversight are contained in DOE P 226.1, DEPARTMENT OF ENERGY OVERSIGHT POLICY, and DOE O 226.1, IMPLEMENTATION OF DEPARTMENT OF ENERGY OVERSIGHT POLICY.

Management/functional assessments are conducted by ORO support organizations that have cognizance of that service function as defined in ORO M 100, ORO MANAGEMENT SYSTEM DESCRIPTION, to ensure contractual requirements are being met. The line organizations and support organizations are also responsible for conducting self-assessments of themselves.

The ORO assessment process involves five phases:

- (1) Assessment planning and scheduling.
- (2) Conduct of assessments.
- (3) Documentation and communication of assessment results.
- (4) Deficiency tracking to closure.
- (5) Continuous improvement.

The assessed ORO organization (for Federal assessments) or line management (for assessments of contractors) ensures that the final assessment results which are not tracked by a formally recognized HQ CA tracking system, such as CATS or the Departmental Audit Report Tracking System (DARTS), are captured in ORION and tracked to closure.

B. Training and Qualification of Team Leaders and Assessors.

Staff selected to be Assessment Team Leaders or Assessors for specific assessments should have experience or training commensurate with the scope, complexity, or special nature of the

activities to be assessed. For independent assessments, the Assessment Team Leader and Assessors should be independent of any direct responsibility for the performance of the activities which they assess. The Assessment Team Leader is appointed by the responsible manager with sufficient time in advance of the assessment to ensure proper coordination and planning.

Selection of prospective Assessment Team Leaders and Assessors should include verifiable evidence that education and experience have been accumulated as outlined below:

- Education – A bachelor’s degree or higher level degree (or equivalent education and experience) from an accredited institution in engineering, physical sciences, mathematics, quality assurance (QA), environmental or business management, or accounting, as pertinent for the assessment.
- Experience – Technical experience in engineering, manufacturing, construction, operation, maintenance, research, safety, management, environmental, QA, accounting, safeguards and security, or assessment/auditing, as pertinent to the assessment.
- Other Credentials of Professional Competence (when appropriate) – Certification of competency in engineering, science, accounting, or QA specialties issued and approved by a state agency or national professional or technical society.
- Communication Skills – The capability to communicate effectively both in writing and verbally.
- Training – Training in assessment/auditing techniques/methods.
- Leadership Skills and Experience – Demonstrated proficiency in leading assessments.

NOTE: The requesting manager may consider other performance factors applicable to conducting assessments that may not be explicitly called out in this guidance. Examples of these factors are interpersonal skills, leadership, sound judgment, maturity, analytical ability, tenacity, past performance, and QA or accident investigation training courses. The requesting manager may waive specified education or experience requirement with documented justification, such as years of work experience in the subject area or other credentials as stated above.

Assessment Team Leaders perform the following:

- (1) Ensure that personnel performing technical assessments possess suitable qualifications commensurate with the nature and type of assessment to be conducted.
- (2) Ensure that assessment personnel are briefed on the Assessment Plan, if applicable, as well as the contents of this Manual prior to commencing the assessment activities.

NOTE: The requesting manager relies on the training and experience of assessment personnel in the specific areas being assessed as the basis for ensuring suitable qualification. Assessment personnel with little knowledge and experience in the subject area may be teamed with or obtain guidance from more experienced personnel. Assessment guidance contained in DOE Directives/Standards, ORO Directives, contractor operating procedures, or other requirements documentation should be used, as necessary, depending on the individual’s experience level.

- (3) Plan the overall assessment. The Assessment Team Leaders normally perform the following:
 - (a) Obtain input and assistance from other organizations.
 - (b) Assemble an assessment team.
 - (c) Develop an assessment plan and obtains concurrence from the responsible manager. Appendix A provides items to be considered when determining program elements to be assessed. An example of a corporate-level ORO Review Plan for the ORO Integrated Safety Management System Review in 2005 can be viewed in ORION at REV-N3B-6/24/2005-33454. An example of a focused review i.e. *Transportation Focus Group Review Plan* can be viewed in DM #191958. An example of some review plans used in FM can be viewed in DM #292972.
 - (d) Identify the appropriate point of contact in the organization being assessed.
 - (e) Make arrangements with the requestor and points of contacts for the organization to be assessed to confirm the planned assessment dates and to ensure that proper personnel will be available. Make arrangements for offices and computer equipment/printers for the team, meeting and interview rooms, office supplies, and administrative support.
 - (f) Determine the requirements for entering the necessary facilities (e.g., radiological, training, and security), and ensure that all access requirements are met prior to the start of the fieldwork.
 - (g) Obtain input from any associated SMEs on previously observed weaknesses and areas of information or concern.
 - (h) Determine the probable length of time required for the assessment fieldwork.
 - (i) Develop lines of inquiry from defined assessment criteria that may exist in DOE or ORO Directives and additional sources.
 - (j) Ensure that the scope and schedule of the assessment are communicated to assessment team members and others, as appropriate, prior to conducting the assessment. The appropriate method for communicating this information (e.g., meeting, writing, telephoning) is at the discretion of the Assessment Team Leader.
 - (k) Work with the assessed organization to ensure the assessment status is documented in ORION.
 - (l) Manage the conduct of the assessment. In performing assessments, assessment personnel do not replace or substitute for line management. Assessment Team Leaders should conduct themselves in a manner that does not permit the appearance of absolving the assessed organization from compliance with established programs or procedures.

- (m) Keep the appropriate DOE line and support organization management informed of the ongoing assessment results.

Assessment Team Members perform the following:

- (1) Interface with operations personnel while conducting assessments to understand the system, program, or facility being assessed as official representatives of DOE, exercising authority consistent with DOE's program and management guidance and in a manner that is objective, factual, formal, and nonconfrontational. Special care should be taken to ensure that field observation activities do not interfere with the normal conduct of operations or alter the performance of these operations.
- (2) Do not operate facility equipment or instrumentation under any circumstances. In addition, all assessment personnel must comply with appropriate facility/site safety requirements. An overview of the Assessment Team Members' duties is provided in Appendix B.
- (3) Inspect and observe, collect facts, assess the facility against requirements and performance in accordance with the Assessment Plan, and document the identified results as proficiencies and/or findings.

C. Reporting Assessment Results.

- (1) Assessment Team Leaders ensure that assessment results are documented in a timely manner in an assessment report (i.e., produce a draft report within two weeks of completing the review and produce a final report within 30 calendar days of the review). An overview of standard report contents is provided in Appendix C.
- (2) Assessment Team Leaders ensure that immediate notification is provided to the cognizant DOE manager and the contractor's senior management if operating requirements and required actions are not within limits, if a significant occupational safety and health regulation noncompliance is identified, or if unmitigated hazards are identified.
- (3) The ES&H- and quality-related findings should express the specific nature of the condition in a clear, concise, direct manner that will allow the assessed organization to translate them into CAs. As appropriate, ES&H- and quality-related findings are tied to nonconformance with the relevant ES&H or quality requirements in DOE/ORO Directives and/or contractual requirements (e.g., specific DOE Orders, regulatory requirements, DOE Acquisition Regulation provisions, or DOE P 450.4, SAFETY MANAGEMENT SYSTEM POLICY).
- (4) Each assessment result that is to be tracked by ORO must be identified or cross-referenced in the assessment report as a Priority 1, 2, or 3 finding or as a proficiency. The Assessment Team assigns a Priority 1, 2, or 3 to all findings identified in the assessment report, regardless of the type of assessment (e.g., Operational Readiness Review [ORR], readiness assessment, program review, implementation review, accident investigation, etc.).

- (5) The Assessment Team should verify the factual accuracy of the identified findings with representatives of the assessed organization(s).
- (6) The Assessment Team Leader should provide the formal assessment report simultaneously to the Federal manager of the assessed organization and the Contracting Officer's Representative, as appropriate.

D. Requirements for Findings Priority 1, Findings Priority 2, and Findings Priority 3.

(1) The following is required for Findings Priority 1:

- Identification of requirement(s) not met.
- Receive management acknowledgement prior to entry in ORION.
- A one-time notification is sent to the Assistant Managers and Safety Advocates when a new P1 finding is initially saved in ORION.
- Require a causal code (apparent cause) to be assigned in ORION.
- Identification of functional area in ORION to support trending.
- Root cause analysis.
- Evidence is required for closure of corrective actions.
- Verification of closure required for corrective actions.
- Validation of closure required for finding.
- Effectiveness review.

(2) The following is required for Findings Priority 2:

- Identification of requirement(s) not met.
- Receive management acknowledgement prior to entry in ORION.
- Require a causal code (apparent cause) to be assigned in ORION.
- Identification of functional area in ORION to support trending.
- Evidence is required for closure of corrective actions.
- A management decision on whether to apply effectiveness reviews depending upon severity and extent.

(3) The following is required for Findings Priority 3:

- All P3 findings will be trend only.
- Identification of functional area in ORION to support trending.
- No actions can be assigned to P3 findings.

E. Tracking Assessment Results to Closure and Trending.

- (1) The assessed ORO organization (for Federal assessments) or line management (for assessments of contractors) ensures that the final assessment results which are not tracked by a formally recognized HQ CA tracking system, such as CATS or the Departmental Audit Report Tracking System (DARTS), are captured in ORION and tracked to closure.

ORION is the formal tracking system used by ORO. The following ORION screens should be completed:

- ASSESSMENT/REVIEW DATA ENTRY Screen – This screen is the record of the assessment (when it was performed, the team members, the scope, etc.) The assessment plan file (Word or pdf) is attached to this screen.
 - ISSUE DATA ENTRY Screen – For the purposes of this Manual, issues are equivalent to findings. The ISSUE DATA ENTRY screen should be completed for each finding and proficiency.
 - ACTION DATA ENTRY Screen – One or more actions are entered to identify what has to be done (including the deliverables) to close a finding.
- (2) Line management tracks findings against the contractor to closure. Line management is responsible for ensuring that findings against the contractor are closed and that objective evidence of closure is maintained (either by the contractor or by the line organization). Line management is responsible for trending contractor findings (or obtaining trending information from the contractor), as necessary.
- (3) For assessments of Federal organizations, the Assistant Manager or Division Director of the assessed organization tracks the assessment findings to closure in ORION. The Assistant Manager or Division Director is responsible for ensuring that CAs are developed to address the findings against the ORO organization and that objective evidence of closure is maintained. All ORO organizations are responsible for trending the findings against their organizations.

The *ORION Usage Guide* is available from the main screen of ORION by using the “help” drop down menu and selecting user documentation. This guide is a pdf and can answer questions about what to enter in the required and optional fields. The user must have edit privileges to enter/Change data in ORION. ORION is available at the following internet address:

<http://www-internal.oro.doe.gov/esq/ORION3/index2.htm>.

F. Assessment Records.

The following hard copy records generated by an assessment, as applicable, should be maintained:

- Assessment Team Leader qualification/certification documentation.
- Assessment Team Member qualification documentation.
- Written request for the assessment (electronic mail message or memorandum).
- Assessment plan.
- Assessment report.
- Original field notes, as appropriate.
- Other documents and evidence, as appropriate.

6.0 CORRECTIVE ACTION PLANS.

A. General.

The information in this section is a synopsis of information included in DOE O 414.1C, QUALITY ASSURANCE, Attachment 4, "*Corrective Action Management Program.*" CAPs are usually developed for formal assessments that identify Priority 1 or 2 findings, but not all assessment reports require development of a CAP. It depends on the quantity and severity of the findings and the type of assessment as to whether ORO management will decide to develop a CAP. This section describes development of a formal, detailed CAP. An example of a complex, corporate-level ORO CAP for the ORO Integrated Safety Management System Review in 2005 can be viewed at DM 250421. However, CAP for one or two findings can be a simple, one-page document if it includes the necessary information. A simple CAP for a Safety System Oversight Program Implementation Review can be viewed at DM 224840.

B. CAP Development and Approval.

- (1) The ORO line manager or support manager prepares a single, comprehensive CAP to address the findings contained in a single report.
- (2) The CAP should describe the basis for the disposition of each identified finding. The ORO line manager may determine that no action will be taken in response to the finding. In this case, the CAP must describe the basis for this determination and if the finding involves safety, describe how safety will be maintained.
- (3) A simple CAP for a few findings from an assessment of one organization can be a single page and can be approved by the appropriate Assistant Manager. A CAP for an assessment that covered multiple organizations and includes five or more findings should follow the sample CAP content guidance included in Appendix D and be approved by the ORO Manager.
- (4) In general, a CAP should include the following information.
 - (a) State how the findings will be tracked (i.e., ORION, CATS, DARTS, etc.).
 - (b) List each finding separately.
 - (c) For each finding, provide the following information:
 - Clear and concise description of the reported finding.
 - Description of the corrective action(s) to be used to resolve the finding.
 - Description of the finding evaluation, as applicable, to include discussion of causal factor identified. This may include background, facts, evaluation activities, and causal analysis, including root cause analysis. Refer to Appendix E for more information on performing root cause analysis. Responsible manager and individual for each action.
 - Deliverable(s) for each action (e.g., memorandum, revised procedure, presentation to the Safety Attainment Board for approval, etc.).
 - Planned completion date for each action.

- The mechanisms for independent verification of closure of each action and validation of issue resolution, if applicable.

NOTE: Typically, several actions may be linked to one finding, but an action should only be linked to one finding in order to facilitate tracking it to closure.

- (d) If multiple organizations will participate on an action, line management should determine who will be the lead for the action (s).

NOTE: The ORO approving authority may require a causal analysis to be performed and the results included in the CAP. For CAPs to be submitted to HQ, a thorough analysis of the underlying causal factors is required to determine whether systemic weaknesses exist.

- (e) State whether an effectiveness review will be performed when the CAP is closed to determine if the CAs resolved the findings. Refer to Appendix G for more information on performing effectiveness reviews.
- (f) Describe how the CAP and associated corrective actions will be tracked and reported to completion.
- (g) Describe the process for approving changes or extensions to corrective action completion dates, effectiveness reviews, or other activities listed in the CAP after approval.
- (h) Get the CAP formally approved by the appropriate member of ORO management or, if necessary, by HQ.
- (i) Prepare CAPs within 30 calendar days after the report is complete, and approve CAPs within 60 calendar days after the report is complete.
- (j) Ensure that the issues and CA information from the approved CAP are entered into ORION.

The *ORION Usage Guide* is available from the main screen of ORION by using the “help” drop down menu and selecting user documentation. This guide is a pdf and can answer questions about what to enter in the required and optional fields. The user must have edit privileges to enter/Change data in ORION. ORION is available at the following internet address:

<http://www-internal.oro.doe.gov/esq/ORION3/index2.htm>.

C. CAPs for Headquarters Reviews and Type A Accident Investigations

CAPs developed in response to findings identified by the HQ Office of Security and Safety Performance Assurance (SSA) must conform to the process and requirements contained in DOE O 470.2B, INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE PROGRAM, dated October 31, 2002. Additional guidance is provided in Volume 2, Appendix G, “*Feedback and Improvement Mechanisms*” of DOE G 450.4-1B, INTEGRATED SAFETY

MANAGEMENT SYSTEM GUIDE. In addition, CAPs for Environmental Management (EM) facilities must also comply with EM Policy Memorandum, "Policy for Content and Implementation of Corrective Action Plans (CAP)," dated October 4, 2001.

- (1) When the HQ process for the assessment/investigation requires a CAP, the responsible Assistant Manager must complete the CAP and obtain approval from the appropriate approval authority (frequently the HQ Program Office) within 60 calendar days of the issuance of the assessment/investigation report
- (2) The responsible ORO line manager ensures that the assessment/investigation findings and the actions are documented and entered into the HQ tracking system (e.g., CATS or DARTS) within 10 working days of receiving approval of the CAP.
- (3) Actions to be tracked in CATS include findings from the following:
 - Findings identified by SSA during ES&H and emergency management assessments.
 - Judgments of Need identified by Type A Accident Investigations.
 - Findings identified by the HQ Office of Aviation Management or the HQ Office of Management, Budget and Evaluation.
 - Other sources as directed by the Secretary or Deputy Secretary, including crosscutting safety issues (e.g., the November 11, 1999, memorandum that established the DOE Nuclear Criticality Safety Improvement Initiative).

NOTE: CATS is available at the following internet address:
<http://www.eh.doe.gov/camp/trackingsys.html>.

- (4) Describe the mechanism for independent verification of the closure of the actions. This type of closure verification is required for CAPs submitted to DOE HQ.
- (5) Briefly describe the effectiveness review that will be performed when the CAP is closed to determine if the CAs resolved the findings. Effectiveness reviews are required by DOE O 414.1C for CAPs submitted to DOE HQ. Effectiveness reviews will—
 - (a) Determine whether the completed CAs have or have not effectively resolved and prevented recurrence of the same or similar findings at the performance level;
 - (b) Identify additional actions necessary to effectively resolve the finding and prevent recurrence; and
 - (c) Collect effectiveness data for subsequent analyses and sharing of LL.
- (6) The AMESH prepares a monthly report for ORO senior management on the status of CAs. This report is pulled from ORION and CATS, if applicable. Information in the AMESH report tracks and trends CAs across ORO.

D. Implementing and Closing the CAP.

- (1) CAP Implementation. The ORO line manager should ensure completion of the actions identified in the CAP, and track and trend the findings. If the finding is being tracked in

ORION, the closure evidence should be attached to the appropriate action when it is closed. When all of the actions in the CAP are completed and documented as closed in ORION or CATS (thereby closing the findings), the responsible line manager should document this in a memorandum to the approving authority.

- (2) Closing Actions and Findings in ORION. To acceptably close an action, attach a Word file or pdf file of the closure documentation (i.e., the deliverable identified in the CAP for that finding) in ORION.
- (3) CAP Verification. The ORO line manager is responsible for requesting an independent verification, when necessary. If an independent verification is necessary, it should be performed by persons with sufficient independence from those who performed the actions identified in the CAP.
- (4) Effectiveness Review. The ORO line managers or the AMESH organization may review completed CA for adequacy in resolving the original finding. DOE O 414.1C, Attachment 4, provides additional information on performing effectiveness reviews. If the CA did not resolve the original finding, a new finding should be identified and entered into ORION or CATS for resolution. Effectiveness reviews are required for CAPs that are entered in CATS. Effectiveness reviews may be performed in a linear manner (i.e., by verifying the effectiveness of each action as it is completed rather than waiting until all of the actions are completed). Refer to Appendix G for more information on performing effectiveness reviews.

E. Change Control Process for CAPS.

- (1) Once the CAP has been approved, it is loaded in ORION. The only authority that can approve changes to the planned completion dates for the CAs in the CAP is the authority that approved the CAP. When a Change is made to a CAP action (e.g., the due date or the CA itself) in ORION, a justification for the Change and the name of the person who approved the Change is entered in ORION. In addition, documentation of the approved changes should be attached.
- (2) For EH CATS, the only authority that can approve changes to the CAP (other than typographical errors when copying the information from the CAP) is the authority that approved the CAP (i.e., the Secretarial office or designee delegated authority to approve the CAP). The CAP approval authority must sign the "Data Change Request Form" or any other document approving the specific change, which must be attached to the "Data Change Request Form." The Field Element Manager may also annotate the Secretarial office approval on the "Data Change Request Form." Once the completed "Data Change Request Form" is received, the database administrator will evaluate the request and make the changes, as appropriate. Changes to an action in CATS follow the HQ Change process identified in DOE O 414.1C, Attachment 4, "*Corrective Action Management Program*."

7.0 WALKTHROUGHS.

A. General.

Walkthroughs are a key component of ORO's operational awareness activities and contractor oversight program. Walkthroughs and operational awareness visits involve observation of site conditions and contractor activities to verify that safe working conditions exist and applicable requirements are being followed during work implementation. Appendix F provides a process summary diagram for the walkthrough process. Process input and outputs are shown in Appendix G.

ORO line managers are expected to have an Operational Awareness Program that includes conducting routine day-to-day monitoring of work performance through facility walkthroughs, work observation, document reviews, etc.

ORO line managers are expected to have a Walkthrough Surveillance Program that includes periodic inspection visits or tours by management and senior staff of facilities and operations. The line managers could be accompanied by Facility Representatives or other ORO staff performing routine field duties. The Facility Representative or ORO staff participant documents the walkthrough in ORION. These walkthroughs may be scheduled prior to the visits. The AMESH supports the line managers in conducting walkthroughs, as requested.

B. Conducting a Walkthrough.

- (1) Walkthroughs may be scheduled or unscheduled to cover planned or emerging topics. Checklists should be developed prior to performing the walkthrough (or use of the Office of Science *Manager's Walkthrough Guide*), but these are not mandated. Most walkthroughs are performed by Facility Representatives. Occasionally, SME and technical support is needed, depending on the area of review.
- (2) A portion of the walkthroughs can be joint walkthroughs with the contractor. Line organizations should ensure that their contractors have robust walkthrough programs.

C. Stop Work Authority.

Any condition that has caused or poses an imminent danger to people, property, the environment, or the operational integrity of a facility shall be cause to immediately suspend operations upon identification of the condition. All ORO Federal and contractor employees have authority to stop work when conditions are judged to be an imminent threat to health, safety, or the environment in accordance with DOE O 440.1A, WORKER PROTECTION MANAGEMENT FOR DOE FEDERAL AND CONTRACTOR EMPLOYEES, and the ORO and National Nuclear Security Administration "*Stop Work/Suspend Work*" responsibility declaration of October 2000.

D. Documenting a Walkthrough.

- (1) All walkthroughs are to be documented in ORION. Each walkthrough event, regardless of the number of participants, should only be recorded in ORION one time. The group participating in the walkthrough should agree on which individual will document the walkthrough and its results in ORION.
- (2) All findings are identified and recorded as issues (Priority 1, Priority 2, or Priority 3) or as proficiencies in ORION in order to allow the issues to be trended.
- (3) Most findings generated from a walkthrough will be Priority 3 (trend only observations). If a Priority 1 or Priority 2 finding is documented, then a CA response should be required and tracked to closure. For Priority 1 or Priority 2 findings, the issue is tracked in ORION; however, contractor CAs should generally be tracked in the contractor's Corrective Action System. For additional information on requirements associated with Priority 1, 2, or 3 findings, refer to section 5.0 D titled "*Requirements for Findings Priority 1, Findings Priority 2, and Findings Priority 3.*"
- (4) Priority 3 findings are used for trending purposes only. CAs are not applicable to Priority 3 findings. Priority 3 findings can be indicators of trends in a particular area or at a particular facility.
- (5) Issues are categorized by functional area for ORO trend analysis. A sample of the trending functional areas and sub-areas are listed in Appendix F. (The most current list of trending functional areas and sub-areas is located in ORION). In addition, the facility should be identified, if applicable, so that it can be used for trending.
- (6) All walkthroughs should be recorded in ORION as soon as practical after completion of the walkthrough (i.e., within three working days).

The *ORION Usage Guide* is available from the main screen of ORION by using the "help" drop down menu and selecting user documentation. This guide is a pdf and can answer questions about what to enter in the required and optional fields. The user must have edit privileges to enter/Change data in ORION. ORION is available at the following internet address: <http://www-internal.oro.doe.gov/esq/ORION3/index2.htm>

8.0 PERFORMANCE INDICATORS AND TRENDING.

A. General.

Performance indicators and measures are one mechanism used to help line management identify adverse trends and promote improvements. This data is considered in a variety of management decisions, such as allocating resources, establishing goals, identifying performance trends, identifying potential problems, and applying LL and good practices. Appendix F depicts key steps in the trending process. Appendix I provides inputs and outputs to trending analysis.

B. Data Collection for Trending.

Accurate data for trending purposes is critical. ORO should be able to quickly identify and respond to issues based on accurate information. ORION enables ORO to centralize assessment related and walkthrough related data. It also allows ORO to look at data consistently across organizations and time periods. ORION is able to track the status of any follow-up items, and several options are available for viewing data. Currently, trending analysis can be performed over time, as well as on various functional areas, functional sub-areas, facilities, finding severity levels, and other fields. Once data is entered into ORION, reports are generated so that the trends can be evaluated.

In addition to trending data from assessments and walkthroughs, event-driven data (e.g. occurrences, injuries and illnesses, accidents, etc.) should also be collected and used in trending analysis.

C. Requirements.

- (1) ORO organizations are expected to identify performance indicators and perform trending analysis. As part of their oversight function, line organizations should review the results of their contractor's trending evaluations.
- (2) ORO will establish a Management Review Committee for Issues composed of the Safety Advocates to meet on a periodic basis and screen assessment issues, trends, LL (from assessments and walkthroughs), and provide feedback on trending information that is useful for continuous improvement. The objective of the committee is to:
 - Improve the consistency of assigning severity to issues;
 - Provide a management perspective on data trends coming out of assessments and walkthroughs; and
 - Provide an opportunity to adjust priorities of assessment and walkthrough efforts or management of issues and actions if needed.

The committee will meet quarterly except when emerging or significant issues need more immediate attention.

- (3) ORO will establish a Trending Review Team for Issues which will meet on a periodic (generally monthly) basis and develop/review trend information and trend codes assigned to assessment and walkthrough issues and LL. This team will improve the consistency of trending code assignments and spot data input problems. The trending review team will assist users, as needed, on how to input data to ensure usability. The team will also evaluate event-driven trends. The Safety Advocates will appoint trending review team members and meet with the team on a quarterly basis to discuss reports and provide feedback.

9.0 FEEDBACK AND IMPROVEMENT OF THE ORO ASSESSMENT PROGRAM.

ORO organizations conducting assessments and being assessed are expected to share LL to be used to improve the assessment process and other elements of the ORO Assessment Program. Conduct of

walkthroughs also provides a means to provide feedback on how to improve the process. Feedback mechanisms available to ORO for improving the Assessment Program include, but are not limited to:

- LL from teams conducting various types of reviews and walkthroughs.
- Independent reviews from external organizations, training courses, and working groups.
- Establishing performance metrics and tracking/trending performance.
- Obtaining customer feedback from organizations being assessed.
- Benchmarking best practices from other government offices, contractor methods, industry, and consensus groups.

Assessment Team Leaders capture and document applicable LL (on conducting the assessment) in the assessment report. The organization being assessed is responsible for ensuring that LL documented in the assessment report are entered into ORION.

LL during the conduct of assessments and walkthroughs should be entered in ORION using the LL features that are available. ORION can associate a LL with a particular assessment, which enables trending by type of assessment (i.e., LL from conducting ORRs, Integrated Safety Management reviews, accident investigations, etc.) and provides useful information for the next team conducting that type of assessment.

**ITEMS TO BE CONSIDERED WHEN DETERMINING
PROGRAM ELEMENTS TO BE ASSESSED**

The Assessment Team Leaders should consider the following when determining the program elements to be assessed:

1. Contractual requirements.
2. Past deficiencies and corrective actions.
3. Implementation of corrective actions.
4. Results of other assessments including external assessments, evaluations, or events (e.g., investigation reports, implementation of lessons learned items, causal analysis, effectiveness reviews, reportable occurrences, etc.).
5. Past and current management issues.
6. Additional considerations for support service organizations:
 - Identification of customers.
 - Identification of customer requirements.
 - Alignment of processes with key business drivers.
 - Establishment of customer service standards.
7. Potential risk to workers, the public, and the environment.
8. Conditions indicative of known or suspected noncompliance.
9. Special interests or priorities (e.g., request from HQ, upcoming external audits, etc.).
10. Investigation report topics.
11. Lessons learned item(s).
12. Areas for which little information is available or documented (e.g., areas that have not been previously reviewed).
13. Negative trends.
14. Contractor internal assessment data.
15. Current or past management issues.
16. Annual Operating Plan and award fee milestones.
17. Available time and resources.
18. Time since element was last assessed.
19. Significant changes in the element (personnel, procedures, system, etc.).
20. Cost, risk, schedule, etc.

(Reference: DOE G 414.1-1A, MANAGEMENT ASSESSMENT AND INDEPENDENT ASSESSMENT GUIDE)

ASSESSMENT TEAM MEMBER DUTIES

Assessment personnel inspect and observe, conduct interviews, collect facts, assess the facility against requirements and performance in accordance with the assessment plan, and document potential proficiencies and findings (Priority 1, 2, or 3 finding). Although much of a programmatic technical assessment may consist of a rollup of facility-specific technical assessments, it is expected that normally some amount of fieldwork will still be conducted to supplement or verify the facility-specific data. In some cases, the Assessment Team Member may have acquired sufficient knowledge through routine fieldwork conducted to maintain operational awareness and so may not need to conduct additional fieldwork as part of the assessment. The duties of the Assessment Team Member usually include the following:

- A. Conduct a performance-based assessment. Assessment techniques include but are not limited to the following:
 1. Observation of process evolutions and drills.
 2. Walk down systems.
 3. Observation of facility conditions and cleanliness.
 4. Observation of adherence to established procedures and schedules.
 5. Inspection of equipment and observation of maintenance evolutions.
 6. Interview of appropriate personnel.
 7. Review of documents to support performance-based assessments, such as the following:
 - a. Logs and program records.
 - b. Personnel training and qualification records.
- B. For programmatic assessments, review and discuss the following, as applicable.

NOTE: Appendix A provides a list of items to be considered when determining the program elements to be assessed.

 1. Results from facility-specific assessments of program elements.
 2. The contractor's applicable site-level implementing policies and procedures.
 3. Criteria identified in an annual assessment plan for site-level assessment of the program element.
- C. Evaluate activities beyond the scope of the lines of inquiry, as necessary, to address the problem areas observed.
- D. Use a systematic method to record information obtained during interviews. Information may be recorded as field notes or, more formally, on prepared forms, a personal data assistant, or a voice recorder (if the latter are permitted in the facility).
- E. Document the assessment results (including proficiencies and findings).
- F. Identify any common factors that contribute to multiple findings.
- G. Compare the conclusions against those in the contractor's self-assessments to credit the contractor for self-identified findings and to evaluate the contractor's self-assessment program.

- H. Suspend assessment activities if hazards are identified that result in a work stoppage. Assessment activity may continue once mitigating actions are implemented.
- I. Use established field observation techniques, including the following:
1. Take detailed notes and records of observed activities, including the objective evidence obtained or reviewed and the date and time of the observed activities.
 2. Record the time notes were taken to correlate contractor responses and personnel actions identified by other observers.
 3. Include questions, items, and reference information in notes for later follow-up.
 4. Compare notes with other observers to share information.
- J. Use proven questioning techniques, such as the following:
1. Encourage respondents to answer questions fully without answering for them.
 2. State questions so that they require an explanation (e.g., “How do you perform . . . and why”; “When does . . .”; “Who is responsible for . . .”; “Where are the . . .”).
 3. Limit the use of direct questions (requiring yes or no) to investigating unclear replies or problem areas.
 4. Request the respondent provide supporting evidence for answers (e.g., “Show me where . . .”).
- K. Report any incident of contractor uncooperativeness or out-of-the-ordinary observations to the Review Team Leader and the Department of Energy (DOE) line manager responsible for the facility.
- L. Report injuries as follows:
1. Injury to contractor personnel – Review Team Leader, DOE line manager responsible for the facility, and the Facility Representative, if applicable.
 2. Injury to an Assessment Team Member – Assessment Team Leader and the Assessment Team Member’s supervisor.
- M. Independent assessment personnel meet the following criteria:
- Are technically knowledgeable in the areas being assessed.
 - Do not have direct responsibilities for the work activity being assessed.
 - Act in a management advisory function.
 - Have sufficient freedom and authority to identify problems.
 - Monitor work performance.
 - Identify abnormal performance and precursors of potential problems.
 - Focus on improving the quality of the processes that lead to the end product.
 - Document assessment results.
 - Verify satisfactory resolution of problems.
 - Perform follow-up reviews of deficient areas, as necessary or as requested.

OVERVIEW OF REPORT CONTENTS

Executive Summary – The Executive Summary is placed on a separate page after the Table of Contents and List of Acronyms (if included) and before the body of the report. This summary is a brief synopsis of what the assessment/investigation was and why it was performed. A more detailed paragraph (or two) in this format is placed under “Introduction” in the body of the report.

Overall Conclusions and Recommendation – Briefly explain the conclusions of the assessment. Additional detail is provided in the body of the report. If appropriate for the type of assessments, such as an Operational Readiness Review (ORR), provide the team’s recommendation regarding the contractor’s readiness to begin the activity.

Proficiencies – In bulleted format, list the proficiencies found during the assessment. These are explained in detail within the body of the report.

Findings – In bulleted format, list the Priority 1, 2, and 3 findings identified during the assessment. These are explained in detail within the body of the report.

Body of the Report

Introduction – This section provides the basic background information, such as the assessment purpose, scope, objectives, dates, review team members, and procedures used. Briefly identify the criteria or reference documents on which the assessment was based (e.g., Department of Energy [DOE] Directive, DOE Rule, contract requirements) or reference the list in an Appendix if it is long. Include a brief description of the activities assessed. This section may be split into additional sections if the material is lengthy.

Assessment Results – This section provides a discussion of the results obtained from data collection and validation. Provide summary paragraphs for each key area of the assessment. For example, the report for an ORR has a summary paragraph for each functional area that was reviewed. The discussion should include examples of specific objective evidence that led the reviewer to the stated conclusion about the subject area. Include subheadings, if appropriate, that are tailored specifically for the assessment. At the end of each summary discussion, list the proficiencies and findings that were identified in that area.

An alternate method for presenting the information is to provide a discussion of the results and, within this text, include identifiers for the proficiencies and findings. Then, provide the list of proficiencies and findings in the next section of the report. If a report is too short to have an executive summary, this method of presenting the information puts all of the proficiencies and findings in one place, which makes it easier for the reader to locate them.

Lessons Learned – If applicable or if required by the type of review (such as an ORR), provide lessons learned on the assessment process that will help improve the conduct of future assessments.

Appendices – The order and content of some report appendices is often dictated by the type of review (such as an ORR). However, for a short, generic report, provide the following appendices: (1) list of interviews (titles only), (2) documents reviewed (document number, title, and issue date), and (3) reference Documents (regulations, DOE Directives, DOE Rules, or other documents containing the requirements or expectations relevant to the assessment).

OVERVIEW OF CORRECTIVE ACTION PLAN CONTENTS

An example of a complex corporate-level Oak Ridge Office (ORO) Corrective Action Plan (CAP) for the ORO Integrated Safety Management System Review in 2005 can be viewed in Documents Management (DM) 250421. However, a CAP for one or two findings can be a simple, one-page document if it includes the necessary information. A simple CAP for a Safety System Oversight Program Implementation Review can be viewed in DM 224840.

Front Pages

Table of Contents – Self-explanatory.

List of Corrective Action (CA) Detail Tables – Complex CAPs will include CA Detail Tables that describe the actions that will be taken for each finding, the responsible person(s), the due date, the deliverables, etc. This list provides the names of those tables and their page numbers in the Appendix.

List of Acronyms – Self-explanatory.

Executive Summary – The Executive Summary is placed on a separate page after the Table of Contents and List of Acronyms (if included) and before the body of the CAP. This summary is a brief synopsis of what the assessment/investigation was and why it was performed.

Body of the CAP

- 1.0 Background** – Provide a description of the assessment/investigation and its background (why was it performed, who performed it, etc.). Reference Appendix I, which should list the proficiencies and findings or Judgments of Need identified in the assessment/investigation.
- 2.0 Introduction** – This is an optional section that may be added at the discretion of the person developing the CAP to add additional information (e.g., ORO’s management philosophy and safety philosophy).
- 3.0 Purpose** – State the purpose of the CAP. For example, “The purpose of the CAP is to document the actions that will be taken to continue to mature and refine the ORO Integrated Safety Management System.
- 4.0 Corrective Action Plan Development Methodology** – Explain the CAP development methodology so that a reader unfamiliar with the assessment will be able to understand how it was prepared. An example is provided below.

“The CAs were developed for each finding and its associated weakness (es) with the intent to continue improving the ORO Integrated Safety Management System. The CAs are being tracked in Oak Ridge Issues, Open Items, and Nonconformances System (ORION) using the following structure:”

Finding Identifier and Finding: The verbatim finding identifier and statement from the assessment report.

Description of the finding evaluation. As applicable, include discussion of causal factor identified. This may include background, facts, evaluation activities, and causal analysis, including root cause analysis. Refer to Appendix E for more information on performing root cause analysis.

Action Identifier: An alphanumeric identifier that is assigned to each CA for unique identification in the assessment report and CAP. (Note: ORION will assign an ORION unique identifier once action is entered in system.)

Description: The CA necessary to correct the weaknesses or unmet requirement. Each CA is listed separately, with a separate action identifier.

Status: The disposition of the CA (Open, Closed).

Due Date: The date that the CA is scheduled to be finished.

Responsible Person: The ORO Assistant Manager or equivalent that is responsible for the CA.

Organization: The organization that is responsible for completing the CA.

Point of Contact: The individual(s) assigned to complete or coordinate the corrective action.

Deliverables: The documentation that demonstrates that an action has been completed.

- 5.0 Corrective Action Details** – State that specific CAs are provided for each finding identified in the assessment report. A list of the findings and proficiencies should be provided in **Appendix I**, “List of Findings and Proficiencies.” The individual actions for each finding should be provided in **Appendix II**, “Corrective Action Detail Tables.”

ROOT CAUSE ANALYSIS GUIDANCE

(References: Adapted from Institute for Nuclear Power Operations (INPO) Good Practice OE-907, INPO 90-004, “*Root Cause Analyses*,” January 1990; DOE-NE-STD-1004-92, ROOT CAUSE ANALYSIS GUIDANCE DOCUMENT; and memorandum from the ORO Manager dated 9/30/2003, DM #124797)

- (1) Every root cause effort should include five phases. While there will be some overlap between phases, efforts should be made to keep them as distinct as possible. These phases include the following:
 - a. Collect Data: Collect and organize data, develop a problem description and chronology of events, and identify the facts and the effects.
 - b. Assess: Analyze the “facts” (data) to determine how and why the events happened and assign causal factors.
 - c. Correct: Develop, review, and implement corrective actions.
 - d. Inform: Explain/discuss the results of the root cause analysis, including corrective actions, with management and personnel involved in the event, or others as necessary to prevent recurrence of a similar event. In addition, consideration should be given to generating a lessons learned.
 - e. Follow-up: Perform effectiveness review to determine if corrective action has been effective in resolving problems. Root cause analysis activities can be structured in various ways as long as certain basic elements exist. Effectiveness depends on the ability to identify root causes and prevent repetitive or similar performance problems.
- (2) Management should ensure root cause analysis is performed by individuals trained in root cause analysis.
- (3) Use a graded approach suited to the significance of the issue
- (4) The following table, “Summary of Root Cause Methods,” is provided to aid in the selection of the “best” RCA method(s) for the problem(s) to be analyzed. Managers are encouraged to have staff with the ability to apply one or more of these applications in meeting the needs of your organization. The Training and Development Group should be contacted for additional information on available root cause training courses.

SUMMARY OF ROOT CAUSE METHODS

METHOD	WHEN TO USE	ADVANTAGES	DISADVANTAGES	REMARKS
Event and Causal Factor Charting Cause-and-Effect (walk-through) Task Analysis	Use for multi-faceted problems such as reactor trips or plant transients. Also good for evaluating equipment failures.	Provides visual display of analysis process. Identifies probable contributors to the condition.	Time-consuming and requires familiarity with process to be effective.	Requires a broad perspective of the event to identify unrelated problems. Helps to identify where deviations occurred from acceptable methods.
Fault Tree Analysis	Use when there is a shortage of experts to ask the right questions and whenever the problem is a recurring one. Helpful in solving programmatic problems.	Can be used with limited prior training.	May only identify area of cause, not specific causes.	If this process fails to identify problem areas, seek additional help or use cause-and-effect analysis.
Change Analysis	Use on singular problems or when cause is obscure. Especially useful in evaluating equipment failures.	Simple 6-step process.	Limited value because of the danger of accepting wrong, "obvious" answer.	A singular problem technique that can be used in support of a larger investigation. All root causes may not be identified.
Barrier Analysis	Use for procedural or administrative problems. Also good for human performance problems.	Provides systematic approach.	Requires some familiarity with process to be effective.	May also be used for equipment failures.
Management Oversight and Tree (MORT)	Use when there is a shortage of experts to ask the right questions and whenever the problem is a recurring one. Helpful in programmatic problem solving.	Can be used with limited prior training. Provides a list of questions for specific control and management factors.	May only identify area of cause, not specific causes.	If this process fails to identify problem area, seek additional help or use cause and effect analysis.
Mini-MORT	Helpful in programmatic problem solving	Can be used with limited prior training. Provides a list of questions for specific control and management factors.	May only identify area of cause, not specific causes.	If this process fails to identify problem area, seek additional help or expand to full MORT.

METHOD	WHEN TO USE	ADVANTAGES	DISADVANTAGES	REMARKS
Human Performance Evaluations	Use whenever people have been identified as being involved in the problem cause.	Thorough analysis.	None if process is closely followed.	Requires individual trained in HPE techniques
Kepner-Tregoe Problem Solving and Decision Making	Use for major concerns where all aspects need thorough analysis.	Highly structured approach focuses on all aspects of the occurrence and problem resolution.	More comprehensive than may be needed.	Requires Kepner-Tregoe training.
Why Staircase (Ask why 5 times or question to the Void)	When significance of problem does not warrant more structured approaches	Can be used with little training	Dependent upon ability of analyst to keep digging until the root cause is found.	Requires analyst to avoid settling for easy answers.

SAMPLE TRENDING FUNCTIONAL AREAS AND SUB-AREAS

Administration

Conduct of Operations

- Communications
- Control Area Activities
- Control of Equipment and System Status
- Control of On-Shift Training
- Equipment and Piping Labeling
- Independent Verification
- Investigation of Abnormal Events
- Lockouts and Tagouts
- Logkeeping
- Notifications
- Operations Aspects of Facility Chemistry
- Operations Organization and Administration
- Operations Procedures
- Operations Turnover
- Operator Aid Postings
- Required Reading
- Shift Routines and Operating Practices
- Timely Orders to Operators

Criticality Safety

Emergency Management

Environment

- Affirmative Procurement
- Comprehensive Environmental Response, Compensation, and Liability Act
- Clean Air
- Clean Water
- Emergency Planning and Community Right-To-Know Act
- Federal Insecticide, Fungicide and Rodenticide Act (Pesticides)
- Hazardous Waste Storage Area
- Pollution Prevention
- Resource Conservation and Recovery Act
- Safe Drinking Water
- Toxic Substances Control Act/Polychlorinated Biphenyls
- Underground Storage Tanks
- Waste Management
- Waste Management/Waste Minimization
- Waste Management/Waste Characterization
- Waste Management/Wastewater Treatment
- Waste Management/Inspections
- Waste Management/Recordkeeping
- Waste Management/Regulatory Reporting
- Waste Management/License/Permit/Regulatory Operating Requirements

Facility Safety

- Authorization Basis
- Documented Safety Analysis
- Potential Inadequacy in the Safety Analysis
- Unreviewed Safety Question

Finance

Fire Protection

- Administrative Controls
- Emergency Response and Preparedness
- Fire Protection Design
- Hazards Identification and Control
- Inspection, Testing, and Maintenance
- Management and Administration
- Procedures and Training
- Safety Basis and Fire Hazards Analysis

Industrial Hygiene

- Biohazards
- Bloodborne Pathogens
- Chemical Safety
- Confined Space
- Ergonomics
- Hazard Communication
- Hazardous Waste Operations
- Laboratory Standard
- Laser Safety
- Noise/Hearing Conservation
- Nonionizing Radiation
- Occupational Health/Medicine
- Respiratory Protection
- Thermal Stresses
- Toxic and Hazardous Substances
- Ventilation/Local Exhaust

Industrial Safety

- Compressed Gases
- Electrical
- Fall Protection/Walking Surfaces
- Hand and Power Tools
- Hoisting and Rigging/Cranes
- Machine Guarding
- Materials Handling
- Personal Protective Equipment
- Scaffolding
- Stairways/Ladders
- Welding/Cutting

Maintenance

Packaging and Transportation

Quality Assurance

- Criterion 1—Program
- Criterion 2—Personnel Training and Qualification
- Criterion 3—Quality Improvement
- Criterion 4—Documents and Records
- Criterion 5—Work Processes
- Criterion 6—Design
- Criterion 7—Procurement
- Criterion 8—Inspection and Acceptance Testing
- Criterion 9—Management Assessment
- Criterion 10—Independent Assessment
- Suspect/Counterfeit Items
- Safety Software Quality

Radiation Protection

- Emergency Exposures
- Entry Control
- Contamination Control
- Internal and External Exposure Standards
- Management and Administration
- Plans and Procedures
- Radiation Safety Training
- Records and Reports
- Sealed Radioactive Source Control
- Surveillance, Assessment, and Maintenance

Safeguards and Security

The most current list of trending functional areas and sub-areas is located in ORION.

EFFECTIVENESS REVIEW GUIDANCE FOR ORO PERFORMED ASSESSMENTS

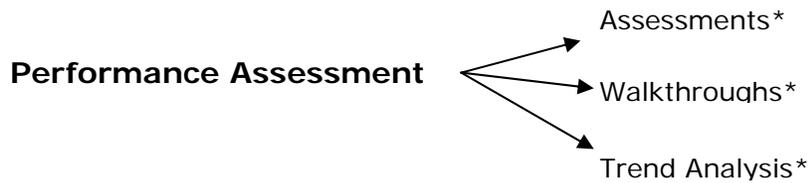
(Reference: DOE O 414.1C, Attachment 4)

- (1) Corrective Action Effectiveness Reviews evaluate findings and implementation of corrective actions performed to correct the underlying causes for the finding. In some instances completed corrective actions have failed to effectively resolve or prevent recurrence of the same or similar assessment findings.
- (2) Effectiveness reviews will –
 - (a) Determine whether completed corrective actions have or have not effectively resolved and prevented recurrence of the same or similar findings at the performance level;
 - (b) Identify additional actions necessary to effectively resolve the findings and prevent recurrence; and
 - (c) Collect effectiveness data for subsequent analyses and sharing of lessons learned.
- (3) Conduct of Effectiveness Reviews.
 - (a) Upon completion of the corrective actions, the responsible manager initiates a followup review of the completed corrective actions to verify they are closed, ensure all findings were effectively resolved, and ensure the same or similar findings will not recur. A formal review report as deemed by management is prepared (generally within 6 months after the CAP completion date (the date when all corrective actions for all findings listed in the CAP have been completed)).
 - (b) The responsible manager determines or approves –
 - (1) How the review is conducted,
 - (2) Who conducts the review,
 - (3) What specific completed corrective actions are reviewed for each finding,
 - (4) When the review is initiated, and
 - (5) How the review report will be formatted.
 - (c) For each finding, the responsible manager determines or approves for review a sufficient number of completed corrective actions to allow an objective, accurate assessment of effectiveness in resolving the finding and preventing recurrence.
 - (d) Standards for conducting effectiveness reviews include the following:
 - (1) A 100 percent review of all corrective actions is not required to determine effectiveness.
 - (2) Effectiveness reviews can be initiated at any time during CAP implementation.
 - (3) Reviews are initiated based on -
 - (a) Severity of a finding,
 - (b) Length of time needed to review selected corrective actions,
 - (c) Availability of resources to review corrective actions, and
 - (d) Length of time before all corrective actions for the finding are to be completed.
 - (4) Effectiveness reviews are performed by Federal and/or contractor personnel who are not associated with the findings or corrective actions.

- (5) Mechanisms used to conduct effectiveness reviews are determined by the FEM and may include:
- (a) Document reviews,
 - (b) Performance analyses,
 - (c) Work observations/facility tours,
 - (d) Performance testing,
 - (e) Interviews,
 - (f) Trending of performance,
 - (g) Monitoring performance metrics based on operational data,
 - (h) Tracking performance utilizing targeted assessments, and
 - (i) Performing tailored scheduled assessments to gather the data.

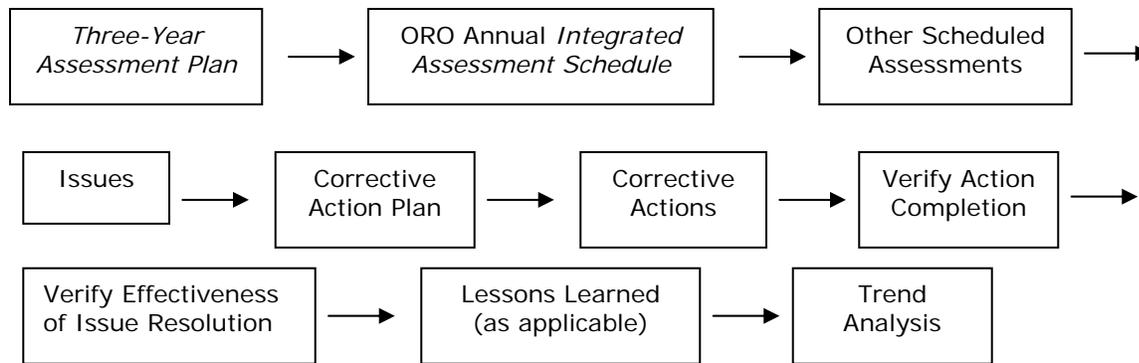
NOTE: This guidance is adapted for use in ORO performed assessments. Effectiveness reviews for the following HQ reviews must adhere to content and timeframes described in DOE O 414.1C, Attachment 4: Office of Independent Oversight and Performance Assurance Environment, Safety, and Health (ES&H) and Emergency Management assessments, Type A accident investigations, findings identified by the Office of Aviation Management, Office of Management, Budget and Evaluation; or other sources as directed by the Secretary or Deputy Secretary, including crosscutting safety issues.

PERFORMANCE ASSESSMENT PROCESS SUMMARY

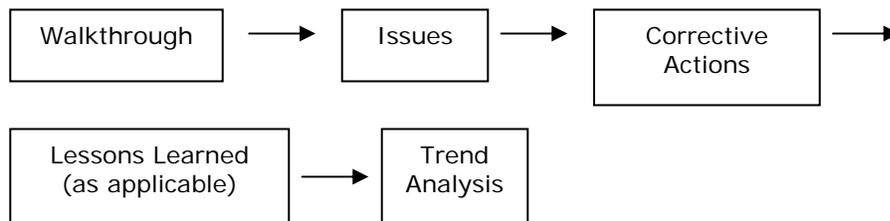


* All three of these elements are tracked in ORION, with some exceptions. The exceptions are Headquarters assessment results that are tracked in Headquarters' systems and contractors' actions that are tracked in the contractors' systems.

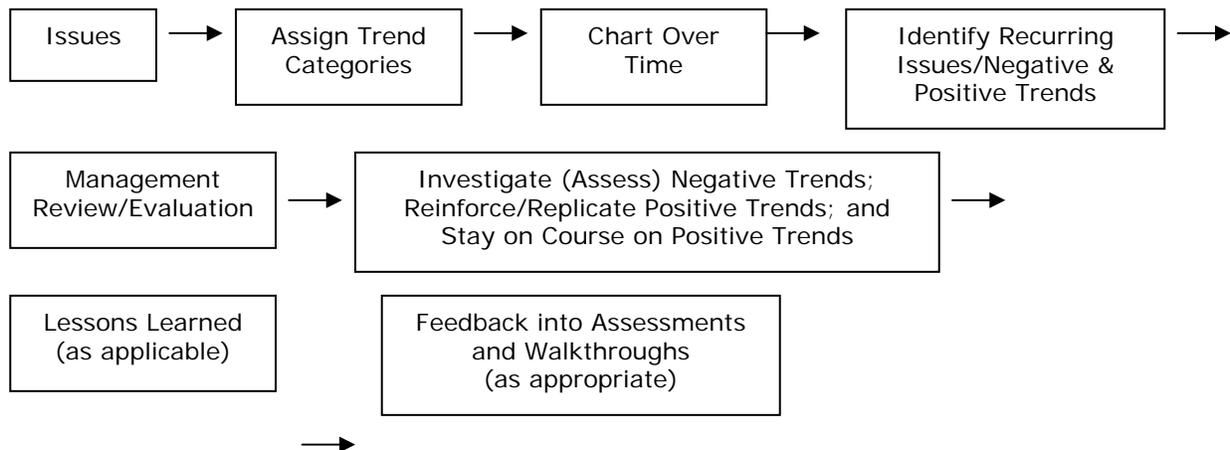
Assessment Process



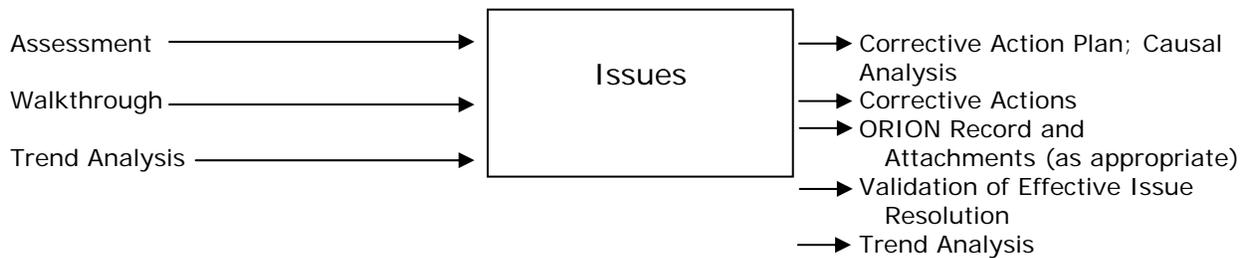
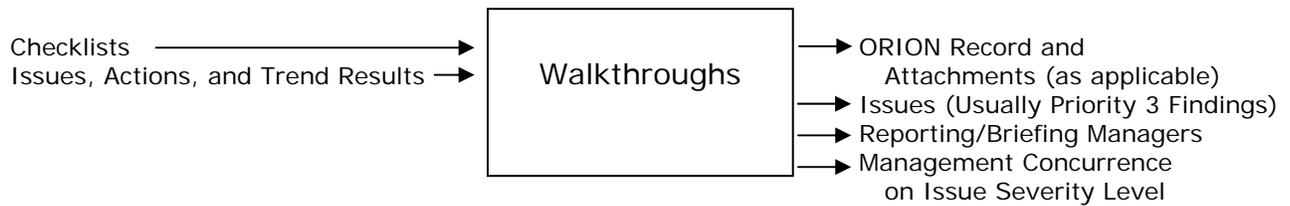
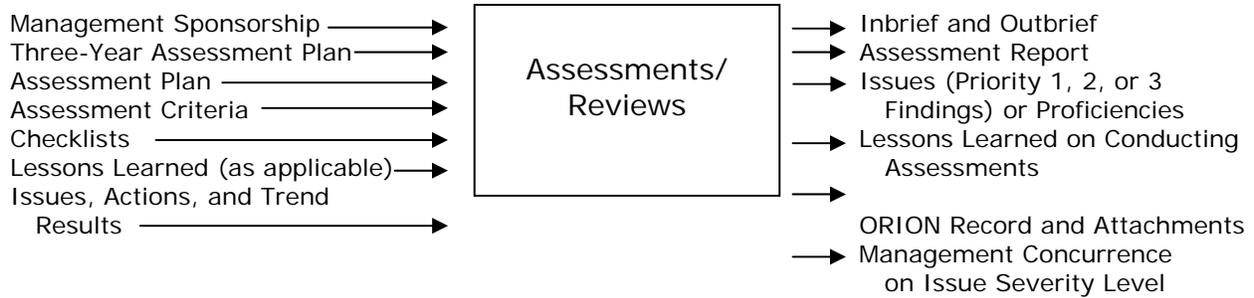
Walkthrough Process

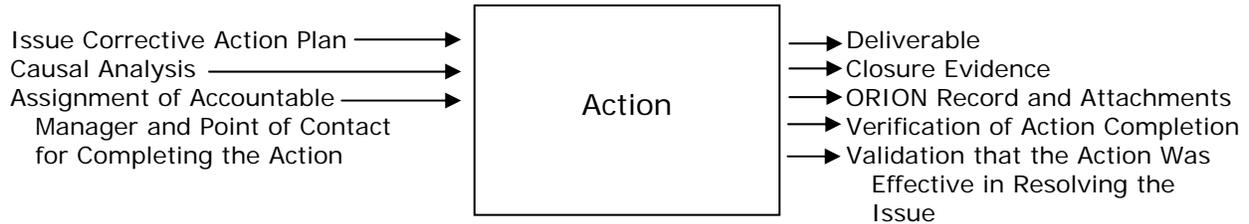
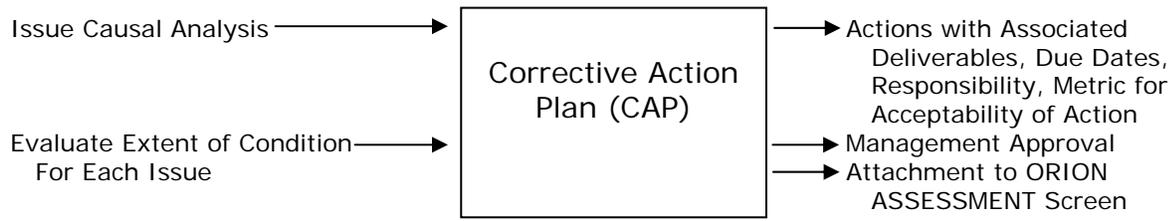


Trend Analysis Process



PERFORMANCE ASSESSMENT PROCESS INPUTS AND OUTPUTS*





* These are key examples for illustrative purposes and are not intended to be a comprehensive or exhaustive list of inputs and outputs.