

# DOE/ORO CONTROL FORM - ORO FINAL DIRECTIVE

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## PART A (To be completed by the Division of Primary Interest (DPI))

1. **NUMBER AND TITLE OF DIRECTIVE:** ORO O 410, Chapter III, Change 3, QUALITY ASSURANCE

2. **PURPOSE OF TRANSMITTAL:**  New Directive  Revised Directive

3. **THIS DOCUMENT MAY AFFECT THE WORK PERFORMED BY THE FOLLOWING CONTRACTORS:** (Check appropriate boxes)

No (all contractors)

Yes If yes, whom?  Bechtel Jacobs Co.  ORAU  UT-Battelle

Other contractors (list by type) All other contractors managing/operating ORO non-nuclear facilities.

*Many ORO contractors have approved S/RIDs or WSS sets that may affect applicability of contractor requirements from this directive. Applicability of contractor requirements must take into account the approved standards set for each particular contract.*

4. **SIGNIFICANT PROVISIONS:** Are there any significant changes or impact?

No  Yes If yes, describe: This ORO chapter is part of the ORO sunset review process. Changes to this chapter include editorial revisions (1) to indicate the correct number of the correlating DOE Order (DOE O 414.1A, Change 1) and (2) a rewrite of paragraphs 4, 5, 6 and attachments, as noted.

5. **CONTACT POINT:** Teresa Perry Assessment & Emergency Management Div., SE-32 576-0831  
Name Organization Telephone

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## PART B (To be completed by the Directives Management Group (DMG)):

6. **FILING INSTRUCTIONS:**

<u>Remove</u>	<u>Dated</u>	<u>Insert</u>	<u>Dated</u>
ORO Control Form	11/04/1998	ORO Control Form	02/24/2003
ORO O 410, Chapter III, Chg. 2, Pages III-1 thru III-3	11/04/1998	ORO O 410, Chapter III, Chg. 3, Pages III-1 thru III-33	02/24/2003

*ORO Directives are available on the ORO Directives Management Home Page at [http://www.ornl.gov/doe\\_oro\\_dmg/oro\\_dir.htm](http://www.ornl.gov/doe_oro_dmg/oro_dir.htm). The ORO Directives will no longer be mailed in printed copy unless you do not have Internet capabilities.*

7. **APPROVED FOR DISTRIBUTION IN ACCORDANCE WITH THE OFFICIAL DIRECTIVES DISTRIBUTION LIST:**

*Original Signed By*  
Wayne H. Albaugh 02/25/2003  
Signature: DMG Team Leader, AD-440 Date

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

Rev. 01/10/2003

# NNSA/YSO DIRECTIVES CONTROL FORM – FINAL DIRECTIVE

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

**DIRECTIVE NUMBER, TITLE, AND DATE:**

ORO O 410, Chapter III, Change 3, QUALITY ASSURANCE, dated 02/24/2003

PURPOSE OF TRANSMITTAL:  New Directive  Revised DirectiveDOES THIS DIRECTIVE CANCEL/REPLACE OR EXTEND ANY OTHER DIRECTIVES?  Yes  No  
If "Yes," list what action (cancel/replace or extend) and list the directive(s), including the number(s), title(s), and date(s):

This chapter cancels and replaces ORO O 410, Chapter III, Change 2, QUALITY ASSURANCE, dated November 4, 1998.

The attached directive is forwarded for review and action. Complete Part B and forward this form to ORO DMG, AD-440, by 03/12/2003.

## PART B (To be completed by the NNSA Y-12 SITE OFFICE, Y12-01):

CONTRACTOR APPLICABILITY: NNSA – YSO has a YSO QAPD (YSO-3.0 QAPD)

Does this directive affect the work performed by BWXT Y-12, L.L.C.?  Yes  NoDoes this directive affect the work performed by BWXT Y-12, L.L.C., subcontractors?  Yes  No

If "Yes," list the subcontractors:

*Many contractors have approved S/RIDs or WSS sets that may affect applicability of contractor requirements from this directive. Applicability of contractor requirements must take into account the approved standards set for each particular contract.*SIGNIFICANT PROVISIONS: Are there any significant changes or impact?  Yes  No

List summary of directive changes and, if "Yes" above, describe the significant changes or impact:

IMPLEMENTATION: Does the directive contain special implementation requirements and/or dates?  Yes  No

If "Yes," describe:

**FOR DOE DIRECTIVE – SUPPLEMENTAL DIRECTIVE REQUIRED?**Is a new or revised supplemental directive required?  Yes  No

If "Yes," target date for submission of draft supplemental directive is \_\_\_\_\_.

IDENTIFY CONTACT POINT: Michael Glasman 574-3499  
Name TelephoneAPPROVED BY COR FOR DIRECTIVES: Diane McCarten, COR for Dir. 04/07/2003 576-9330  
Signature Date Telephone

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

*DOE Directives are available on the DOE Directives, Regulations, Policies, and Standards Portal at <http://www.directives.doe.gov/>.  
ORO Directives are available on the ORO Directives Management Group Home Page at [http://www.ornl.gov/doe\\_oro\\_dmg/oro\\_dir.htm](http://www.ornl.gov/doe_oro_dmg/oro_dir.htm).  
Directives will no longer be mailed in printed copy unless you do not have Internet capabilities.***APPROVED FOR DISTRIBUTION IN ACCORDANCE WITH OFFICIAL DIRECTIVE DISTRIBUTION LIST:**Wayne H. Albaugh, AD-440 04/10/2003  
Original Signed By Name Date**INSTRUCTIONS TO ADDRESSEES: THIS FORM IS TO BE FILED WITH THE DIRECTIVE AND RETAINED.**

(Revised 01/10/2003)

# U.S. Department of Energy

Oak Ridge Operations

ORO O 410  
Chapter III  
Change 3

DATE: 02/24/2003

SUBJECT: QUALITY ASSURANCE

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1. PURPOSE. This chapter establishes the elements of an effective Oak Ridge Operations (ORO) Quality Assurance Program (QAP). Attachments 1 and 2 of this chapter provide the Quality Assurance Program Description (QAPD) and QAPD Implementation Matrix for ORO. This chapter correlates to DOE O 414.1A, Change 1, QUALITY ASSURANCE, dated July 12, 2001; DOE P 450.4, SAFETY MANAGEMENT SYSTEM POLICY, dated October 15, 1996; and DOE P 450.5, LINE ENVIRONMENT, SAFETY AND HEALTH OVERSIGHT, dated June 26, 1997. Nothing in this issuance changes any requirements contained in any Department of Energy (DOE) directive.
2. CANCELLATION. This chapter cancels and replaces ORO O 410, Chapter III, Change 2, QUALITY ASSURANCE, dated November 4, 1998.
3. APPLICABILITY. The provisions of the chapter apply to ORO Principal Staff and to contractors responsible for managing and/or operating ORO facilities to the extent set forth in their contract.
4. RESPONSIBILITIES. Many ORO contractors have developed Standards/Requirements Identification Documents (S/RIDs) or Work Smart Standards (WSS) sets that may not include requirements referenced or included in DOE O 414.1A, Change 1, or this chapter. Interpretation and performance of Federal responsibilities outlined below must take into account the approved standards set for each particular contract and must not be deemed to add any requirement to the approved set or contract.
  - a. Manager.
    - (1) Is responsible for the development, approval, implementation, and maintenance, of the ORO QAPD.
    - (2) Establishes an ORO QAP through issuance and implementation of the QAPD.
    - (3) Establishes a comprehensive assessment program that meets or exceeds DOE guidance including an integrated Corrective Action Management Program.
    - (4) Approves contractor QAPs submitted in accordance with Title 10 Code of Federal Regulations (CFR) Part 830, Subpart A, QUALITY ASSURANCE REQUIREMENTS, as delegated by DOE Headquarters (HQ).

- b. Assistant Manager for Environment, Safety, Health and Emergency Management (AMESH).
- (1) Coordinates the development and maintenance of ORO's QAPD and the associated Implementation Matrix.
  - (2) In conjunction with the Training and Development Group, develops and provides initial and periodic training to ORO personnel on the QAPD, including the ORO Integrated Safety Management (ISM) Program, issues management, assessments, and general quality assurance principles and tools.
  - (3) Assists in performing independent assessments of ORO implementation of the QAPD and ISM Program.
  - (4) Performs the issues management functions outlined in ORO O 450, Chapter VI, ORO ASSESSMENT PROGRAM.
  - (5) Assists the line in developing and implementing a comprehensive assessment program to meet requirements defined in 10 CFR 830, Subpart A; DOE O 414.1A, Change 1; DOE P 450.5; and ORO O 450, Chapter VI; including special-focus safety assessment processes (i.e., accident investigations, operational readiness, emergency management, and radiological protection).
  - (6) Performs formal QAP reviews, as requested, and recommends approval or rejection of ORO contractors' QAPs to the Contracting Officer's Representative (COR) and the ORO Manager.
  - (7) Coordinates the development of the Safety Issues Corrective Action Process (see Attachment 3 of this chapter) as a formal ORO safety issue corrective action process.
  - (8) Implements the ORO QAPD and ISM Program within AMESH.
  - (9) Provides an ORO point of contact who serves as a member of the HQ Corrective Action Management Team that supports and coordinates line management efforts to implement the Corrective Action Management Program for the Deputy Assistant Secretary for Environment, Safety and Health Oversight.
  - (10) Provides an ORO point of contact for the Office of Enforcement and Investigation (EH-10) who conducts investigations of contractor nuclear and radiological safety performance and enforces the DOE Price-Anderson Amendments Act regulations (10 CFR 830 and 10 CFR 835).
  - (11) Provides an ORO point of contact for the emergency management oversight function performed by the Office of Independent Oversight and Performance Assurance (OA).

- c. Assistant Managers for Administration, Laboratories, Environmental Management, and Assets Utilization; and Director, Office of Nuclear Fuel Security and Uranium Technology.
  - (1) Implement the ORO QAPD Program and the ISM Program within each organization to comply with the quality assurance criteria identified in 10 CFR 830, Subpart A; DOE P 450.5; ORO O 450, Chapter VI; ORO O 450, Chapter V; DOE O 414.1A, Change 1, paragraph 4b; and this chapter.
  - (2) Ensure ORO employees are appropriately qualified/certified to implement the requirements of the ORO QAPD and ISM Program Description.
  - (3) Support readiness review teams to determine if the equipment/systems/facility is ready to operate.
  - (4) Support internal and external evaluations of DOE and contractor safety management performance.
  - (5) Develop and implement a comprehensive assessment program to meet the requirements defined in 10 CFR 830, Subpart A; DOE O 414.1A, Change 1; DOE P 450.5; and ORO O 450, Chapter VI; including special-focus safety assessment processes (i.e., accident investigations, operational readiness, emergency management, and radiological protection).
- d. Contracting Officer's Representatives
  - (1) Approve or reject contractor QAPs submitted under DOE O 414.1A.
  - (2) Forward contractor QAPs submitted under 10 CFR 830, Subpart A, to the Manager with a recommendation for approval or rejection.

5. REQUIREMENTS AND PROCEDURES.

ORO organizations with quality assurance and/or environment, safety, and health responsibilities must develop implementing procedures consistent with this chapter.

6. REFERENCES.

- a. 10 CFR 830, Subpart A, QUALITY ASSURANCE REQUIREMENTS, dated January 10, 2001.
- b. ORO O 110, Revision 1, ORGANIZATION AND STRUCTURE, dated February 23, 2000.
- c. ORO M 110, OAK RIDGE OPERATIONS ORGANIZATION MANUAL, Chapter 9, Change 3, "Office of Assistant Manager for Environment, Safety, Health, and Emergency Management (AMESH)," dated June 7, 2001.
- d. ORO O 450, Chapter V, ORO INTEGRATED SAFETY MANAGEMENT PROGRAM, dated December 31, 2002.

- e. ORO O 450, Chapter VI, ORO ASSESSMENT PROGRAM, dated December 31, 2002.
- 7. DEFINITIONS. See Attachment 1 of this chapter.
- 8. CONTRACTOR REQUIREMENTS DOCUMENT. None
- 9. ATTACHMENTS.
  - a. Attachment 1 – “*ORO Quality Assurance Program Description*.”
  - b. Attachment 2 – Example “*ORO Quality Assurance Program Description Implementation Matrix*.”
  - c. Attachment 3 – Safety Issue Corrective Action Process.

# Quality Assurance Program Description (QAPD)



**Revision Log**

<b>Revision No.</b>	<b>Description of Change</b>	<b>Effective Date</b>
0	This revision supercedes DOE/OR/1084, <i>Management Performance and Assessment Program</i> , dated June 1993.	TBD

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## 1.0 PURPOSE AND SCOPE

### A. Quality Assurance Program

- (1) Department of Energy (DOE) O 414.1A, *Quality Assurance*, defines a Quality Assurance Program (QAP) as "The overall program (management system) established to assign responsibilities and authorities, define policies and requirements, and provide for the performance and assessment of work".
- (2) The Oak Ridge Operations Office (ORO) QAP is a management system which ensures that ORO's missions, policies, and objectives are integrated into standard business practices and work processes for Federal operations and contractor oversight. Functions and activities performed to satisfy or implement ORO's mission, policies, and objectives are based on the requirements of various source documents (e.g., DOE directives and Federal regulations).
- (3) The QAP involves all ORO organizational components and is not solely owned by a single organization. It is based on the criteria applicable to DOE as stated in paragraphs 4 and 5 of DOE O 414.1A, and Attachment 1 of DOE O 414.1A and is described in this Quality Assurance Program Description (QAPD). The QAP applies to the management and oversight of basic and applied research, scientific investigation, engineering design, operations, maintenance and repair of facilities, and environmental restoration. It reflects ORO's comprehensive way of doing business throughout the life cycle of DOE's programs and projects.
- (4) The goal of the QAP is to achieve continuous improvement while satisfying customer requirements in a cost-effective manner. To achieve that goal, a "culture" that encourages all employees to establish and maintain high standards, identify and resolve problems, accept recommendations for improvement, and foster mutual respect and effective communication must be established and maintained. Employees are responsible for continuous pursuit of enhancements to safety and reliability, not just complying with a minimal set of requirements.

### B. Quality Assurance Program Description

This QAPD is written to reflect DOE O 414.1A in that it contains 10 criteria sections, each corresponding to the 10 criteria contained in DOE O 414.1A. Within each criteria section, the basic requirement of DOE O 414.1A is quoted, followed by a description of how ORO satisfies the applicable portions of the requirement. Following the description, ORO's responsibilities are assigned and defined at the level where requirement implementation is most effective. Applicable criteria are implemented in accordance with *ORO QAPD Implementation Matrix*, which is posted on the ORO web site. An example of the matrix is included as Attachment 2 of ORO O 410, Chapter III.

C. Project-Specific Quality Assurance Programs

While the requirements of DOE O 414.1A involve all of ORO's functions and activities, specific ORO projects may impose other QAP requirements. When this occurs, ORO evaluates the project-specific requirements to determine their impact on this QAPD. If there are significant differences, ORO addresses those requirements in separate documents.

D. Integrated Safety Management System

- (1) The objective of an Integrated Safety Management System (ISMS) is to integrate quality, environmental, safety, and health and emergency management requirements into planning, management, work practices, and work execution at all levels. DOE P 450.4, *Safety Management System Policy*, provides principles and functions for implementing an ORO Integrated Safety Management (ISM) Program.
- (2) The ORO ISM Program Description ORO O 450, Chapter V, Attachment 1, and this ORO QAPD describe mechanisms for implementing a comprehensive ORO program.

**2.0 REFERENCES**

- A. 10 CFR 830, Subpart A, QUALITY ASSURANCE REQUIREMENTS, dated January 10, 2001.
- B. 29 CFR 1960, BASIC PROGRAM ELEMENTS FOR FEDERAL EMPLOYEE OCCUPATIONAL SAFETY AND HEALTH PROGRAMS AND RELATED MATTERS, July 1, 2001.
- C. DOE P 411.1, SAFETY MANAGEMENT FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES, dated January 28, 1997.
- D. DOE P 450.4, SAFETY MANAGEMENT SYSTEM POLICY, dated October 15, 1996.
- E. DOE P 450.5, LINE ENVIRONMENT, SAFETY AND HEALTH OVERSIGHT, dated June 26, 1997.
- F. DOE O 151.1A, COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM, dated November 1, 2000.
- G. DOE O 200.1, INFORMATION MANAGEMENT PROGRAM, dated September 30, 1996.
- H. DOE O 210.1, CHANGE 2, PERFORMANCE INDICATORS AND ANALYSIS OF OPERATIONS INFORMATION, dated May 1, 1996.
- I. DOE O 225.1A, ACCIDENT INVESTIGATIONS, dated November 26, 1997.
- J. DOE O 231.1, CHANGE 2, ENVIRONMENT, SAFETY, AND HEALTH REPORTING, dated November 7, 1996.

- K. DOE O 232.1A, OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION, dated July 21, 1997.
- L. DOE M 411.1-1B, SAFETY MANAGEMENT FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES, dated May 22, 2001.
- M. DOE O 414.1A, CHANGE 1, QUALITY ASSURANCE, dated July 12, 2001.
- N. DOE O 425.1B, STARTUP AND RESTART OF NUCLEAR FACILITIES, dated December 21, 2000.
- O. DOE O 440.1A, WORKER PROTECTION MANAGEMENT FOR DOE FEDERAL AND CONTRACTOR EMPLOYEES, dated March 27, 1998.
- P. DOE O 470.2A, SECURITY AND EMERGENCY MANAGEMENT INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE PROGRAM, dated March 1, 2000
- Q. DOE N 203.1, SOFTWARE QUALITY ASSURANCE, dated October 2, 2000.
- R. DOE G 200.1-1, SOFTWARE ENGINEERING METHODOLOGY, dated May 21, 1997.
- S. DOE G 414.1-1A, MANAGEMENT ASSESSMENT AND INDEPENDENT ASSESSMENT GUIDE FOR USE WITH 10 CFR Part 830 Subpart A, and DOE O 414.1A, Quality Assurance; DOE P 450.4, Safety Management System Policy; and DOE P 450.5, Line ES&H Oversight Policy, dated May 31, 2001
- T. DOE G 450.3-2, ATTRIBUTES OF EFFECTIVE IMPLEMENTATION, dated February 1, 1997
- U. DOE G 450.4-1B, INTEGRATED SAFETY MANAGEMENT SYSTEM GUIDE FOR USE WITH DOE P 450.4, DOE P 450.5, and DOE P 450.6, THE FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES MANUAL, and THE DOE ACQUISITIONS REGULATIONS (Volumes I and II), dated March 1, 2001
- V. ORO O 220, Chapter V, Change 1, APPRAISAL OF DOE CONTRACTOR PERFORMANCE, dated June 18, 1999, and any subsequent revisions.
- W. ORO O 230, Chapter IV, CHANGE 1, OCCURRENCE REPORTING AND PROCESSING OF OPERATION INFORMATION, dated October 9, 2002.
- X. ORO O 250, Chapter V, Change 3, DEVELOPMENT, APPROVAL, AND MAINTENANCE OF WORK SMART STANDARDS, dated June 9, 2001.
- Y. ORO O 250, Chapter VII, Change 2, MAINTENANCE OF STANDARDS/REQUIREMENTS IDENTIFICATION DOCUMENTS, dated April 27, 2001.

- Z. ORO M 411.1-1D, MANUAL OF SAFETY MANAGEMENT FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES, LEVEL II, FOR OAK RIDGE OPERATIONS (ORO FRAM), dated October 31, 2000.
- AA. ORO O 420, Chapter IV, Change 2, CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES, dated December 17, 1998.
- BB. ORO O 450, Chapter VI, ORO ASSESSMENT PROGRAM, dated December 31, 2002.
- CC. Department of Energy Report on Contract Reform, Action Item No. 27, *Department-Wide Guidelines for Coordination of Contractor Oversight Programs*, undated.
- DD. *Oak Ridge Operations Office Facility Representatives Program Manual*, Revision 3, dated August 2001.
- EE. DOE-STD-7501-99, *The DOE Corporate Lessons Learned Program*, dated December 1999.
- FF. DOE-HDBK-7502-95, *Implementing U. S. Department of Energy Lessons Learned Programs*, dated August 1995.
- GG. *U. S. Department of Energy Plan to Address and Resolve Safety Issues Identified by Internal Independent Oversight, Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 98-1*, dated March 10, 1999.

### 3.0 **ACRONYMS AND DEFINITIONS**

#### A. Acronyms

AMESH	Assistant Manager for Environment, Safety, Health, and Emergency Management
CATS	Corrective Action Tracking System
DOE	Department of Energy
EH	Office of Environment, Safety, and Health, DOE HQ
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
ORO	Oak Ridge Operations Office
QAP	Quality Assurance Program
QAPD	Quality Assurance Program Description

#### B. Definitions

- (1) Assessment – The act of reviewing, evaluating, inspecting, testing, checking, performing surveillance, auditing, or otherwise determining and documenting whether items, processes, systems, or services meet specified requirements and are performing effectively.
- (2) Directive – Written information originated by DOE Headquarters (HQ) or ORO that assigns responsibilities or establishes requirements. HQ directives include DOE Policies,

Orders, Notices, Manuals, Guides, Technical Standards, and Secretary of Energy Notices. ORO directives include Orders, Chapters, Notices, and Manuals.

- (3) Document – Any written or pictorial information describing, defining, specifying, reporting, or certifying activities, requirements, procedures, or results. A document is not considered to be a quality assurance record as defined in this document.
- (4) Graded Approach – The process by which the levels of detail in an analysis or documentation and/or the actions necessary to comply with requirements are commensurate with all of the following:
  - Relative importance to safety and safeguards and security.
  - Magnitude of any hazard involved.
  - Life cycle stage of the facility.
  - Programmatic mission of the facility.
  - Particular characteristics of the facility.
  - Any other relevant factors.
- (5) Independent Assessment – Independent Assessments must be planned and conducted to measure item and service quality, to measure the adequacy of work performance, and to promote improvement. Persons performing independent assessments must have sufficient authority and freedom from the line to carry out their responsibilities. Persons conducting independent assessments must be technically qualified and knowledgeable in the areas assessed. “Freedom from the line” means that the reviewers are not directly associated with the cost/budget or scheduling of the activity/facility being assessed. (Reference Criterion 10 of DOE O 414.1A.)
- (6) Item – An all-inclusive term used in the place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, or support system.
- (7) Manager – The ORO Manager.
- (8) Management Assessment – Assessments performed by management that focus on how well their own management processes are working and which are used to identify management problems that hinder the organization from achieving its objectives in accordance with quality, safety, health, and environmental requirements.
- (9) ORO Management – This refers to all positions identified on the ORO Organization Chart.
- (10) Procedure – A document that specifies or prescribes how an activity is to be performed.
- (11) Procurement Document – A business instrument intended to formalize agreements between a purchaser and a seller. Purchase requisitions, purchase orders, drawings, contracts, specifications, or instructions are used to define the requirements for a purchase.

- (12) Qualification – The knowledge and skills gained through education, learning activities, and experience that, when measured against established qualification standards, ensure that an individual is competent to perform the required functions, duties, and responsibilities of his or her job position.
- (13) Quality – The condition achieved when an item, service, or process meets or exceeds the user's requirements and expectations.
- (14) Quality Assurance – All those actions that provide confidence that quality is achieved.
- (15) Quality Assurance Program – The overall program (management system) established to assign responsibilities and authorities, define policies and requirements, and provide for the performance and assessment of work.
- (16) Quality Assurance Record – Quality assurance records furnish objective evidence of the quality of items, activities, and processes that affect quality. Quality assurance records are established based on regulatory and environmental requirements and the level of risk established for the item, activity, or process to which the records apply.
- (17) Record – A completed document or other media that provides objective evidence of a service or process.
- (18) Service – The performance of work such as design, construction, fabrication, inspection, nondestructive examination/testing, environmental qualification, equipment qualification, repair, installation, or the like.
- (19) Supplier – Any individual or organization that furnishes services in accordance with a procurement document. This is an all-inclusive term that is used in place of any of the following: vendor, seller, contractor, subcontractor, fabricator, consultant, and their subtier levels.
- (20) Training – The process of providing for/making available to an employee and placing or enrolling the employee in a planned, prepared, and coordinated program, course, curriculum, subject, system, or routine of instruction or education in scientific, professional, technical, mechanical, trade, clerical, fiscal, administrative, or other field that will improve the individual's and organization's performance and assist in achieving DOE's missions and performance goals.
- (21) Work – The process of performing a defined task or activity; for example, research and development, operations, environmental remediation, maintenance and repair, administration, software development and use, inspection, safeguards and security, or data collection and analysis.

#### 4.0 **PROGRAM**

##### A. Requirements

A written QAP must be developed, implemented, and maintained. The QAP must describe the organizational structure, functional responsibilities, levels of authority, and interfaces for those who are managing, performing, and assessing the work. The QAP must describe the management processes, including planning, scheduling, and resource considerations.

##### B. Description

- (1) The ORO QAP is a broad-based management system which ensures that ORO's missions, policies, and objectives are integrated into standard work processes. The QAP applies to every ORO organization and employee and is described in this QAPD.
- (2) The ORO organizational structure and functional responsibilities are defined in ORO M 411.1-1D, *Manual of Safety Management Functions, Responsibilities, and Authorities, Level II, for Oak Ridge Operations*. Levels of authority and interfaces are prescribed in various approved documents (e.g., ORO Implementing Procedures), which are identified in the *ORO QAPD Implementation Matrix*. An example is included as Attachment 2 of ORO O 410, Chapter III.
- (3) ORO's missions and objectives are accomplished and its policies are implemented in a reasonable, practical, and cost-effective manner. Technical standards that are developed or adopted from commercial practice are used, wherever applicable, to implement the QAPs. Employees are provided with the necessary information, tools, support, and encouragement to perform their tasks in a quality manner. In addition, employees are provided the authority to make decisions at the lowest effectual level where technical expertise is localized. By empowering employees with authority, they are encouraged to look for better, safer, and more efficient ways of accomplishing their work.
- (4) Not all items, services, and processes have the same effect on safety and reliability. The rigor with which the QAP is applied is determined using a graded approach. The graded approach focuses on plans and schedules and considers cost impacts using the following criteria:
  - Relative importance of safety and safeguards and security.
  - Magnitude of any hazard involved.
  - Programmatic mission and/or particular characteristics of the function or activity.
  - Consequences and/or probability of failure.
  - Ability to demonstrate compliance.
  - History of environmental, safety, health, and quality.
  - Impact on the environment.
  - Impact on cost and schedule.
  - Stakeholder input.
  - Any other relevant factor.

Environment, safety, health, and quality requirements are integrated at all levels of activities.

C. Responsibilities

- (1) The **Manager** is responsible for the development, approval, implementation, and maintenance of the ORO QAPD. The Manager performs QAPD development and maintenance through the Assessment and Emergency Management Division of the office of Assistant Manager for Environment, Safety, Health, and Emergency Management (AMESH). The Manager ensures implementation of the ORO QAPD.
- (2) The **Manager** reviews and approves initial submittals of contractors' QAPs submitted in accordance with 10 CFR 830, Subpart A, and any subsequent changes made thereafter on a yearly basis.
- (3) The **Manager and Assistant Managers**:
  - (a) Implement the QAP as described in this QAPD.
  - (b) Apply the QAPD to all functions and activities using a graded approach.
  - (c) Establish a management system that ensures ORO's functions and activities are properly planned and scheduled and contain the appropriate cost control considerations.
  - (d) Provide individuals with the necessary training, tools, resources, and encouragement to perform their assigned tasks.
  - (e) Structure their organizations so that quality is achieved, improved, and maintained by those responsible for performing the work (i.e., employees).
  - (f) Ensure that Office of Environment, Safety, and Health (EH)-driven issues and responses and the corrective action plans for such issues and/or EH special studies are coordinated with the ORO representative on the Headquarters Corrective Action Management Team. This representative is located in the AMESH organization and is responsible for facilitating effective ORO implementation of maintaining the EH Corrective Action Tracking System (CATS) and the Oak Ridge Issues, Open Items, and Nonconformances (ORION2) System. More detail on managing issues and corrective actions is provided in ORO O 450, Chapter VI
  - (g) Describe their organizational structure, functional responsibilities, level of authority, and interfaces in ORO M 411.1-1D.
  - (h) Establish and maintain employee job descriptions.
  - (i) Administer employee performance plans and Individual Development Plans.

- (j) Identify documents used to implement the QAP in the *ORO QAPD Implementation Matrix*. An example of the matrix is provided as Attachment 2 of ORO O 410, Chapter III.
- (4) **The Assistant Manager for Environment, Safety, Health, and Emergency Management (AMESH).**
  - (a) The AMESH develops, coordinates approval, and maintains this QADP.
  - (b) Reviews contractor QAPs and makes recommendations for approval or rejection, as requested.
- (5) **Contraction Officer's Representatives.:**
  - (a) Approve or reject contractor QAPs submitted under DOE O 414.1A.
  - (b) Forward contractor QAPs submitted under 10 CFR 830, Subpart A, to the Manager with a recommendation for approval or rejection.
- (6) **Employees** implement the ORO QAP as described in this QAPD.

## 5.0 **PERSONNEL TRAINING AND QUALIFICATION**

### A. Requirements

Personnel must be trained and qualified to ensure they are capable of performing their assigned work. Personnel must be provided continuing training to ensure that job proficiency is maintained.

### B. Description

- (1) All ORO personnel are trained and qualified to perform their assignments. The ORO Training and Qualification Program is structured to ensure the curricula address the specific needs of the employees. The program is planned and carried out using clearly defined objectives, is continuously reviewed to determine when improvements are needed or other enhancements are identified, and is upgraded as needed.
- (2) Initial/continuing training and qualification requirements are established for each job position.
- (3) Training is performed within a suitable time frame, provided in accordance with approved documents, and presented by individuals who are technically competent and qualified in the subject matter as well as instructional techniques.
- (4) Specific training activities are planned and documented and are not limited to attainment of initial qualification, but are used to stimulate the professional development of each employee.

- (5) Employee qualification requirements are specified in various approved documents/ programs (e.g., DOE Functional Area Qualification Standards and the ORO Facility Representative Training and Qualification Program) and Individual Development Plans. Employees are qualified based on satisfactory completion of required training courses and/or demonstrated proficiency.

C. Responsibilities

- (1) The **Manager and Assistant Managers** ensure employees are trained and qualified in accordance with ORO's training and qualification policies, processes, and implementing procedures.
- (2) **Division Directors:**
  - (a) Annually specify employee training, qualification, and developmental requirements.
  - (b) Ensure that employees are trained and qualified to support the goals and mission of their organization.
  - (c) Ensure employees attend annual required training and additional mandatory training, as assigned.
  - (d) Discuss training with the employee after completion to reinforce the training's applicability to the employee's duties.
  - (e) Ensure that employees are qualified in accordance with approved documents.
  - (f) Monitor employees' progress towards the completion of their training and/or qualification requirements in Individual Development Plans, if applicable, notify employees of training opportunities, and support their attendance at assigned training.
  - (g) Identify annual organizational goals to assist employees in the determining training needs.
- (3) The **Human Resources Division Director:**
  - (a) Establishes and maintains ORO's policies, processes, and procedures to train and qualify employees.
  - (b) Ensures the training provided supports the work processes as defined in this QAPD.
  - (c) Develops and manages the *ORO Annual Training Budget*.
  - (d) Serves as a formal point of contact with DOE HQ program offices and other field offices for training policies and programs.

- (e) Serves as the Authorizing Official for training documents such as the training/education request form (SF-182, "Request, Authorization, Agreement, and Certification of Training") and equivalencies.
  - (f) Identifies and evaluates the qualifications of individuals who perform training.
  - (g) Maintains the training and qualification records in accordance with quality assurance records requirements.
- (4) **Employees** obtain training and qualification in accordance with approved Individual Development Plans and ORO Training Program policies, processes and implementing procedures.

## 6.0 QUALITY IMPROVEMENT

### A. Requirements

Processes to detect and prevent quality problems must be established and implemented. Items, services, and processes that do not meet established requirements must be identified, controlled, and corrected according to the importance of the problem and the work affected. Correction must include identifying the causes of problems and working to prevent recurrence. Item characteristics, process implementation, and other quality-related information must be reviewed and the data analyzed to identify items, services, and processes needing improvement.

### B. Description

- (1) The ORO management approach to promoting continuous improvement is to maintain a culture in which every employee believes that he or she can make a difference in the quality of products and services. To ensure success, a "no fault" attitude is fostered that encourages employees to participate in solving problems and suggesting improvements.

- (2) Processes that detect and prevent quality problems are contained in various programs, such as the following:

- Issues and Corrective Action Management
- ORO Management Assessments
- Performance Assurance Assessments
- Performance Indicators
- Occurrence Reporting and Processing System

Data resulting from the above programs is reviewed and analyzed to identify items and processes needing improvement.

- (3) Quality improvement processes are documented and include guidance to identify problem causes and prevent their recurrence.

C. Responsibilities

- (1) The **Manager and Assistant Managers**:
  - (a) Establish quality improvement processes with the objective of preventing problems and promoting continuous improvement.
  - (b) Establish performance standards to promote improvement.
  - (c) Maintain a work environment in which employees can identify problems and opportunities for improvement without fear of retribution.
- (2) **Division Directors**:
  - (a) Implement quality improvement processes based on a graded approach that identifies, documents, analyzes, resolves, and follows-up on problems.
  - (b) Review and approve all problem resolutions.
- (3) **Employees** participate in the detection, prevention, and resolution of problems.

**7.0 DOCUMENTS AND RECORDS**

A. Requirements

Documents must be prepared, reviewed, approved, issued, used, and revised to prescribe processes, specify requirements, or establish design. Records must be specified, prepared, reviewed, approved, and maintained.

B. Documents Description

- (1) The ORO document control system ensures that ORO's documents that specify requirements, establish policy, or prescribe work are properly prepared, reviewed, approved, issued, used, and revised. The document control system includes the following:
  - Identification of documents to be controlled, their specified distribution, and the timeliness for distribution.
  - Assignment of responsibility for preparing, reviewing, approving, revising, and issuing documents.
  - Review of documents for adequacy, completeness, and correctness prior to approval and issuance. (Note: Individuals who were not involved in originating the document and who are technically competent in the subject matter perform the reviews.)
  - Physical protection of documents from misuse, loss, or compromise of information.

- A method of indicating the status of documents issued to ensure that only the correct documents are used.

(2) ORO processes other documents (e.g., technical standards and notices) as required.

C. Records Description

The ORO records system ensures records are specified, prepared, reviewed, approved, and maintained to accurately reflect completed work and include the following features:

- Provisions for the retention and disposition of records to satisfy the requirements of DOE O 200.1, *Information Management Program*, and the National Archives and Records Administration's methods to preclude unauthorized access to ORO records.
- Provisions for record storage areas that minimize the risk of damage from natural disasters and environmental conditions.
- Methods for maintaining record accountability.
- Provisions for the retrieval of ORO's records.
- Provisions that ensure records are legible, accurate, complete, and traceable to the activities to which they apply.

D. Responsibilities

(1) The **Manager and Assistant Managers** review and approve documents that prescribe ORO's functions and activities.

(2) **Division Directors:**

- (a) Prepare, review, approve, issue, use, and revise documents in accordance with approved documents.
- (b) Specify, prepare, review, approve, and maintain records attesting to the quality of ORO's activities in accordance with approved documents.
- (c) Establish and implement processes to retain and disposition records in accordance with DOE O 200.1.

(3) The **Human Resources Division Director** establishes processes to prepare, review, approve, issue, use, and revise documents.

(4) **ORO employees:**

- (a) Use documents and prepare records in accordance with approved documents.
- (b) Inform management of activities not prescribed or adequately addressed in

approved documents.

## 8.0 WORK PROCESSES

### A. Requirements

Work must be performed to established technical standards and administrative controls. Work must be performed under controlled conditions using approved instructions, procedures, or other appropriate means. Items must be identified and controlled to ensure their proper use. Items must be maintained to prevent their damage, loss, or deterioration. Equipment used for process monitoring or data collection must be calibrated and maintained.

### B. Description

- (1) ORO's work is planned, authorized, and performed by technically competent individuals who provide leadership, direction, and oversight. Work processes are performed using technical standards developed or adopted from commercial practice, policies, procedures, and other appropriate means and contain a level of detail commensurate with the complexity and importance of the work being performed (i.e., graded approach). Environment, safety, and health requirements are integrated into ORO's work processes.
- (2) Work is reviewed to ensure the expected level of quality is achieved and to identify areas needing improvement.

### C. Responsibilities

- (1) **The Manager, Assistant Managers, and Division Directors:**
  - (a) Ensure that work-related documents are developed, verified, validated, and approved by technically competent personnel.
  - (b) Provide employees with the necessary resources and administrative controls to perform work.
  - (c) Define acceptable work performance criteria to employees in implementing documents.
  - (c) Ensure personnel are knowledgeable of work-process requirements.
- (2) **Employees** perform work in accordance with implementing documents and are responsible for the quality of their work.

## 9.0 DESIGN

### A. Requirements

Items and processes must be designed using sound engineering/scientific principles and appropriate standards. Design work, including changes, must incorporate applicable requirements and design bases. Design interfaces must be identified and controlled. The adequacy of design products must be verified or validated by individuals or groups other than those who performed the work. Verification and validation work must be completed before approval and implementation of the design.

### B. Description

ORO designs processes (such as ISM, exemption request management, software quality assurance, etc.). ORO does not design items; however, ORO performs oversight on its contractors who design items.

## 10.0 PROCUREMENT

### A. Requirements

Procured items and services must meet established requirements and perform as specified. Prospective suppliers must be evaluated and selected on the basis of specified criteria. Processes to ensure that approved suppliers can continue to provide acceptable items and services must be established and implemented.

### B. Description

- (1) ORO procures services in accordance with DOE Acquisition Regulation and Federal Acquisition Regulation documents.
- (2) ORO's procurement processes are based on established technical and administrative criteria and include the evaluation of submitted quotations or proposals and prospective suppliers. In addition, these processes provide methods for accepting procured services (e.g., review of technical data provided, review of objective evidence for conformance to procurement documents, and evaluation of the service provided).
- (3) ORO's procurement documents identify the provisions (i.e., requirements) that must be fulfilled by the supplier. These provisions are identified based on the graded approach. ORO's procurement documents are reviewed to ensure the following provisions are included, as applicable to the service being procured:
  - Technical Requirements – Applicable technical requirements (e.g., specifications, codes, and standards) are specified in or referenced by specific DOE directives, regulations, or procedures.
  - QAP Requirements – Applicable QAP requirements are documented and depend on the type of procurement.

- Right of Access – The procurement documents specify allowances for access to the supplier's facilities and records for the purpose of evaluation.
  - Documentation Requirements – Applicable document requirements are identified.
- (4) Suppliers are monitored to ensure their performance meets procurement requirements and/or expectations and that they continue to provide acceptable services.

C. Responsibilities

(1) **Division Directors:**

- (a) Implement processes to ensure that procured items and services meet established requirements and/or expectations.
- (b) Impose appropriate controls for the selection, determination of suitability, and evaluation of suppliers. Such controls include performance requirements, review of process data, statements of work, and acceptance criteria.
- (c) Review procurement documents to ensure adherence to appropriate provisions (e.g., technical, QAP, right-of-access, and documentation).

(2) The **Procurement and Contracts Division Director** establishes and implements processes to ensure that procured items and services meet established requirements and/or expectations.

(3) The **Contracting Officer**, through the Contracting Officer's Representative:

- (a) Evaluates, selects, and uses qualified service suppliers.
- (b) Periodically assesses suppliers for acceptance using the graded approach.
- (c) Evaluates each supplier's performance to the original performance criteria to determine the effectiveness of the services provided and the supplier's ability to continually provide acceptable services.

## 11.0 INSPECTION AND ACCEPTANCE TESTING

A. Requirements

Inspection and testing of specified items, services, and processes must be conducted using established acceptance and performance criteria. Equipment used for inspections and tests must be calibrated and maintained.

B. Description

- (1) Inspection and Acceptance Testing – ORO does not perform inspection and acceptance testing of items and processes as defined by DOE O 414.1A.
- (2) Measuring and Test Equipment – ORO does not calibrate or maintain equipment used for inspections and tests as defined by DOE O 414.1A.

**12.0 MANAGEMENT ASSESSMENT**

A. Requirements

Management must assess their management processes. Problems that hinder the organization in achieving its objectives must be identified and corrected.

B. Description

- (1) ORO's management assessment process focuses on how well the QAP is working and identifies management problems that prevent effective implementation of quality, safety, and environmental 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 resource capabilities.
- (2) Problems that hinder ORO's quality, safety, and environmental goals and objectives are identified and corrected. Decisions and recommendations are promptly documented, acted upon, followed up on, and evaluated for effectiveness.

C. Responsibilities

**The Manager, Assistant Managers, and Division Directors:**

- Conduct periodic management assessments that identify management problems and ensure effective implementation of the QAP.
- Assess work processes to ensure the desired quality is being achieved.
- Ensure results are accurately documented as described in ORO O 450, Chapter VI.
- Take prompt action to document decisions in response to recommendations, follow up to ensure appropriate actions have been taken, and evaluate actions taken for effectiveness.

### 13.0 INDEPENDENT ASSESSMENT

#### A. Requirements

Independent assessments must be planned and conducted to measure item and service quality, to measure the adequacy of work performance, and to promote improvement. The group performing independent assessments must have sufficient authority and freedom from the line to carry out its responsibilities. Persons conducting independent assessments must be technically qualified and knowledgeable in the areas assessed.

#### B. Description

- (1) ORO's functions and activities (including those of the contractors) are independently assessed. These assessments expand on traditional auditing techniques and focus on implementation of the QAP, and they are intended to improve the quality and effectiveness of all of ORO's functions and activities.
- (2) Independent assessments ensure consistent application of the QAP and are not intended to reinterpret or redefine the requirements of DOE O 414.1A. 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:
  - 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 are applied, where applicable.
  - Actions are taken to improve the condition(s) causing the problem.
- (3) Independent assessment personnel meet the following criteria:
  - Are technically knowledgeable in the areas being assessed.
  - Do not have direct responsibilities in the areas 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.

#### C. Responsibilities

- (1) The **Manager** ensures that the ORO QAP and work performed under it are assessed on a periodic basis.

- (2) The **Manager, Assistant Managers, and Principal Staff** (being assessed):
  - (a) Respond to assessment results, as applicable.
  - (b) Track and resolve assessment results as described in ORO O 450, Chapter VI, and Attachment 2 of ORO O 410, Chapter III.
  - (c) Perform assessment functions as described in ORO O 450, Chapter VI.

QA Criteria	QAPD Section	Implementing Documents	ORO Lead Organization	Implementation Status		Comments
				YES	NO	
1. Program Description	4.0	ORO O 410, Ch. III, Att. 2	AMESH		X	In progress.
		ORO O 110	AMA		X	
		ORO M 110	AMA		X	
		ORO M 411.1-1D	AMA		X	
2. Personnel Training and Qualification	5.0	ORO O 360	AMA		X	
3. Quality Improvement	6.0	ORO Performance Measures Document	AMESH		X	Needs to be developed.
		ORO Nonconforming Items, Services, and Products Document	AMESH		X	Needs to be developed.
		ORO O 450, Ch. IV	AMESH		X	In progress.
		ORO O 410, Ch. III	AMESH		X	In progress.
		ORO O 230	AMESH		X	
		ORO O 240	AMA		X	
4.a. Documents	7.0	ORO Document Control Document	AMA		X	Needs to be developed.
4.b. Records	7.0	ORO Records Management Document	AMA		X	Needs to be developed.
5. Work Processes	8.0	ORO Procedure on Procedures	AMA		X	Needs to be developed.
		Specific ORO Directives and Procedures	Various		X	
6. Design	9.0	ORION2 System Design Document	AMESH	X		
		ORION2 Functional Design Document	AMESH	X		
7. Procurement	10.0	ORO O 540	AMA		X	
		N/A				
8. Inspection and Testing	11.0					
9. Management Assessment/Self-Assessment	12.0	ORO O 450, Ch. VI	AMESH		X	In progress.
10. Independent Assessment	13.0	ORO O 450, Ch. VI	AMESH		X	In progress.

\* The current version of this document is available on the ORO internal web site.

### **Safety Issue Corrective Action Process**

1. OBJECTIVE. To establish a uniform process and associated responsibilities that apply Department of Energy (DOE) quality assurance criteria to the resolution of safety issues.
2. GENERAL REQUIREMENTS.
  - a. ORO line managers perform the following:
    - (1) Correct safety issues (i.e., quality problems) according to the importance of the problem and the work affected. These issues may be identified by self-assessment, independent assessment, internal assessment, occurrence reports, accident investigations, walkthroughs, or other documented sources.
    - (2) Develop and implement corrective actions, as appropriate, for these safety issues. The corrective actions must be tracked to closure and trended as described in paragraph (3c) below and in ORO O 450, Chapter VI.
    - (3) Ensure that contractors within their purview implement, track, and trend the approved corrective actions, as appropriate.
    - (4) Apply this process to safety issue identification, Corrective Action Plan (CAP) development, as appropriate, and tracking actions to closure.
    - (5) Corrective actions plans for EM facilities must also comply with EM Policy Memorandum, POLICY FOR CONTENT AND IMPLEMENTATION OF CORRECTIVE ACTION PLANS (CAP), dated October 4, 2001.
    - (6) Corrective action plans developed in response to findings generated by the Headquarters Office of Independent Oversight and Performance Assurance must also conform to the process and requirements contained in DOE O 470.2B.
  - b. The Assistant Manager for Environment, Safety, Health and Emergency Management (AMESH) is responsible for overall program administration for Oak Ridge Issues, Open Items, and Nonconformances (ORION2) System by performing the following:
    - (1) Overall coordination and administration for ORION2 System and software quality assurance in conjunction with the Information Resources Management Division.  
  
NOTE: Each Assistant Manager is responsible for his/her data in the ORION2 System and for timely completion of corrective actions
    - (2) Monthly tracking, trending and analysis reports for the Oak Ridge Operations (ORO) Manager.
    - (3) Training, as necessary, for the ORION2 System in conjunction with the Training and Development Group.

3. SAFETY ISSUE IDENTIFICATION AND RESOLUTION PROCESS.

- a. Safety Issue Identification. These functions are the responsibility of those performing the review/assessment/investigation.
- (1) Assessments, investigations, and reviews will be conducted in accordance with ORO O 450, Chapter VI; ORO O 450, Chapter V; ORO O 220, Chapter X; and program implementing procedures.
  - (2) For formal assessments, each safety issue will be clearly described in a final report. Safety issues will express the specific nature of the condition in a clear, concise, direct manner that will allow the assessed organization to translate it into corrective actions. As appropriate, safety issues will be tied to nonconformance with the relevant environment, safety, and health requirements or DOE/ORO directives (e.g., specific DOE Orders, regulatory requirements, DOE Acquisition Regulation provisions, or DOE P 450.4)
  - (3) Verify the factual accuracy of the reported findings with representatives of the assessed organization(s).
  - (4) Provide the formal, approved assessment report simultaneously to the manager of the assessed organization and the Contracting Officers Representative (COR), as appropriate.
- b. Corrective Action Plan (CAP) Development. The ORO line manager must prepare a CAP to address the safety issues raised in a formal assessment/investigation report by performing the following. (This process of tracking the safety issue can also be followed when a safety issue is identified that does not require a CAP.)
- (1) The ORO line manager prepares a single, comprehensive CAP to address the safety issues contained in a single report.
  - (2) The CAP must include actions to correct the safety issues (e.g., a clear variance from established requirements), determine the causes of each issue, and prevent recurrence of the issues.
  - (3) The CAP must describe the basis for the disposition of each identified safety issue. The ORO line manager may determine that no action will be taken in response to a given issue. In this case, the CAP must describe the basis for this determination and demonstrate how safety will be maintained.
  - (4) The CAP must indicate the following for each safety issue requiring specific corrective actions:
    - Description of the corrective actions used to resolve the issue;
    - Responsible manager and individual;
    - Expected date of completion;

- How it will be tracked to closure (e.g., CATS, ORION2 System, or contractor's system); and
- The mechanism for independent verification of closure, if applicable.

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

c. CAP Approval and Tracking.

- (1) The applicable Assistant Manager must complete a CAP and obtain approval from the appropriate approval authority (frequently the HQ Program Office) within 60 days of the issuance of the assessment/investigation report.
- (2) The applicable line manager is responsible for ensuring that the assessment-related issues and actions are documented and entered into the appropriate tracking system within 10 working days of receiving approval of the CAP
- (3) The AMESH is responsible for preparing a monthly report for ORO senior management on the status of corrective actions. This report is pulled from the ORION2 System and/or the CATS. Information in this report tracks and trends corrective actions across ORO.
- (4) A key component of the assessment process is an effective tracking and follow-up system. Most contractors and DOE elements use an electronic database to continuously update a prioritized list of improvements and corrections and to track their resolution. The tracking and resolution of independent oversight evaluations performed by EH-2 and OA are required by DOE O 414.1A. CATS is available at the following internet address: <http://tis-nt.eh.doe.gov/ism/cats.html>. Actions to be tracked in CATS include findings from the following:
  - Assessment Reports issued by EH-2 and OA;
  - Type A Accident Investigations;
  - OA Emergency Management Assessments;
  - High Efficiency Particulate Air Filter Line Management Self-Assessments; and
  - Nuclear Criticality Safety Line Management Self-Assessments.

Corrective actions deemed by line management will be tracked in ORION2 System. The ORO issues management system, ORION2, is available at the following internet address: <http://www-internal.oro.doe.gov/esq/orion2/index.htm>. DOE must ensure that ORO contractors perform their own tracking and trending as part of their comprehensive assessment programs.

- d. CAP Implementation. The ORO line manager must implement the approved CAP, complete the associated corrective actions, and track and trend the issues and actions.

- e. CAP Verification. The ORO line manager is responsible for requesting an independent verification when necessary. If independent verification is necessary, this verification must be performed by persons with sufficient independence from those who performed the work described in the CAP.
  
- f. Effectiveness Review. The ORO line managers or the AMESH may review completed corrective actions for adequacy in resolving the original safety issue. When the CAP has not resolved the original safety issue, the new safety issue should be identified and entered into the ORION2 System for resolution, as appropriate.