UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 2 7 2018

OFFICE OF
AIR AND RADIATION

Martin Navarrete
Acting Quality Assurance Manager
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, New Mexico 88221-3090

Dear Mr. Navarrete:

The U.S. Environmental Protection Agency is transmitting results of the EPA's audit of the quality assurance (QA) program of the U.S. Department of Energy's (DOE's) Management and Operations contractor, Nuclear Waste Partnership, LLC. The EPA conducted this audit on February 13–15, 2018, at the Waste Isolation Pilot Plant (WIPP) site and at the Carlsbad Field Office (CBFO) in Carlsbad, New Mexico. The purpose of the audit was to verify implementation of Nuclear Waste Partnership's QA program relative to the requirements of American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA) Standard NQA-1-1989, "Quality Assurance Program Requirements for Nuclear Facilities." Nuclear Waste Partnership is responsible for ensuring that WIPP operations, including characterization of transuranic (TRU) wastes as performed by the Central Characterization Program (CCP), are performed in compliance with the requirements of NQA-1-1989.

During this audit, the EPA audit team reviewed documents and records provided by Nuclear Waste Partnership and interviewed applicable Nuclear Waste Partnership personnel in Carlsbad, New Mexico. The EPA QA auditors evaluated the Nuclear Waste Partnership QA program against the NQA-1-1989 elements listed below to ensure compliance with EPA regulations at Title 40 of the Code of Federal Regulations (40 CFR) 194.22:

- Element 1, "Organization."
- Element 2, "Quality Assurance Program."
- Element 4, "Procurement Document Control."
- Element 6, "Document Control."
- Element 7, "Control of Purchased Items and Services."
- Element 16, "Corrective Action."
- Element 17, "Records."

The EPA audit team did not identify any findings or concerns during the audit. Based on this audit, the EPA audit team determined that the Nuclear Waste Partnership QA program continues to comply with these NQA-1-1989 elements and continues to have sufficient independence, authority and resources to verify the quality of items and activities that are important to long-term isolation of TRU waste.

If you have any questions regarding this QA audit report, please contact Jerry Ellis at (202) 564-2766 or ellis.jerry@epa.gov.

Sincerely,

Tom Peake
Director
Center for Waste Management and Regulations

One enclosure

cc:
Betsy Forinash, DOE HQ
Alton Harris, DOE HQ
Todd Shrader, CBFO Manager
Jeff Carswell, CBFO Deputy Manager
Dennis Miehls, CBFO QA
Ricardo Maestas, NMED
Jon Edwards, EPA ORIA Director
Lee Ann B. Veal, EPA RPD Director
Rick White, EPA RPD Deputy Director
Jerry Ellis, EPA RPD QA Coordinator
Jennifer Mosser, EPA ORIA QA Manager
Jon Walsh, EPA HQ
Raymond Lee, EPA HQ
Nick Stone, EPA Region 6
Site Documents

EPA AIR eDOCKET NO: EPA-HQ-OAR-2001-0012-0476

EPA AUDIT OF THE NUCLEAR WASTE PARTNERSHIP LLC QUALITY ASSURANCE PROGRAM

AUDIT NO. AUD-NWP-FEB-2018

FEBRUARY 13–15, 2018

U. S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RADIATION AND INDOOR AIR
CENTER FOR WASTE MANAGEMENT AND REGULATIONS
WASHINGTON, DC 20460

MARCH 2018

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TABLES

ATTACHMENTS

ACRONYMS AND ABBREVIATIONS

ASNT	American Society for Nondestructive Testing
ASME	American Society of Mechanical Engineers
CAR	corrective action report
CBFO	Carlsbad Field Office
CCP	Central Characterization Program
CDL	controlled document location
CFR	Code of Federal Regulations
CTAC	Carlsbad Field Office Technical Assistance Contractor
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
HVAC	heating, ventilation and air conditioning
IFMS	Integrated Financial Management System
M&TE	measuring and test equipment
NQA	nuclear quality assurance
NTP	National TRU Program
NWP	Nuclear Waste Partnership LLC
OHB	operator handbook
OUO	Official Use Only
PRCN	purchase requisition change notice
QA	quality assurance
QAPD	Quality Assurance Program Description
RCA	root cause analysis
RH	remote-handled
RIDS	WIPP Records Inventory and Disposition Schedule
STR	subcontract technical representative
TRU	transuranic
UCNI	unclassified controlled nuclear information
UPS	uninterruptible power supply
WIPP	Waste Isolation Pilot Plant
WJC West	William Jefferson Clinton West
WRA	WIPP Records Archive

1.0 EXECUTIVE SUMMARY

This report provides the results of the U.S. Environmental Protection Agency's audit of the quality assurance (QA) program of the U.S. Department of Energy's (DOE's) Management and Operations contractor, Nuclear Waste Partnership, LLC. The EPA conducted this audit on February 13–15, 2018, at the Waste Isolation Pilot Plant (WIPP) site and at the Carlsbad Field Office (CBFO) in Carlsbad, New Mexico. The purpose of the audit was to verify implementation of Nuclear Waste Partnership's QA program relative to the requirements of American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA) Standard NQA-1-1989, "Quality Assurance Program Requirements for Nuclear Facilities."[1] Nuclear Waste Partnership is responsible for ensuring that WIPP operations, including characterization of transuranic (TRU) wastes as performed by the Central Characterization Program (CCP), are performed in compliance with the requirements of NQA-1-1989.

During this audit, the EPA audit team reviewed documents and records provided by Nuclear Waste Partnership and interviewed applicable Nuclear Waste Partnership personnel in Carlsbad, New Mexico. A list of personnel who participated in the audit is in Attachment A. For each NQA-1-1989 element evaluated, the EPA used checklists, which are located in Attachments B–H. The EPA QA auditors evaluated the Nuclear Waste Partnership QA program against the NQA-1-1989 elements listed below to ensure compliance with EPA regulations at Title 40 of the Code of Federal Regulations (40 CFR) 194.22:

- Element 1, "Organization."
- Element 2, "Quality Assurance Program."
- Element 4, "Procurement Document Control."
- Element 6, "Document Control."
- Element 7, "Control of Purchased Items and Services."
- Element 16, "Corrective Action."
- Element 17, "Records."

Based on this audit, the EPA audit team determined that the Nuclear Waste Partnership QA program continues to comply with these NQA-1-1989 elements and continues to have sufficient independence, authority and resources to verify the quality of items and activities that are important to long-term isolation of TRU waste.

The EPA audit team did not identify any findings or concerns during the audit.

This document and audit activities will be made available to the public through the EPA's Air eDocket number EPA-HQ-OAR-2001-0012-0476 located at the Air and Radiation Docket in the EPA Docket Center, WJC West, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C., 20460.

[1] The regulation at 40 CFR 194.22(a)(1) states that DOE's QA program shall comply with the requirements of the 1989 version of the ASME NQA-1 standard.

2.0 BACKGROUND

2.1 Regulatory Background

In accordance with 40 CFR 194.22(a)(1), the EPA requires DOE to adhere to a QA program that implements the requirements of the following NQA standards developed by ASME:

- ASME NQA-1-1989.
- ASME NQA-2a-1990 Addenda, Part 2.7, to ASME NQA-2-1989.
- ASME NQA-3-1989 (excluding section 2.1(b) and (c) and section 17.1).

The regulation at 40 CFR 194.22(a)(2) requires DOE to implement its QA plan for all items and activities that are important to the long-term isolation of TRU waste within the WIPP. The regulation at 40 CFR 194.22(e) provides the EPA with the authority to conduct audits to verify the proper establishment and implementation of QA programs for the WIPP.

2.2 Organizational Background

CBFO is responsible for management of the WIPP. This responsibility includes oversight of the characterization and emplacement of TRU waste at the WIPP disposal site near Carlsbad, New Mexico. As stated in the Quality Assurance Program Document,[2] "The mission of the CBFO is to protect human health and the environment by operating the WIPP for safe disposal of TRU waste and by establishing an effective system for management of TRU waste from generation to disposal."

Nuclear Waste Partnership is DOE's contractor that manages and operates the WIPP. A division of Nuclear Waste Partnership, CCP, contracts with most of the DOE TRU waste generator sites to characterize the waste intended for emplacement at the WIPP. The Nuclear Waste Partnership QA program and Quality Assurance Program Description[3] support all Nuclear Waste Partnership activities, including WIPP site operations and CCP waste characterization activities. A copy of the Nuclear Waste Partnership organizational chart is in Attachment I.

3.0 PURPOSE AND SCOPE

The purpose of this EPA audit was to verify that the Nuclear Waste Partnership QA program continues to properly implement selected elements of ASME NQA-1-1989. The scope of this EPA audit was limited to QA oversight of activities that are important to the long-term isolation of TRU waste as represented by records and documentation provided by Nuclear Waste Partnership.

[2] U.S. Department of Energy Carlsbad Field Office, Quality Assurance Program Document, DOE/CBFO-94-1012, Revision 13, April 2017.

[3] Nuclear Waste Partnership, Quality Assurance Program Description, WP 13-1, Revision 38, February 6, 2018.

4.0 DEFINITIONS

Finding: A determination that a requirement of the NQA standards has not been properly established or implemented. A finding requires a response.

Concern: A judgment that a finding may occur in the future and, depending on the magnitude of the issue, may or may not require a response.

Quality: The reliability of a specific item or activity that is important to the long-term isolation of TRU waste in the WIPP. "Quality achievement" is the responsibility of operational groups that directly produce such an item or perform such an activity. "Quality assurance/verification" is the responsibility of QA groups that do not produce such an item or perform such an activity.

5.0 EPA AUDIT LOGISTICS

5.1 Location

On February 13–15, 2018, the EPA conducted a QA audit of the Nuclear Waste Partnership QA program at the WIPP site and at CBFO's offices in Carlsbad, New Mexico. On December 20, 2017, the EPA provided the initial scope to the Office of Quality Assurance, which then shared it with Nuclear Waste Partnership QA personnel. The EPA provided a revised scope correcting the audit location to Nuclear Waste Partnership QA personnel on January 8, 2018 (see Attachment J).

5.2 Team Members

Table 1 lists all members of the EPA audit team, along with each person's affiliation and function during this audit.

Table 1. EPA Quality Assurance Audit Team Members

Audit Team Member	Audit Responsibility	Affiliation
Jerry Ellis	EPA QA Audit Team Leader	EPA
Kira Darlow	Lead QA Auditor	SC&A, Inc.
Patrick Kelly	QA Auditor	SC&A, Inc.

Attachment A lists all other personnel who participated in this audit.

6.0 PERFORMANCE OF THE AUDIT

As recovery from the February 2014 events within the repository continues, ongoing QA oversight of the operations is especially important. During this audit, the EPA evaluated selected aspects of the Nuclear Waste Partnership QA program to ensure that it continues to have the appropriate independence, authority and resources to oversee all Nuclear Waste Partnership operations.

The EPA audit team (1) reviewed records provided by Nuclear Waste Partnership,

(2) interviewed Nuclear Waste Partnership personnel, including CCP personnel, to evaluate implementation of the requirements of ASME NQA-1-1989, and (3) gathered objective evidence to document the proper implementation of the following elements[4]:

- Element 1, "Organization."
- Element 2, "Quality Assurance Program."
- Element 4, "Procurement Document Control."
- Element 6, "Document Control."
- Element 7, "Control of Purchased Items and Services."
- Element 16, "Corrective Action."
- Element 17, "Records."

The EPA documented applicable reviewed records and objective evidence in NQA-1-1989-element-specific checklists. The checklists are included in this report in Attachments B–H.

7.0 FINDINGS AND CONCERNS

The EPA audit team did not identify any findings or concerns relative to the NQA-1-1989 elements listed above.

8.0 CONCLUSIONS

The EPA audit team reviewed records and documentation and interviewed personnel to determine the continued compliance of the Nuclear Waste Partnership QA program with ASME NQA-1-1989. Based on the sample of records, documentation and elements reviewed during this audit, the EPA determined that Nuclear Waste Partnership continues to comply with the ASME NQA-1-1989 elements listed above and continues to have sufficient independence, authority and resources to verify the quality of items and activities that are important to long-term isolation of TRU waste.

[4] All elements of the NQA-1-1989 standard are summarized in Attachment K.

9.0 REFERENCES

10323-QA-2017, Inspection Plan for Q-Card Purchase of Calibration Services for Digital Pressure Gauge, October 2017

CBFO MP 3.1, Corrective Action Reports, Revision 15, September 15, 2017

CCP Graded Approach 17-069-0, February 2017

CCP Graded Approach 17-070-0, February 28, 2017

CCP Graded Approach 17-071-0, March 3, 2017

CCP Qualification Card: Chad Gerlock, Non-Destructive Assay Operator

CCP Qualification Card: Connie Walker, Acceptable Knowledge Expert

CCP Qualification Card: Dan Remington, Non-Destructive Assay Expert Analyst

CCP Qualification Card: Ron Whitson, Dose-to-Curie Operator

CCP Qualification Card: Steve Schaffer, Acceptable Knowledge Expert

CCP Qualification Card: Susan Anderson, Dose-to-Curie Operator

CCP Qualification Card: Tim Barton, Non-Destructive Assay Operator

CCP-PO-043, CCP Interface Document Preparation Document, Revision 0, September 9, 2015

CCP-PO-047, CCP Training and Qualification Program Document, Revision 2, November 8, 2017

CCP-PO-049, CCP Training Implementation Matrix, Revision 1, October 19, 2017

CCP-QP-001, CCP Graded Approach, Revision 9, May 15, 2017

CCP-QP-002, CCP Training and Qualification Plan, Revision 44, November 8, 2017

CCP-QP-005, CCP TRU Nonconforming Item Reporting and Control, Revision 25, July 29, 2015

CCP-QP-008, CCP Records Management, Revision 26, June 24, 2016

CCP-QP-010, CCP Document Preparation, Approval, and Control, Revision 27, December 15, 2016

CCP-QP-016, CCP Control of Measurement and Test Equipment, Revision 23, April 10, 2017

CCP-QP-026, CCP Inspection Control, Revision 15, July 10, 2017

CCP-QP-028, CCP Records Filing, Inventorying, Scheduling, and Dispositioning, Revision 17, March 1, 2017

CCP-QP-041, CCP Job Needs Analysis and Design, Revision 2, October 19, 2017

CCP-QP-042, CCP Project Level Training and Qualification, Revision 1, May 17, 2017

CCP-QP-043, CCP Operations Level Training and Qualification, Revision 1, May 17, 2017

CCP-TP-140, CCP Equipment Maintenance, Revision 13, September 15, 2017

Copy of CCP General Records Inventory and Disposition Schedule, last reviewed July 2017

Demonstration of IFMS showing PR 0000506003, PO506003, PR 0000506983, PO506983, PR 0000508131, February 13, 2018

EA09CN3005-1-0, Management Level Determination Worksheet Blank Form, Revision 4, July 19, 2016

EA09CN3005-2-0, Graded Approach Controls Worksheet Blank Form, Revision 3, July 19, 2016

EA13QA05-4-0, NWP Quality Assurance Personnel Indoctrination and Training Record Blank Form, Revision 10, July 20, 2016

EA15PC3041-2-0, Approval/Variation Request (AR/VR) Working Copy, Revision 5, May 30, 2013

EA15PC3041-3-0, Approval/Variation Request Comment Sheet Blank Form, Revision 1, June 12, 2017

EA15PC3044-2-0, Q-Credit Card Master Inspection Plan Working Copy, Revision 3, May 28, 2013

EA15PC3609-3-0, Certificate of Conformance Working Copy, Revision 3, May 16, 2013

EA15PS3002-3-0, External Document Blank Form, Revision 0, November 13, 2015

EA15PS3002-4-0, Controlled Document Cancellation Request Blank Form, Revision 0, November 13, 2015

EA15PS3002-5-0, Interactive Review Documentation Blank Form, Revision 0, November 13, 2015

EA15PS3002-6-0, Field Revision Documentation Blank Form, Revision 2, August 19, 2016

EA15PS3002-8-0, Procedure Change Request Blank Form, Revision 0, March 16, 2017

EA15RM3002-1-0, WIPP Records Inventory Work Sheet Blank Form, Revision 4, March 26, 2015

EA15RM3002-2-0, WIPP Records Inventory and Disposition Schedule (RIDS) Working Copy, Revision 2, May 22, 2012

EA15RM3005-1-0, Records Transmittal and Index for Correspondence Blank Form, Revision 1, June 10, 2015

EA15RM3005-2-0, Records Transmittal and Index for Records Blank Form, Revision 1, June 10, 2015

General employee training materials to verify that there is information about existence of QA program in training to all employees

IFMS demonstration of line item description from purchase requisition for coveralls, February 15, 2018

Letter from National Archives and Records Administration to Margaret Gee, Records Management Field Officer, DOE CBFO, November 22, 2017

Letter from The Fire Protection International Consortium, Inc. to Michael Fox, TFE Inc., June 26, 2017

M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015

NWP Inter-Office Correspondence: Transmittal and Closure of NWP Quality Assurance Surveillance S-18-15, Effectiveness Review of the Corrective Actions Associated with WIPP Form 16-002, February 1, 2018

NWP Organizational Chart, Revision 0, December 20, 2017

NWP Procurement Instructions Desktop Guide, Revision 5, January 3, 2018

NWP QA Memo No. QA:15:00230, designating the WIPP Site Level III ASNT

PO411979, Terms and Conditions Excerpt

PO506003 Hard Copy File, Observed February 13, 2018

POC-QGR-0001, Q-List and Category Assessments for the Standard Pipe Overpacks, Revision 0, August 2012

QAP-104, Apparent Cause Analysis and Corrective Action Planning, Revision 3, not dated

Qualification Card: Bethany J. Jones, Non-Destructive Examination

Qualification Card: Brandye Pyeatt, Quality Assurance Surveillor

Qualification Card: E. Ciszek, Quality Assurance Lead Auditor

Qualification Card: L. Klingler, Quality Assurance Lead Auditor

Qualification Card: Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination

Qualification Card: Tommy R. Estes, Quality Assurance Receipt Inspector

Qualified Supplier List, February 15, 2018

Record copies of AR/VR411979-13, AR/VR411979-14B, AR/VR411979-14B-1

SCA-QGR-0002, Q-List and Category Assessments for the SC-30G2 Shielded Container, Revision 0, September 2017

SCA-QGR-0006, Q-List and Category Assessments for the SC-55N5 Shielded Container, Revision 0, January 2018

Statement of Work for 044 Hyster Forklift Diagnostics and Repair, Nuclear Waste Partnership, Revision 0, November 9, 2017

Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities, Purchase Requisition 509901, Revision 2, November 2017

Statement of Work for Plugging and Abandonment of Groundwater Monitoring Wells and Replacement Well Drilling, Nuclear Waste Partnership, Revision 2, Draft

Statement of Work for Site Elevators Inspection and Maintenance, Nuclear Waste Partnership, Revision 0, Draft

Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2, Nuclear Waste Partnership, Revision 0, February 8, 2018

Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300), PO 506989, Nuclear Waste Partnership, Revision 0, April 2017

Statement of Work for UPS and HVAC Replacement in Building 451, Nuclear Waste Partnership, Revision 0, August 10, 2017

Surveillance Report, Surveillance Number S-18-15, January 18–23, 2018

Training Completion Report, Bethany J. Jones, prepared on February 13, 2018

Training Completion Report, Brandye Pyeatt, prepared on February 15, 2018

Training Completion Report, Steve D. Tanner, prepared on February 15, 2018

Training Completion Report, Tommy R. Estes, prepared on February 15, 2018

WIPP Form WF-16-002 (Closed)

WIPP Form WF-17-1301 (Open)

WIPP Form WF-17-243 (Closed)

WIPP Form WF-18-026 (Open)

WIPP Forms: List of Open WIPP Forms as of February 16, 2018, prepared by Bob Billet

WP 08-PT3006, Quality Lists and Quality Category Assessments, Revision 4, March 17, 2016

WP 09-CN3005, Graded Approach to Application of QA Controls, Revision 8-FR1, November 3, 2016

WP 13-1, Nuclear Waste Partnership LLC Quality Assurance Program Description, Revision 38, February 6, 2018

WP 13-QA.03, Quality Assurance Independent Assessment Program, Revision 26, July 18, 2016

WP 13-QA.04, Quality Assurance Department Administrative Program, Revision 22, July 20, 2016

WP 13-QA.06, Quality Assurance Department Qualification and Certification of Nondestructive Examination Personnel, Revision 10, April 30, 2015

WP 13-QA.37, Quality Assurance Inspection Plan for RH Facility Canisters, Revision 3, January 21, 2013

WP 13-QA.42, Quality Assurance Inspection Plan for the Pipe Overpack (standard, S100, S200, and S300), Revision 4, June 1, 2017

WP 13-QA1003, Quality Assurance Receipt/Source Inspections, Revision 27, June 28, 2017

WP 13-QA3007, CBFO Assessment Activity and Corrective Action Coordination, Revision 13, May 9, 2017

WP 13-QA3012, Supplier Evaluation/Qualification, Revision 23, January 31, 2018

WP 15-CA.01, Contractor Assurance System Program Description, Revision 2, October 17, 2016

WP 15-CA1009, Causal Analysis, Revision 0, August 23, 2016

WP 15-GM1002, Issues Management Processing of WIPP Forms, Revision 6, June 28, 2017

WP 15-MD3102, Event Investigation, Revision 10, March 28, 2017

WP 15-PA.02, Causal Analysis Guidance, Revision 2, May 29, 2014

WP 15-PC.01, NWP Cost Estimating Guide, Revision 3, March 18, 2016

WP 15-PC.02, NWP Work Authorization Process, Revision 1, July 13, 2016

WP 15-PC3041, Approval/Variation Request Processing, Revision 12, June 12, 2017

WP 15-PC3042, Credit Card Purchases, Revision 17, February 4, 2016

WP 15-PC3044, Quality Credit Card Purchases, Revision 10, March 20, 2014

WP 15-PC3605, Proposal, Competition, Identification, Selection, Evaluation, and Award, Revision 6, March 15, 2016

WP 15-PC3608, Subcontract Technical Representative Program Manual, Revision 8, August 16, 2016

WP 15-PC3609, Preparation of Purchase Requisitions, Revision 30, March 17, 2016

WP 15-PS.01, Procedure Program, Revision 2-FR1, April 27, 2017

WP 15-PS.2, Procedure Writers Guide, Revision 15, January 31, 2018

WP 15-PS3002, Controlled Document Processing, Revision 41-FR1, May 9, 2017

WP 15-PS3004, Procedure Validation and Verification, Revision 2, July 10, 2017

WP 15-PS3006, Processing NWP Forms and Electronic Attachments, Revision 6, October 25, 2012

WP 15-PS3103, Document Distribution, Revision 18, September 15, 2016

WP 15-RM, WIPP Records Management Program, Revision 10, September 28, 2017

WP 15-RM3002, Records Filing, Inventorying, Scheduling, and Dispositioning, Revision 9, April 4, 2017

WP 15-RM3003, Disposal of Nonpermanent Records in Office, Revision 4, April 4, 2017

WP 15-RM3005, Records Transfer and Retrieval, Revision 9, April 4, 2017

WP 15-RM3006, Records Inventory and Disposition Schedule Review and Approval, Revision 6, April 4, 2017

WP 15-RM3007, Receipt of Records Containers into the WIPP Records Archive, Revision 14, June 23, 2017

WP 15-RM3011, Retrieving Records from the WIPP Records Archive, Revision 8, April 4, 2017

WP 15-RM3013, Destruction of Nonpermanent Records, Revision 5, November 24, 2015

ATTACHMENT A: PERSONNEL PARTICIPATING IN AUDIT MEETINGS

Name	Organization/Role
A.J. Fisher	Source One Consultants/Support Services Manager
Albert Taylor	NWP/Corrective Action
Andy Jacobs	TFE, Inc./Project Manager
Becky Brown	NWP/Contractor Assurance
Berry Pace	CCP/Records and Issues Management Manager
Bob Billett	NWP/Corrective Action Program Manager
Bruce Covert	NWP/President
Cindy Kruger	NWP/Training and Procedures Manager
D. Steve Tanner	NWP/Quality Assurance
Daniel Wade	CCP/Project Manager
David Crnich	NWP/Industrial Hygiene
Dendee Groves	TFE, Inc./Records Analyst
Don McBride	NWP/Engineering Manager
Donny Baker	Iron Mountain/Operations Manager
Gary Helton	NWP/Quality Assurance Engineer
Heidi Lowe	NWP/Training Specialist
Joseph Pruitt	NWP/Project Engineering Manager
Larry Klingler	NWP/Quality Assurance
Luis Santana	CCP/Conformance Management Engineer
M.A. Davis	NWP/Quality Assurance Engineer
Mark Trygstad	NWP/Procurement
Martin Navarrete	CBFO/Quality Assurance Acting Manager
Mary McDaniel	NWP/Quality and Contractor Assurance Manager
Michael Fox	TFE, Inc./Records Manager
Michael Hendrickson	NWP/Quality and Contractor Assurance
Michelle Billett	CCP/Training Specialist
Mike Ramirez	CCP/Certification Manager
Pam Hester	NWP/Chief Financial Officer
Ricardo Chavez	CTAC/Observer
Scott Burns	NWP/NTP/Packaging Engineer
Sheila Pearcy	TFE, Inc./CCP Records Manager
Sonia Gonzalez	CCP/Technical Editor
Tammy Reynolds	NWP/Project Management Office
Veronica Ballew	NWP/Quality Assurance Program and Supplier Quality Manager
Victoria Holt	NWP/Procedure Writer
W.G. Helton	NWP/Quality Oversight Programs

ATTACHMENT B: ASME NQA-1-1989, ELEMENT 1, CHECKLIST

NQA-1 ELEMENT: No. 1 with Supplement 1S-1, *Organization* EPA AUDITORS: J. Ellis, K. Darlow, P. Kelly DATE: February 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
Basic Requirements		
1. Are the organizational structure, functional responsibilities, levels of authority and lines of communication documented for activities affecting quality?	Y	WP 13-1, Revision 38, section 1.1, Quality Assurance Program and Organization; section 1.1.8, Establishment and Maintenance of Quality Assurance Programs NWP Organizational Chart, Revision 0
2. Do persons or organizations responsible for performing quality assurance functions have sufficient authority, access to work areas and organizational freedom to: • Identify quality problems? • Initiate, recommend, or provide solutions to quality problems through designated channels? • Verify implementation of solutions? • Assure that further processing, delivery, installation or use is controlled until proper disposition of a nonconformance, deficiency or unsatisfactory condition has occurred?	Y	WP 13-1, Revision 38, section 1.1.5, Quality and Contactor Assurance Manager; section 1.3.4, Corrective Action; section 1.3.6, Recurring Conditions Adverse to Quality NWP Organizational Chart, Revision 0 Interviews with CCP and NWP Quality and Contractor Assurance personnel:
3. Do persons or organizations responsible for performing quality assurance functions have direct access to responsible management at a level where appropriate action can be effected?	Y	WP 13-1, Revision 38, section 1.1.5, Quality and Contactor Assurance Manager; section 1.1.8, Establishment and Maintenance of Quality Assurance Programs NWP Organizational Chart, Revision 0 Interviews with NWP and CCP Quality and Contractor Assurance personnel
4. Do persons or organizations responsible for performing quality assurance functions report to a management level that provides the required authority and organizational freedom, including sufficient independence from cost and schedule considerations?	Y	WP 13-1, Revision 38, section 1.1.5, Quality and Contactor Assurance Manager NWP Organizational Chart, Revision 0 Interviews with Quality and Contractor Assurance personnel
Supplementary Requirements (1S-1)		
1. Are the organizational structure and the responsibility assignments such that: • Quality is achieved and maintained by those who have been assigned responsibility for performing work? • Quality achievement is verified by persons or organizations not directly responsible for performing the work?	Y	WP 13-1, Revision 38, section 1.1.3, Line Management (Section Managers); section 1.1.4, Employee; section 1.1.5, Quality and Contactor Assurance Manager; section 2.1.1, Work Interviews with NWP and CCP personnel
2. Do the individuals or organizations responsible for establishing and executing a quality assurance program delegate any or all of the	Y	WP 13-1, Revision 38, section 1.1.6, Delegation of Work Interviews with NWP and CCP personnel

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
work to others, and, if so, do the individuals or organizations retain responsibility for the quality assurance program?		
3. Is responsibility for the control of further processing, delivery, installation or operation of nonconforming items designated in writing?	Y	WP 13-1, Revision 38, section 1.1.5, Quality and Contactor Assurance Manager; section 1.3.2, Quality Problems; section 1.3.3, Nonconforming Items
4. Where more than one organization is involved in the execution of quality assurance activities, is the responsibility and authority of each organization clearly established and documented?	Y	WP 13-1, Revision 38, section 1.1.10, Interfaces; WP 13-1, Revision 38, section 1.1.8, Establishment and Maintenance of Quality Assurance Programs Interviews with NWP and CCP personnel
5. Are the external interfaces between organizations, as well as the internal interfaces between organizational units, documented? Are interface responsibilities defined and documented?	Y	WP 13-1, Revision 38, section 1.1.10, Interfaces Interviews with NWP personnel Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300)

*Y: The referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N: The referenced documents do not adequately define, describe, address or satisfy the NQA-1-1989 requirement.
I: The EPA requires additional information to determine if the referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N/A: The specific NQA-1-1989 requirement is not applicable to the subject QA program.

ATTACHMENT C: ASME NQA-1-1989, ELEMENT 2, CHECKLIST

NQA-1 ELEMENT: No. 2 with Supplements 2S-1, 2S-2, 2S-3 and 2S-4, *Quality Assurance Program* EPA AUDITORS: J. Ellis, K. Darlow, P. Kelly DATE: February 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
Basic Requirements		
1. Is a documented quality assurance program planned, implemented and maintained in accordance with NQA-1?	Y	WP 13-1, Revision 38, Introduction; section 1.1.8, Establishment and Maintenance of Quality Assurance Programs Interviews with NWP personnel
2. Does the quality assurance program identify the activities and items to which it applies?	Y	WP 13-1, Revision 38, section 1.1.8.2, Applicability
3. Does the quality assurance program provide control over activities affecting quality to an extent consistent with their importance?	Y	WP 13-1, Revision 38, section 1.1.8.1, Grading Items and Processes and Applying Quality Assurance Controls WP 09-CN3005, Revision 8-FR1, Graded Approach to Application of QA Controls WP 08-PT3006, Revision 4, Quality Lists and Quality Category Assessments CCP-QP-001, Revision 9, CCP Graded Approach EA09CN3005-1-0, Revision 4, Management Level Determination Worksheet Blank Form EA09CN3005-2-0, Revision 3, Graded Approach Controls Worksheet Blank Form CCP Graded Approaches 17-069-0, 17-070-0 and 17-071-0 SCA-QGR-0002 SCA-QGR-0006 POC-QGR-0001
4. Was the quality assurance program established at the earliest time consistent with the schedule for accomplishing the activities?	Y	NWP officially took over the management and operations contract on 10/1/2012. NWP management adopted the previous QA program in full and has updated as necessary and appropriate.
5. Does the quality assurance program provide for the planning and accomplishment of activities affecting quality under suitably controlled conditions, which include the use of appropriate equipment, suitable environmental conditions for accomplishing the activity and assurance that prerequisites for the given activity have been satisfied?	Y	WP 13-1, Revision 38, section 1.1.12, Planning Work; section 2.1, Work Processes WP 13-QA.04, Revision 22, section 3.0, Special Processes; section 4.0, QA Program Responsibilities CCP-QP-010, Revision 27, section 2.3, Document Format Requirements, paragraph 2.3.3 WP 08-PT3006, Revision 4, Quality Lists and Quality Category Assessments
6. Does the quality assurance program provide for any special controls, processes, test equipment, tools and skills to attain the required quality and for verification of quality?	Y	WP 13-1, Revision 38, section 1.1.12, Planning Work WP 13-QA.04, Revision 22, section 3.0, Special Processes; section 4.0, QA Program Responsibilities

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		CCP-QP-010, Revision 27, section 2.3, Document Format Requirements, paragraph 2.3.3 WP 08-PT3006, Revision 4, Attachment 2
7. Does the quality assurance program provide for indoctrination and training of personnel performing activities affecting quality?	Y	WP 13-1, Revision 38, section 1.2, Personnel Qualification and Training WP 13-QA.04, Revision 22, section 2.0, Training and Indoctrination WP 13-QA.04, Revision 22, Attachment 4, Requirements for Quality Assurance Surveillors WP 13-QA.06, Revision 10, Quality Assurance Department Qualification and Certification of Nondestructive Examination Personnel EA13QA05-4-0, Revision 10, NWP Quality Assurance Personnel Indoctrination and Training Record Blank Form QAP-104, Revision 3, Apparent Cause Analysis and Corrective Action Planning CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-041, Revision 2, CCP Job Needs Analysis and Design CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-QP-043, Revision 1, CCP Operations Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix General employee training materials to verify that there is information about existence of QA program in training to all employees (see Item 2S-1. Item 6, below)
8. Does the management of the organizations implementing the quality assurance program regularly assess the adequacy of that part of the program for which they are responsible and assure its effective implementation?	Y	WP 13-1, Revision 38, section 1.3, Quality Improvement; section 3.1, Management Assessment WP 13-QA.04, Revision 22, section 7.1, Management Assessments WP 15-PS3103, Revision 18, section 3.6.2, Annual Verification of OHB/CDL CCP-QP-002, Revision 44, CCP Training and Qualification Plan Interviews with NWP personnel
Supplementary Requirements (2S-1)		
1. Does the responsible organization designate those activities that require qualified inspection and test personnel and minimum requirements for such personnel?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors CCP-QP-010, Revision 27, section 2.3, Document Format Requirements, paragraph 2.3.3[F]

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		WP 08-PT3006, Revision 4, Quality Lists and Quality Category Assessments WP 13-QA1003, Revision 27, section on Prerequisite Actions WP 13-QA.37, Revision 3, Quality Assurance Inspection Plan for RH Facility Canisters WP 13-QA.42, Revision 4, Quality Assurance Inspection Plan for the Pipe Overpack (standard, S100, S200, and S300) CCP-QP-016, Revision 23, CCP Control of Measurement and Test Equipment CCP-QP-026, Revision 15, CCP Inspection Control Qualification Card for Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination Training Completion Reports for Steve D. Tanner, prepared on February 15, 2018; Tommy R. Estes, prepared on February 15, 2018
2. Has the responsible organization established written procedures for the qualification of inspection and test personnel to assure that only qualified personnel are permitted to perform inspection and test activities?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors CCP-QP-016, Revision 23, CCP Control of Measurement and Test Equipment CCP-QP-026, Revision 15, CCP Inspection Control
3. Do personnel selected for performing inspection and test activities have the experience or training commensurate with the scope, complexity or special nature of the activities?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2 – Requirements for Inspectors CCP-QP-016, Revision 23, CCP Control of Measurement and Test Equipment CCP-QP-026, Revision 15, CCP Inspection Control
4. Have provisions been made for the indoctrination of personnel regarding the technical objectives and requirements of the applicable codes and standards and the quality assurance program elements that are to be employed?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, section 2.0, Training and Indoctrination CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-041, Revision 2, CCP Job Needs Analysis and Design CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
5. Has the need for a formal training program been determined? Are training activities, including on-the-job training, conducted to qualify personnel who perform inspections and tests?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors, Training CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-041, Revision 2, CCP Job Needs Analysis and Design CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix
6. Are the capabilities of a candidate for certification initially determined by a suitable evaluation of the candidate's education, experience, training and either test results or capability demonstration?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors, Certification Qualification Cards: Bethany J. Jones, Non-Destructive Examination; Brandye Pyeatt, Quality Assurance Surveillor; E. Ciszek, Quality Assurance Lead Auditor; Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination; Tommy R. Estes, Quality Assurance Receipt Inspector; L. Klingler, Quality Assurance Lead Auditor Qualified Supplier List, February 15, 2018 Training Completion Reports: Bethany J. Jones, prepared on February 13, 2018; Brandye Pyeatt, prepared on February 15, 2018; Steve D. Tanner, prepared on February 15, 2018; Tommy R. Estes, prepared on February 15, 2018
7. Is the job performance of inspection and test personnel reevaluated at periodic intervals not to exceed three years?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors; Attachment 2, Requirements for Inspectors, Maintenance of Qualification Qualification Card for Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination Training Completion Reports for Steve D. Tanner, prepared on February 15, 2018; Tommy R. Estes, prepared on February 15, 2018
8. If it is determined at any time that the capabilities of an individual are not in accordance with the qualification requirements specified for the job, is that person removed from that activity until such time as the required capability has been demonstrated?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors, Maintenance of Qualification

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
9. Is a person reevaluated for a required inspection or test capability if activities have not been performed in his or her qualified area for a period of one year?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors, Maintenance of Qualification Qualification Card for Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination Training Completion Report for Steve D. Tanner, prepared on February 15, 2018
10. Is the qualification of personnel certified in writing in an appropriate form, including: • Employer's name? • Identification of person being certified? • Activities certified to perform? • Basis used for certification, including: – Education, experience, indoctrination and training? – Test results, where applicable? – Results of capability demonstration? • Results of periodic evaluation? • Results of physical examinations, when required? • Signature of employer's designated representative who is responsible for such certification? • Date of certification and date of certification expiration?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors, Certification CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-016, Revision 23, CCP Control of Measurement and Test Equipment CCP-QP-026, Revision 15, CCP Inspection Control
11. Has the responsible organization identified any special physical characteristics needed in the performance of each activity, including the need for initial and subsequent physical examination?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, Attachment 2, Requirements for Inspectors, Physical Examination
12. Does the employer establish and maintain records of personnel qualification?	Y	WP 13-1, Revision 38, section 2.4.1.1, Qualification of Inspection and Test Personnel WP 13-QA.04, Revision 22, section 1.0, Introduction CCP-QP-016, Revision 23, CCP Control of Measurement and Test Equipment CCP-QP-026, Revision 15, CCP Inspection Control Qualification Cards: Bethany J. Jones, Non-Destructive Examination; Brandye Pyeatt, Quality Assurance Surveillor; E. Ciszek, Quality Assurance Lead Auditor;

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination; Tommy R. Estes, Quality Assurance Receipt Inspector; L. Klingler, Quality Assurance Lead Auditor Training Completion Reports: Bethany J. Jones, prepared on February 13, 2018; Brandye Pyeatt, prepared on February 15, 2018; Steve D. Tanner, prepared on February 15, 2018; Tommy R. Estes, prepared on February 15, 2018
Supplementary Requirements (2S-2)		
1. Does the quality assurance program provide for the qualification of nondestructive examination personnel to the American Society of Nondestructive Testing Recommended Practice No. SNT-TC-1A, issued June 1980?	Y	WP 13-1, Revision 38, section 2.4.1.2, Qualification of Nondestructive Examination Personnel WP 13-QA.06, Revision 10, section 1.0, Introduction NWP QA Memo No. QA:15:00230, designating the WIPP Site Level III ASNT Qualification Card for Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination Training Completion Report for Steve D. Tanner, prepared on February 15, 2018
2. Has the responsible organization established written procedures for the control and administration of nondestructive examination personnel training, examination and certification?	Y	WP 13-1, Revision 38, section 2.4.1.2, Qualification of Nondestructive Examination Personnel WP 13-QA.06, Revision 10, section 4.4, Training Programs; section 4.5, Examinations; section 4.6, Certification
3. Does the employer establish and maintain records of personnel qualification?	Y	WP 13-1, Revision 38, section 2.4.1.2, Qualification of Nondestructive Examination Personnel WP 13-QA.06, Revision 10, section 1.0, Introduction; section 4.9, [Nondestructive Testing] File Contents Requirements
Supplementary Requirements (2S-3)		
1. Has the responsible auditing organization established the qualifications for audit personnel and the requirements for the use of technical specialists to accomplish the auditing of quality assurance programs?	Y	WP 13-1, Revision 38, section 3.2.3, Independent Assessment Team Selection; section 3.2.4, Assessment Personnel Qualifications WP 13-QA.03, Revision 26, section 4.3, QA Independent Assessment Planning CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix
2. Is the competence of audit personnel developed by one or more of the following methods:	Y	WP 13-1, Revision 38, section 3.2.4.3, Independent Assessor Qualifications WP 13-QA.03, Revision 26, section 4.3, QA Independent Assessment Planning

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
• Orientation to provide a working knowledge and understanding of NQA-1 and the auditing organization's procedures for implementing audits and reporting results? • Training programs to provide general and specialized training in audit performance? • On-the-job training, guidance and counseling under the direct supervision of a lead auditor?		WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors; Attachment 2, Requirements for Inspectors, Maintenance of Qualification CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-016, Revision 23, CCP Control of Measurement and Test Equipment CCP-QP-026, Revision 15, CCP Inspection Control
3. Does a prospective lead auditor have the capability to communicate effectively, both in writing and orally? Has the lead auditor's employer attested to these skills in writing?	Y	WP 13-1, Revision 38, section 3.2.4.1.2, Communications Skills WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Communication Skills CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix
4. Are prospective lead auditors trained, as necessary, to assure their competence in auditing skills, including training in the following areas: • Knowledge and understanding of NQA-1 and other nuclear-related codes, standards, regulations and regulatory guides? • General structure of quality assurance programs as a whole and applicable elements as defined by NQA-1? • Auditing techniques of examining, questioning, evaluating and reporting; methods of identifying and following up on corrective action items; and closing out audit findings? • Audit planning in the quality-related functions for the following activities: design, purchasing, fabrication, handling, shipping, storage, cleaning, erection, installation, inspection, testing, statistics, nondestructive examination, maintenance, repair, operation, modification of nuclear facilities or associated components, and safety aspects of the nuclear facility? • On-the-job training to include applicable elements of the audit program?	Y	WP 13-1, Revision 38, section 3.2.4.1.3, Lead Auditor Training WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Training Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015 CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
5. Is a prospective lead auditor required to have participated in a minimum of five quality assurance audits within a period of time not to exceed three years prior to the date of qualification, one audit of which shall be a nuclear quality assurance audit within one year prior to qualification?	Y	WP 13-1, Revision 38, section 3.2.4.1.4, Audit Participation WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Audit Participation Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015
6. Is a prospective lead auditor required to pass an examination that evaluates his or her comprehension of and ability to apply the body of knowledge identified under the training requirements (listed under question 4 above)?	Y	WP 13-1, Revision 38, section 3.2.4.1.5, Lead Auditor Examination WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Examination Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015
7. Do lead auditors maintain their proficiency through one or more of the following: • Regular and active participation in the audit process? • Review and study of codes, standards, procedures, instructions and other documents related to quality assurance program and program auditing? • Participation in training programs?	Y	WP 13-1, Revision 38, section 3.2.4.1.7, Lead Auditor Proficiency Maintenance WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Proficiency Maintenance CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015
8. Does management conduct documented annual assessments of lead auditors to extend their qualification, require retraining or require requalification?	Y	WP 13-1, Revision 38, section 3.2.4.1.7, Lead Auditor Proficiency Maintenance WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Proficiency Maintenance
9. Are lead auditors who fail to maintain their proficiency for a period of two years or more required to requalify?	Y	WP 13-1, Revision 38, section 3.2.4.1.7, Lead Auditor Proficiency Maintenance WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Proficiency Maintenance
10. Is the employer responsible for training auditors?	Y	WP 13-1, Revision 38, section 1.1.2, Department Management; section 1.2.1,

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		Qualification
11. Does the responsible auditing organization select and assign personnel who are independent of any direct responsibility for performance of the activities that they will audit?	Y	WP 13-1, Revision 38, section 3.2.3, Independent Assessment Team Selection; Appendix A, Glossary, *Independent Assessment*
12. Does the lead auditor, prior to commencing the audit, concur that assigned audit personnel collectively have experience or training commensurate with the scope, complexity or special nature of the activities to be audited?	Y	WP 13-1, Revision 38, section 3.2.3, Independent Assessment Team Selection Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015
13. Is the employer responsible for the development and administration of the examination for a lead auditor? If the employer delegates this activity to an independent certifying agency, does the employer retain responsibility for the conformance of the examination and its administration to the NQA-1-1989 standard?	Y	WP 13-1, Revision 38, section 3.2.4.1.5, Lead Auditor Examination WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Examination Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015
14. Does the employer establish and maintain records of personnel qualifications for auditors and lead auditors performing audits?	Y	WP 13-1, Revision 38, section 1.2, Personnel Qualification and Training; section 1.2.1, Qualification WP 13-QA.04, Revision 22, section 1.0 Introduction; section 2.3, Specific Requirements CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor M. Kaplan lead auditor qualification card 2016, QA indoctrination and surveillance qualification card in 2015
15. Does the employer certify each lead auditor as being qualified to lead audits, including documentation of the following by the certification: • Employer's name?	Y	WP 13-1, Revision 38, section 3.2.4.1.6, Lead Auditor Certification WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Certification CCP-QP-002, Revision 44, CCP Training and Qualification Plan

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
• Lead auditor's name? • Date of certification or recertification? • Basis of qualification (i.e., education, experience, communication skills, training, examination, etc.)? • Signature of employer's designated representative who is responsible for such certification?		CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor
16. Are the records for each lead auditor maintained and updated annually?	Y	WP 13-1, Revision 38, section 3.2.4.1.7, Lead Auditor Proficiency Maintenance WP 13-QA.04, Revision 22, Attachment 1, Requirements for Lead Auditors, Proficiency Maintenance Qualification Cards: E. Ciszek, Quality Assurance Lead Auditor; L. Klingler, Quality Assurance Lead Auditor
Supplementary Requirements (2S-4)		
1. Are personnel identified for indoctrination or training?	Y	WP 13-1, Revision 38, section 1.2.2, Training WP 13-QA.04, Revision 22, section 2.0, Training and Indoctrination CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix
2. Is the extent of indoctrination and training commensurate with the following: • The scope, complexity and nature of the activity? • The education, experience and proficiency of the person?	Y	WP 13-1, Revision 38, section 1.1.3, Line Management (Section Managers); section 1.2.2, Training WP 13-QA.04, Revision 22, section 2.1, Responsibilities; section 2.2, General Requirements; section 2.3, Specific Requirements Qualification Cards: Bethany J. Jones, Non-Destructive Examination; Brandye Pyeatt, Quality Assurance Surveillor; E. Ciszek, Quality Assurance Lead Auditor; Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination; Tommy R. Estes, Quality Assurance Receipt Inspector
3. Are personnel indoctrinated in the following subjects as they relate to a particular function: • General criteria, including applicable codes, standards and company procedures? • Applicable quality assurance program elements? • Job responsibilities and authority?	Y	WP 13-1, Revision 38, section 1.2.2, Training WP 13-QA.04, Revision 22, section 2.0, Training and Indoctrination CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		Qualification Cards: Bethany J. Jones, Non-Destructive Examination; Brandye Pyeatt, Quality Assurance Surveillor; E. Ciszek, Quality Assurance Lead Auditor; Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination; Tommy R. Estes, Quality Assurance Receipt Inspector CCP Qualification Cards: Chad Gerlock, Non-Destructive Assay Operator; Connie Walker, Acceptable Knowledge Expert; Dan Remington, Non-Destructive Assay Expert Analyst; Ron Whitson, Dose-to-Curie Operator; Steve Schaffer, Acceptable Knowledge Expert; Susan Anderson, Dose-to-Curie Operator; Tim Barton, Non-Destructive Assay Operator
4. Is training provided, if needed, to: • Achieve initial proficiency? • Maintain proficiency? • Adapt to changes in technology, methods or job responsibilities?	Y	WP 13-1, Revision 38, section 1.2.2, Training WP 13-QA.04, Revision 22, section 2.0, Training and Indoctrination; Attachment 1, Requirements for Lead Auditors; Attachment 2, Requirements for Inspectors; Attachment 3, Authorization Card(s) for Quality Engineers at WIPP; Attachment 4, Requirements for Quality Assurance Surveillors CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix Qualification Cards: Bethany J. Jones, Non-Destructive Examination; Brandye Pyeatt, Quality Assurance Surveillor; E. Ciszek, Quality Assurance Lead Auditor; Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination; Tommy R. Estes, Quality Assurance Receipt Inspector CCP Qualification Cards: Chad Gerlock, Non-Destructive Assay Operator; Connie Walker, Acceptable Knowledge Expert; Dan Remington, Non-Destructive Assay Expert Analyst; Ron Whitson, Dose-to-Curie Operator; Steve Schaffer, Acceptable Knowledge Expert; Susan Anderson, Dose-to-Curie Operator; Tim Barton, Non-Destructive Assay Operator
5. Do records of the implementation of indoctrination and training take the form of: • Attendance sheets? • Training logs? • Personnel training records?	Y	WP 13-1, Revision 38, section 1.2.2, Training WP 13-QA.04, Revision 22, section 1.0, Introduction; section 2.0, Training and Indoctrination; section 2.3, Specific Requirements; Attachment 1, Requirements for Lead Auditors; Attachment 2, Requirements for Inspectors; Attachment 3, Authorization Card(s) for Quality Engineers at WIPP; Attachment 4, Requirements for Quality Assurance Surveillors CCP-QP-002, Revision 44, CCP Training and Qualification Plan CCP-QP-042, Revision 1, CCP Project Level Training and Qualification

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		CCP-PO-047, Revision 2, CCP Training and Qualification Program Document CCP-PO-049, Revision 1, CCP Training Implementation Matrix Qualification Cards: Bethany J. Jones, Non-Destructive Examination; Brandye Pyeatt, Quality Assurance Surveillor; E. Ciszek, Quality Assurance Lead Auditor; Steve D. Tanner, Quality Assurance Engineer, ASNT Certified, Level III, Non-Destructive Examination; Tommy R. Estes, Quality Assurance Receipt Inspector; L. Klingler, Quality Assurance Lead Auditor Training Completion Reports: Bethany J. Jones, prepared on February 13, 2018; Brandye Pyeatt, prepared on February 15, 2018; Steve D. Tanner, prepared on February 15, 2018; Tommy R. Estes, prepared on February 15, 2018 CCP Qualification Cards: Chad Gerlock, Non-Destructive Assay Operator; Connie Walker, Acceptable Knowledge Expert; Dan Remington, Non-Destructive Assay Expert Analyst; Ron Whitson, Dose-to-Curie Operator; Steve Schaffer, Acceptable Knowledge Expert; Susan Anderson, Dose-to-Curie Operator; Tim Barton, Non-Destructive Assay Operator

*Y: The referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N: The referenced documents do not adequately define, describe, address or satisfy the NQA-1-1989 requirement.
I: The EPA requires additional information to determine if the referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N/A: The specific NQA-1-1989 requirement is not applicable to the subject QA program.

ATTACHMENT D: ASME NQA-1-1989, ELEMENT 4, CHECKLIST

NQA-1 ELEMENT: No. 4 with Supplement 4S-1, *Procurement Document Control*

EPA AUDITORS: J. Ellis, K. Darlow, P. Kelly

DATE: February 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
Basic Requirements		
1. Are procurement documents required to reference or include design bases or quality requirements?	Y	WP 13-1, Revision 38, section 2.1.4, Suspect/Counterfeit Items; section 2.3.2.1, Procurement Document Preparation, paragraph 2; section 6.3, Software Procurement, paragraph A WP 15-PC3609, Revision 30, section 1.4, Assigning Quality Requirements; section 4.1, Line Item Description, paragraph 4.1.4; section 4.2, Technical Information, paragraphs 4.2.2, 4.2.5 and 4.2.6 WP 15-PC3044, Revision 10, section 3.3, Inspection Plan
2. Do procurement documents require suppliers to have a quality assurance (QA) program consistent with the requirements of NQA-1-1989?	Y	WP 13-1, Revision 38, section 2.3.2.1, Procurement Document Preparation, paragraph 3 WP 15-PC3609, Revision 30, section 1.4, Assigning Quality Requirements WP 15-PC3044, Revision 10, section 3.3, Inspection Plan WP 13-QA3012, Revision 23, section 5.2, New Supplier Evaluation Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Terms and Conditions from PO411979
Supplementary Requirements (4S-1)		
1. Do procurement documents include the following provisions as deemed necessary by the purchaser: • Scope of work? • Technical requirements? • QA program requirements? • Right of access? • Documentation requirements? • Requirement for documenting nonconformances? • Spare and replacement parts?	Y	WP 13-1, Revision 38, section 2.3.2.1, Procurement Document Preparation WP 15-PC3609, Revision 30, section 1.4, Assigning Quality Requirements; section 4.2, Technical Information Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300) Statement of Work for UPS and HVAC Replacement in Building 451 Statement of Work for 044 Hyster Forklift Diagnostics and Repair Statement of Work for Site Elevators Inspection and Maintenance

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		Statement of Work for Plugging and Abandonment of Groundwater Monitoring Wells and Replacement Well Drilling
2. Is the review of procurement documentation documented?	Y	WP 13-1, Revision 38, section 2.3.2.2, Procurement Document Review and Approval, paragraph 1 WP 15-PC3609, Revision 30, section 7.0, QA Review Activities, paragraph 7.1.4 Demonstration of IFMS showing PR 0000506003, PO506003, PR 0000506983, PO506983, PR 0000508131, February 13, 2018
3. Are changes to procurement documents subject to the same degree of control as used in the preparation of the original documents?	Y	WP 13-1, Revision 38, section 2.3.2.2, Procurement Document Review and Approval, paragraph 1 WP 15-PC3609, Revision 30, Attachment 3, General Information, section 1.0, PRCN Change Types, paragraph 1.2, Technical Change Demonstration of IFMS showing PR 0000506003, PO506003, PR 0000506983, PO506983, PR 0000508131, February 13, 2018

*Y: The referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N: The referenced documents do not adequately define, describe, address or satisfy the NQA-1-1989 requirement.
I: The EPA requires additional information to determine if the referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N/A: The specific NQA-1-1989 requirement is not applicable to the subject QA program.

ATTACHMENT E: ASME NQA-1-1989, ELEMENT 6, CHECKLIST

NQA-1 ELEMENT: No. 6 with Supplement 6S-1, *Document Control* EPA AUDITORS: J. Ellis, K. Darlow, P. Kelly DATE: February 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
Basic Requirements		
1. Are the preparation, issue and change of documents that specify quality requirements or prescribe activities affecting quality controlled?	Y	WP 13-1, Revision 38, section 1.4, Documents WP 15-PS.01, Revision 2-FR1, Procedure Program WP 15-PS3002, Revision 41-FR1, Controlled Document Processing WP 15-PS3004, Revision 2, Procedure Validation and Verification WP 15-PS3006, Revision 6, Processing NWP Forms and Electronic Attachments CCP-QP-010, Revision 27, CCP Document Preparation, Approval, and Control
2. Are such documents, including changes thereto, reviewed for adequacy and approved for release by authorized personnel?	Y	WP 13-1, Revision 38, section 1.4, Documents WP 15-PS.01, Revision 2-FR1, section 6.5, Procedure Approval WP 15-PS3002, Revision 41-FR1, section 2.0, New Document and Major Revision Development, Review, and Approval WP 15-PS3004, Revision 2, Procedure Validation and Verification WP 15-PS3006, Revision 6, Processing NWP Forms and Electronic Attachments CCP-QP-010, Revision 27, section 2.2, Quality Assurance (QA) Requirements, paragraphs 2.2.2 and 2.2.3; section 3.10, Review and Approval of CCP Documents
Supplementary Requirements (6S-1)		
1. Are documents controlled to assure that correct and applicable documents are available at the location where they are to be used?	Y	WP 13-1, Revision 38, section 1.4.2, Document Control and Distribution WP 15-PS.01, Revision 2-FR1, section 6.6, Procedure Availability WP 15-PS3002, Revision 41-FR1, Introduction; section 4.0, Document Issuance WP 15-PS3004, Revision 2, Procedure Validation and Verification WP 15-PS3006, Revision 6, Processing NWP Forms and Electronic Attachments WP 15-PS3103, Revision 18, Document Distribution CCP-QP-010, Revision 27, section 2.4, Document Distribution and Control; section 4.2, Document Use

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
2. Does the document control system provide for: • Identification of documents to be controlled and their specified distribution? • Identification of personnel, positions or organizations responsible for preparing, reviewing, approving and issuing documents? • Review of documents for adequacy, completeness and correctness prior to approval and issuance?	Y	WP 13-1, Revision 38, section 1.4.1, Document Preparation, Review and Approval WP 15-PS.01, Revision 2-FR1, Procedure Program WP 15-PS3002, Revision 41-FR1, section 2.0, New Document and Major Revision Development, Review, and Approval; section 4.0, Document Issuance WP 15-PS3004, Revision 2, Procedure Validation and Verification WP 15-PS3006, Revision 6, Processing NWP Forms and Electronic Attachments WP 15-PS3103, Revision 18, Document Distribution CCP-QP-010, Revision 27, section 1.1, Scope; section 3.0, Responsibilities NWP QA Memo No. QA:15-00230, designating the WIPP Site NDE Level III ASNT Personnel
3. Are major changes to documents reviewed and approved by the same organization that performed the original review and approval, or is another organization specifically designated to review and approve the major change?	Y	WP 13-1, Revision 38, section 1.4.3, Changes to Documents WP 15-PS.01, Revision 2-FR1, section 6.3, Procedure Revision WP 15-PS.2, Revision 15, Procedure Writers Guide WP 15-PS3002, Revision 41-FR1, section 2.0, New Document and Major Revision Development, Review, and Approval WP 15-PS3004, Revision 2, Procedure Validation and Verification WP 15-PS3103, Revision 18, Document Distribution WP 15-RM, Revision 10, WIPP Records Management Program WP 15-RM3003, Revision 4, Disposal of Nonpermanent Records in Office WP 15-RM3005, Revision 9, Records Transfer and Retrieval, Revision 9 WP 15-RM3006, Revision 6, Records Inventory and Disposition Schedule Review and Approval CCP-QP-010, Revision 27, section 2.2, Quality Assurance (QA) Requirements, paragraph 2.2.3
4. Does the organization reviewing major changes to documents have access to pertinent background data or information upon which to base its approval?	Y	WP 13-1, Revision 38, section 1.4.1, Document Preparation, Review and Approval; section 1.4.3, Changes to Documents WP 15-PS.01, Revision 2-FR1, section 6.4, Procedure Review WP 15-PS3002, Revision 41-FR1, section 2.0, New Document and Major Revision Development, Review, and Approval CCP-QP-010, Revision 27, section 3.10, Review and Approval of CCP Documents
5. Are minor changes to documents defined (i.e., those changes that do not require a review as a major change)? Are the persons who can authorize a minor change clearly delineated?	Y	WP 13-1, Revision 38, section 1.4.3, Changes to Documents WP 15-PS3002, Revision 41-FR1, Definitions, Minor Change; section 3.0, Major

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		Document Revision Development, Review, and Approval WP 15-PS.2, Revision 15, Procedure Writers Guide WP 15-PS3004, Revision 2, Procedure Validation and Verification WP 15-PS3103, Revision 18, Document Distribution CCP-QP-010, Revision 27, section 4.5, Minor Changes to CCP Documents

*Y: The referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N: The referenced documents do not adequately define, describe, address or satisfy the NQA-1-1989 requirement.
I: The EPA requires additional information to determine if the referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N/A: The specific NQA-1-1989 requirement is not applicable to the subject QA program.

ATTACHMENT F: ASME NQA-1-1989, ELEMENT 7, CHECKLIST

NQA-1 ELEMENT: No. 7 with Supplement 7S-1, *Control of Purchased Items and Services* EPA AUDITORS: J. Ellis, K. Darlow, P. Kelly DATE: February 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
Basic Requirements		
1. Does the control of purchased items and services provide for: • Source evaluation and selection (as applicable)? • Evaluation of objective evidence of quality furnished by the supplier? • Source inspection or audit? • Examination of items or services upon delivery or completion?	Y	WP 13-1, Revision 38, section 2.3.1.1, Procurement Planning; section 2.3.4, Methods of Acceptance of Items and Services WP 15-PC3605, Revision 6, Proposal, Competition, Identification, Selection, Evaluation, and Award WP 15-PC3041, Revision 12, Approval/Variation Request Processing WP 15-PC3608, Revision 8, Subcontract Technical Representative Program Manual EA15PC3044-2-0, Revision 3, Q-Credit Card Master Inspection Plan Working Copy WP 15-PC3609, Revision 30, Preparation of Purchase Requisitions WP 13-QA3012, Revision 23, Supplier Evaluation/Qualification WP 13-QA1003, Revision 27, Quality Assurance Receipt/Source Inspections
Supplementary Requirements (7S-1)		
1. Does procurement planning determine the following: • What is to be accomplished? • Who is to accomplish it? • How it is to be accomplished? • When it is to be accomplished?	Y	WP 13-1, Revision 38, section 2.3.1, Procurement Planning Requirements Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300) Statement of Work for UPS and HVAC Replacement in Building 451 Statement of Work for 044 Hyster Forklift Diagnostics and Repair Statement of Work for Site Elevators Inspection and Maintenance Statement of Work for Plugging and Abandonment of Groundwater Monitoring Wells and Replacement Well Drilling
2. Does procurement planning provide for the integration of: • Procurement document preparation, review and change control? • Selection of procurement sources? • Bid evaluation and award? • Purchaser control of supplier performance?	Y	WP 13-1, Revision 38, section 2.3.1.1, Procurement Planning WP 15-PC3609, Revision 30, Preparation of Purchase Requisitions WP 13-QA3012, Revision 23, Supplier Evaluation/Qualification WP 15-PC3605, Revision 6, Proposal, Competition, Identification, Selection, Evaluation, and Award Statement of Work for Site Fire Protection System Upgrade Construction Services

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
• Verification (surveillance, inspection or audit) activities by the purchaser, including notification for hold and witness points? • Control of nonconformances? • Corrective action? • Acceptance of item or service? • Quality assurance records?		Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300) Statement of Work for UPS and HVAC Replacement in Building 451 Statement of Work for 044 Hyster Forklift Diagnostics and Repair Statement of Work for Site Elevators Inspection and Maintenance Statement of Work for Plugging and Abandonment of Groundwater Monitoring Wells and Replacement Well Drilling
3. Are the measures for evaluation and selection of procurement sources documented? Do they include one or more of the following: • Evaluation of the supplier's history, including current capability, of providing an identical or similar product that performs satisfactorily in actual use? • Supplier's current quality records supported by documented qualitative and quantitative information that can be objectively evaluated? • Supplier's technical and quality capability as determined by a direct evaluation of its facilities and personnel and the implementation of its quality assurance program?	Y	WP 13-1, Revision 38, section 2.3.1.2, Supplier Selection WP 13-QA3012, Revision 23, section 1.0, Introduction; Attachment 5A, Supplier Evaluation/Requalification WP 15-PC3605, Revision 6, section 2.4.1, Selection Process, paragraph A, Initial Evaluation Interviews with NWP Procurement and QA Assessment Personnel
4. Are the following items considered in bid evaluations: • Technical considerations? • Quality assurance requirements? • Supplier's personnel? • Supplier's production capability? • Supplier's past performance? • Alternates? • Exceptions?	Y	WP 13-1, Revision 38, section 2.3.1.3, Proposal/Bid Evaluation, paragraph 1 WP 15-PC3605, Revision 6, section 2.4.1, Selection Process, paragraph A, Initial Evaluation Interviews with NWP Procurement Personnel
5. Are the following items considered in a supplier's performance evaluation: • Establishing an understanding between purchaser and supplier of	Y	WP 13-1, Revision 38, section 2.3.3, Supplier Performance Evaluation Requirements WP 15-PC3041, Revision 12, Approval/Variation Request Processing

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
the provisions and specifications of the procurement documents? • Requiring the supplier to identify planning techniques and processes to be used in fulfilling procurement document requirements? • Reviewing supplier documents that are generated or processed during activities fulfilling procurement requirements? • Identifying and processing necessary change information? • Establishing a method of document information exchange between purchaser and supplier? • Establishing the extent of source surveillance and inspection activities?		WP 15-PC3608, Revision 8, section 5.0, Responsibilities; section 7.2.4, Quality; section 7.3.6, Subcontractor Performance Evaluation Reports WP 13-QA3012, Revision 23, section 5.3, Supplier Periodic Evaluations; Attachment 5A, Supplier Evaluation/Requalification; Attachment 5B, Supplier Evaluation – Buyer Response; Attachment 5C, Supplier Evaluation Requestor/STR Response Interviews with NWP Procurement Personnel
6. Are verification activities of the supplier's quality performance planned, verified and documented by qualified personnel?	Y	WP 13-1, Revision 38, section 2.3.4.1, Source Verification WP 13-QA3012, Revision 23, section 5.2, New Supplier Evaluation; section 5.5, Requalification of Suppliers Interviews with NWP Procurement and QA Assessment Personnel Qualified Supplier List, February 15, 2018
7. Are supplier-generated documents controlled, handled and approved in accordance with established methods?	Y	WP 13-1, Revision 38, section 1.5, Records; section 2.3.2.1, Procurement Document Preparation, paragraph 5 WP 15-PC3041, Revision 12, Approval/Variation Request Processing EA15PC3041-2-0, Revision 5, Approval/Variation Request (AR/VR) Working Copy EA15PC3041-3-0, Revision 1, Approval/Variation Request Comment Sheet Blank Form WP 15-RM, Revision 10, WIPP Records Management Program Interviews with NWP Procurement and QA Assessment Personnel
8. Are measures established, implemented and documented to control changes to procurement documents?	Y	WP 13-1, Revision 38, section 2.3.2.2, Procurement Document Review and Approval, paragraph 1 WP 15-PC3609, Revision 30, Attachment 3, General Information, section 1.0, PRCN Change Types WP 15-PC3608, Revision 8, section 8.0, Subcontract Changes Interviews with NWP Procurement Personnel
9. Are methods established for the acceptance of an item or service being furnished by a supplier?	Y	WP 13-1, Revision 38, section 2.3.4, Methods of Acceptance of Items and Services WP 13-QA1003, Revision 27, Quality Assurance Receipt/Source Inspections

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		WP 15-PC3609, Revision 30, section 4.1, Line Item Description Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300) Statement of Work for UPS and HVAC Replacement in Building 451 Statement of Work for 044 Hyster Forklift Diagnostics and Repair Statement of Work for Site Elevators Inspection and Maintenance Statement of Work for Plugging and Abandonment of Groundwater Monitoring Wells and Replacement Well Drilling IFMS demonstration of line item description from purchase requisition for coveralls, February 15, 2018 10323-QA-2017
10. Is the supplier required to verify that the item or service being furnished complies with the procurement requirements?	Y	WP 13-1, Revision 38, section 2.3.4, Methods of Acceptance of Items and Services Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Interviews with NWP Procurement Personnel
11. Are one or more of the following methods used to accept an item or related services from a supplier: • Supplier certificate of conformance? • Source verification? • Receiving inspection? • Post-installation test? Note: Specific requirements for each of the above are addressed in NQA-1-1989, Supplement 7S-1, paragraph 8.2.	Y	WP 13-1, Revision 38, section 2.3.4.1, Source Verification; section 2.3.4.2, Receiving Inspection; section 2.3.4.3, Post-Installation Testing; section 2.3.4.4, Supplier Certificate of Conformance WP 15-PC3609, Revision 30, section 1.4, Assigning Quality Requirements, paragraph 1.4.9; section 4.1, Line Item Description, paragraph 4.1.2 EA15PC3609-3-0, Revision 3, Certificate of Conformance Working Copy WP 13-QA1003, Revision 27, Quality Assurance Receipt/Source Inspections WP 13-QA.37, Revision 3, Quality Assurance Inspection Plan for RH Facility Canisters WP 13-QA.42, Revision 4, Quality Assurance Inspection Plan for the Pipe Overpack (standard, S100, S200, and S300) Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		S300) IFMS demonstration of line item description from purchase requisition for coveralls, February 15, 2018
12. Are one or more of the following methods used to accept purchased services: • Technical verification of data produced? • Surveillance and/or audit of the activity? • Review of objective evidence for conformance to the procurement document requirements, such as certifications or stress reports?	Y	WP 13-1, Revision 38, section 2.3.4.5, Acceptance of Services WP 13-QA1003, Revision 27, section 1.0, Inspection Planning, paragraph 1.1.5 Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for UPS and HVAC Replacement in Building 451 Statement of Work for 044 Hyster Forklift Diagnostics and Repair Statement of Work for Site Elevators Inspection and Maintenance
13. Do the purchaser and supplier have documented methods for disposition of items and services that do not meet procurement document requirements?	Y	WP 13-1, Revision 38, section 2.3.5, Control of Supplier Nonconformance WP 15-PC3609, Revision 30, section 1.4, Assigning Quality Requirements, paragraph 1.4.5 WP 13-QA1003, Revision 27, section 4.0, Source Inspections, paragraph 4.1.4; section 5.0, Receipt Inspections, paragraph 5.2 Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300)
14. Do the methods in question 13 contain provisions for: • Evaluation of nonconforming items? • Submittal of a nonconformance notice to the purchaser by the supplier as directed by the purchaser? (See note below.) Does this submittal include the supplier-recommended disposition (e.g., use-as-is or repair) and technical justification? • Purchaser's disposition of the supplier's recommendation? • Verification of the implementation of the disposition • Maintenance of records of supplier-submitted nonconformances? Note: Specific requirements for nonconformances to the procurement requirements or purchaser-approved documents are	Y	WP 13-1, Revision 38, section 2.3.5, Control of Supplier Nonconformance WP 15-PC3609, Revision 30, section 1.4, Assigning Quality Requirements, paragraph 1.4.5 Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300) Interviews with NWP Procurement and Packaging Engineering Personnel

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
addressed in NQA-1-1989, Supplement 7S-1, paragraph 9(b).		

*Y: The referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N: The referenced documents do not adequately define, describe, address or satisfy the NQA-1-1989 requirement.
I: The EPA requires additional information to determine if the referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N/A: The specific NQA-1-1989 requirement is not applicable to the subject QA program.

ATTACHMENT G: ASME NQA-1-1989, ELEMENT 16, CHECKLIST

NQA-1 ELEMENT: No. 16, *Corrective Action* EPA AUDITORS: J. Ellis, K. Darlow, P. Kelly DATE: February 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
Basic Requirements		
1. Are conditions adverse to quality identified promptly and corrected as soon as practical?	Y	WP 13-1, Revision 38, section 1.3, Quality Improvement WP 15-GM1002, Revision 6, section 3.2, Limitations; section 5.2, WIPP Form Prescreening and Screening, paragraph 5.2.8 WP 13-QA3007, Revision 13, section 3.0, CBFO CAR Response QAP-104, Revision 3, Apparent Cause Analysis and Corrective Action Planning
2. In the case of a significant condition adverse to quality, is the cause of the condition determined and corrective action taken to preclude recurrence?	Y	WP 13-1, Revision 38, section 1.3.4.3, Corrective Action Planning WP 13-QA3007, Revision 13, Note 2 on page 7; Attachment 1, Example Corrective Action Plan for CBFO CARs CBFO MP 3.1, Revision 15, Attachment IV, Instructions for Completing the CAR Form WP 15-CA1009, Revision 0, Causal Analysis WP 15-PA.02, Revision 2, Causal Analysis Guidance QAP-104, Revision 3, Apparent Cause Analysis and Corrective Action Planning
3. Are the identification, cause and corrective action for significant conditions adverse to quality documented and reported to appropriate levels of management?	Y	WP 13-1, Revision 38, section 1.3.4.1, Conditions Adverse to Quality; section 1.3.4.2, Significant Conditions Adverse to Quality, paragraph 2 WP 13-QA3007, Revision 13, section 3.0, CBFO CAR Response, paragraph 3.4; Attachment 1, Example Corrective Action Plan for CBFO CARs WP 15-CA1009, Revision 0, Causal Analysis, section 6.3, Root Cause Analysis (RCA), paragraphs 6.3.11 and 6.3.12 QAP-104, Revision 3, Apparent Cause Analysis and Corrective Action Planning NWP Inter-Office Correspondence: Transmittal and Closure of NWP Quality Assurance Surveillance S-18-15, Effectiveness Review of the Corrective Actions Associated with WIPP Form 16-002, February 1, 2018 WIPP Form WF-16-002 (Closed) WIPP Form WF-17-1301 (Open) WIPP Form WF-18-026 (Open) WIPP Form WF-17-243 (Closed) WIPP Forms: List of Open WIPP Forms as of February 16, 2018, prepared by Bob Billet Surveillance Report, Surveillance Number S-18-15, January 18–23, 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
4. Is follow-up action taken to verify implementation of corrective action?	Y	WP 13-1, Revision 38, section 1.3.4.4, Corrective Action Follow-Up WP 15-GM1002, Revision 6, section 5.4, AL 1 WIPP Form Condition Resolution and Closure; section 5.6, AL 2 WIPP Form Condition Resolution and Closure; section 5.8, AL 3 WIPP Form Condition Resolution and Closure WP 15-PA.02, Revision 2, section 4, Corrective Action Plan NWP Inter-Office Correspondence: Transmittal and Closure of NWP Quality Assurance Surveillance S-18-15, Effectiveness Review of the Corrective Actions Associated with WIPP Form 16-002, February 1, 2018 WIPP Form WF-16-002 (Closed) WIPP Form WF-17-1301 (Open) WIPP Form WF-18-026 (Open) WIPP Form WF-17-243 (Closed) WIPP Forms: List of Open WIPP Forms as of February 16, 2018, prepared by Bob Billet Surveillance Report, Surveillance Number S-18-15, January 18–23, 2018
Supplementary Requirement – None		

*Y: The referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N: The referenced documents do not adequately define, describe, address or satisfy the NQA-1-1989 requirement.
I: The EPA requires additional information to determine if the referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N/A: The specific NQA-1-1989 requirement is not applicable to the subject QA program.

ATTACHMENT H: ASME NQA-1-1989, ELEMENT 17, CHECKLIST

NQA-1 ELEMENT: No. 17 with Supplement 17S-1, *QA Records* EPA AUDITORS: J. Ellis, K. Darlow, P. Kelly DATE: February 2018

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
Basic Requirements		
1. Are records that furnish documentary evidence of quality specified, prepared and maintained?	Y	WP 13-1, Revision 38, section 1.5, Records WP 15-RM, Revision 10, WIPP Records Management Program CCP-QP-010, Revision 27, section 2.3, Document Format Requirements, paragraph 2.3.3[H] CCP-QP-028, Revision 17, CCP Records Filing, Inventorying, Scheduling and Dispositioning WP 15-PC3609, Revision 30, Preparation of Purchase Requisitions WP 13-QA3012, Revision 23, Supplier Evaluation/Qualification WP 15-PC3605, Revision 6, Proposal, Competition, Identification, Selection, Evaluation, and Award PO506003 Hard Copy File
2. Are quality assurance records legible, identifiable and retrievable?	Y	WP 13-1, Revision 38, section 1.5.1, Generating QA Records WP 15-RM, Revision 10, section 2.4, Employees; section 3.1, Legibility; section 7.1, Work Activities; section 8.2, Control of Records at the WRA WP 15-PS.2, Revision 15, Procedure Writers Guide WP 15-PS3002, Revision 41-FR1, Controlled Document Processing WP 15-PS3103, Revision 18, Document Distribution WP 15-PS3004, Revision 2, Procedure Validation and Verification WP 15-PS3006, Revision 6, Processing NWP Forms and Electronic Attachments WP 15-RM3002, Revision 9, Records Filing, Inventorying, Scheduling, and Dispositioning WP 15-RM3003, Revision 4, Disposal of Nonpermanent Records in Office WP 15-RM3005, Revision 9, section 2.0, Preparation of Records for Transfer; section 6.0, Retrieval of Records from the WRA WP 15-RM3006, Revision 6, Records Inventory and Disposition Schedule Review and Approval WP 15-RM3007, Revision 14, Receipt of Records Containers into the WIPP Records Archive Record copies of AR/VR411979-13, AR/VR411979-14B, AR/VR411979-14B-1 Various graded approach and training records cited elsewhere in this report

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
3. Are quality assurance records protected against damage, deterioration or loss?	Y	WP 13-1, Revision 38, section 1.5.1, Generating QA Records, paragraph 4; section 1.5.4, Receiving QA Records, paragraph 5; section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 2 WP 15-RM, Revision 10, section 4.0, Storage and Control of Active Records; section 6.0, Generation, Protection, and Preservation of Electronic Records; section 7.5, Storage, Protection, and Maintenance of QA Records Observation of active record storage for CCP Records, NWP Training Records Tour of WIPP Records Archive, February 15, 2018 CCP-QP-008, Revision 26, section 4.1, Generation of Records PO506003 Hard Copy File
4. Are the requirements and responsibilities established and documented for the transmittal, distribution, retention, maintenance and disposition of quality assurance records?	Y	WP 13-1, Revision 38, section 1.5.1, Generating QA Records; section 1.5.4, Receiving QA Records; section 1.5.5, Storing, Preserving, and Dispositioning QA Records WP 15-RM, Revision 10, section 3.3, UCNI and OUO Documentation; section 4.0, Storage and Control of Active Records; section 7.5, Storage, Protection, and Maintenance of QA Records; section 7.6, Destruction of Nonpermanent QA Records WP 15-RM3002, Revision 9, Records Filing, Inventorying, Scheduling, and Dispositioning WP 15-RM3005, Revision 9, Records Transfer and Retrieval WP 15-RM3006, Revision 6, Records Inventory and Disposition Schedule Review and Approval Tour of WIPP Records Archive, February 15, 2018 CCP-QP-008, Revision 26, section 4.0, Procedure
Supplementary Requirements (17S-1)		
1. Has a quality assurance records system been established?	Y	WP 13-1, Revision 38, section 1.5, Records WP 15-RM, Revision 10, WIPP Records Management Program Interviews with CCP and NWP Records Personnel
2. Is the quality assurance records system defined, implemented and enforced in accordance with written procedures, instructions or other documentation?	Y	WP 13-1, Revision 38, section 1.5, Records WP 15-RM, Revision 10, WIPP Records Management Program WP 15-RM3002, Revision 9, Records Filing, Inventorying, Scheduling, and Dispositioning WP 15-RM3003, Revision 4, Disposal of Nonpermanent Records in Office WP 15-RM3005, Revision 9, Records Transfer and Retrieval

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		WP 15-RM3006, Revision 6, Records Inventory and Disposition Schedule Review and Approval WP 15-RM3007, Revision 14, Receipt of Records Containers into the WIPP Records Archive
3. Do the applicable design specifications, procurement documents, test procedures, operational procedures or other documents specify the quality assurance records to be generated, supplied or maintained by the facility?	Y	WP 13-1, Revision 38, section 1.1.12, Planning Work; section 1.5.1, Generating QA Records; section 2.1.2, Implementing Procedures; section 2.3.1.1, Procurement Planning; section 2.3.2.1, Procurement Document Preparation WP 15-RM, Revision 10, section 3.0, Generation of WIPP Records; section 7.1, Work Activities CCP-QP-010, Revision 27, section 2.3, Document Format Requirements, paragraph 2.3.3[H] Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300)
4. Are quality assurance records required to be legible, accurate and complete?	Y	WP 13-1, Revision 38, section 1.5.1, Generating QA Records, paragraph 3 WP 15-RM, Revision 10, section 2.4, Employees; section 3.1, Legibility; section 3.2, Completeness WP 15-RM3005, Revision 9, section 2.0, Preparation of Records for Transfer CCP-QP-008, Revision 26, CCP Records Management, section 4.1, Generation of Records; 4.2, Legibility; section 4.3, Accuracy; section 4.4, Completeness
5. Are documents considered to be valid quality assurance records only if stamped, initialed or signed and dated by authorized personnel, or otherwise authenticated?	Y	WP 13-1, Revision 38, section 1.5.1, Generating QA Records, paragraph 5 WP 15-RM, Revision 10, section 7.3, QA Record Validation WP 15-RM3005, Revision 9, section 2.0, Preparation of Records for Transfer Interviews with NWP and CCP Records Personnel Record copies of AR/VR411979-13, AR/VR411979-14B, AR/VR411979-14B-1
6. Are the quality assurance records indexed? Does the indexing system include record retention times and the location of the record within the quality assurance record system?	Y	WP 13-1, Revision 38, section 1.5.3, Indexing QA Records, paragraph 2 WP 15-RM, Revision 10, section 7.5, Storage, Maintenance, and Protection of QA Records WP 15-RM3002, Revision 9, Attachment 3, Instructions for Preparing the RIDS (EA15RM3002-2-0)

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		EA15RM3002-2-0, Revision 2, WIPP Records Inventory and Disposition Schedule (RIDS) Working Copy WP 15-RM3005, Revision 9, section 4.0, Completion of the Records Transmittal and Index Form EA15RM3005-2-0, Revision 1, Records Transmittal and Index for Records Blank Form Copy of CCP General Records Inventory and Disposition Schedule Tour of WIPP Records Archive, February 15, 2018
7. Are quality assurance records distributed, handled and controlled in accordance with written procedures?	Y	WP 13-1, Revision 38, section 1.5, Records; section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 2 WP 15-RM, Revision 10, section 4.0, Storage and Control of Active Records; section 7.5, Storage, Protection, and Maintenance of QA Records; section 7.6, Destruction of Nonpermanent QA Records WP 15-RM3003, Revision 4, Disposal of Nonpermanent Records in Office WP 15-RM3005, Revision 9, Records Transfer and Retrieval WP 15-RM3006, Revision 6, Records Inventory and Disposition Schedule Review and Approval Interviews with CCP and NWP Records Personnel Tour of WIPP Records Archive, February 15, 2018 CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records
8. Do quality assurance records provide sufficient information to permit identification between the record and the items or activities to which it applies?	Y	WP 13-1, Revision 38, section 1.5.3, Indexing QA Records, paragraph 3 WP 15-RM, Revision 10, section 6.1, Protection EA15RM3002-2-0, Revision 2, WIPP Records Inventory and Disposition Schedule (RIDS) Working Copy EA15RM3005-2-0, Revision 1, Records Transmittal and Index for Records Blank Form Copy of CCP General Records Inventory and Disposition Schedule Record copies of AR/VR411979-13, AR/VR411979-14B, AR/VR411979-14B-1
9. Are quality assurance records classified as either lifetime or nonpermanent?	Y	WP 13-1, Revision 38, section 1.5.2, Classifying QA Records WP 15-RM, Revision 10, section 7.5, Storage, Protection, and Maintenance of QA Records WP 15-RM3002, Revision 9, Attachment 3, Instructions for Preparing the RIDS

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
		(EA15RM3002-2-0) EA15RM3002-2-0, Revision 2, WIPP Records Inventory and Disposition Schedule (RIDS) Working Copy Copy of CCP General Records Inventory and Disposition Schedule CCP-QP-008, Revision 26, CCP Records Management, section 4.15, Destruction of QA and Non-QA Records
10. Is the retention time for nonpermanent quality assurance records established in writing?	Y	WP 13-1, Revision 38, section 1.5.2, Classifying QA Records, paragraph 4; section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 5 WP 15-RM, Revision 10, section 7.6, Destruction of Nonpermanent QA Records WP 15-RM3002, Revision 9, Attachment 3, Instructions for Preparing the RIDS (EA15RM3002-2-0) EA15RM3002-2-0, Revision 2, WIPP Records Inventory and Disposition Schedule (RIDS) Working Copy Copy of CCP General Records Inventory and Disposition Schedule
11. Are quality assurance records corrected in accordance with procedures that provide for appropriate review or approval by the originating organization? Does the correction include the date and the identification of the person authorized to issue such correction?	Y	WP 13-1, Revision 38, section 1.5, Records; section 1.5.7, Correcting Information in QA Records WP 15-RM, Revision 10, section 7.4, Corrections, Revisions, Supplements, and Lost Records WP 15-RM3005, Revision 9, section 2.0, Preparation of Records for Transfer
12. Does the individual or organization responsible for receiving quality assurance records provide protection from damage or loss during the time that the records are in their possession?	Y	WP 13-1, Revision 38, section 1.5.4, Receiving QA Records, paragraph 5 WP 15-RM, Revision 10, section 7.5, Storage, Protection, and Maintenance of QA Records CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records Interviews with NWP personnel
13. Does each organization responsible for the receipt of quality assurance records designate a person or organization responsible for receiving the records?	Y	WP 13-1, Revision 38, section 1.5.4, Receiving QA Records WP 15-RM3007, Revision 14, section 5.2, Initial Acceptance and Inspection

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
14. Does the receipt control system include: • A method for designating the required records? • A method for identifying records received? • Procedures for receipt and inspection of incoming records? • A method for submittal of completed records to the storage facility?	Y	WP 13-1, Revision 38, section 1.5.4, Receiving QA Records; section 1.5.5, Storing, Preserving, and Dispositioning QA Records WP 15-RM3007, Revision 14, Receipt of Records Containers into the WIPP Records Archive Tour of WIPP Records Archive, February 15, 2018 Interviews with NWP and CCP Records Personnel
15. Is the receipt control system structured to permit a current and accurate assessment of the status of quality assurance records during the receiving process?	Y	WP 13-1, Revision 38, section 1.5.4, Receiving QA Records WP 15-RM3007, Revision 14, Receipt of Records Containers into the WIPP Records Archive Tour of WIPP Records Archive, February 15, 2018
16. Prior to storage of quality assurance records, was a written storage procedure prepared and responsibility assigned for enforcing its requirements? Does the storage procedure include each of the following: • A description of the storage facility? • The filing system to be used? • A method for verifying that the records received are in agreement with the transmittal document and that the records are legible? • A method of verifying that the records are those designated (see No. 14 above)? • The rules governing access to and control of the files? • A method for maintaining control of and accountability for records removed from the storage facility? • A method for filing supplemental information and disposing of superseded records (see No. 11 above)?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 1 WP 15-RM, Revision 10, WIPP Records Management Program WP 15-RM3002, Revision 9, Records Filing, Inventorying, Scheduling, and Dispositioning WP 15-RM3007, Revision 14, Receipt of Records Containers into the WIPP Records Archive CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
17. Are quality assurance records stored in a manner approved by the organizations responsible for storage, including the following: • Provisions in the storage arrangements to prevent damage from moisture, temperature and pressure? • Records firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers? • Provisions for special processed records (such as radiographs, photographs, negatives and microfilm) to prevent damage from excessive light, stacking, electromagnetic fields and temperature?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraphs 2 and 3 WP 15-RM, Revision 10, section 4.1, Access CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records Letter from National Archives and Records Administration to Margaret Gee, Records Management Field Officer, DOE CBFO
18. Have measures been established to preclude the entry of unauthorized personnel into the storage area?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 11 WP 15-RM, Revision 10, section 4.1, Access; section 7.5, Storage, Protection, and Maintenance of QA Records; section 8.2, Control of Records at the WRA Tour of WIPP Records Archive, February 15, 2018
19. Have measures been taken to provide for replacement, restoration or substitution of lost or damaged records?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 12 WP 15-RM, Revision 10, section 7.4, Corrections, Revisions, Supplements, and Lost Records CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records Interviews with NWP and CCP Records Personnel
20. Are records stored in a facility that minimizes the risk of damage or destruction from the following: • Natural disasters such as winds, floods or fires? • Environmental conditions such as high and low temperatures and humidity? • Infestation of insects, mold or rodents?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 2 CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records Tour of WIPP Records Archive, February 15, 2018 Letter from National Archives and Records Administration to Margaret Gee, Records Management Field Officer, DOE CBFO
21. Are quality assurance records stored in single or dual storage facilities?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
22. Does the design and construction of a single record storage facility meet the following criteria: • Reinforced concrete, concrete block, masonry or equal construction? • Floor and roof with drainage control (if a floor drain is provided, a check valve (or equal) is included)? • Doors, structure and frames, and hardware designed to comply with the requirements of a minimum 2-hour fire rating? • Sealant applied over walls as a moisture or condensation barrier? • Surface sealant on the floor providing a hard-wear surface to minimize concrete dusting? • Foundation sealant and provisions for drainage? • Forced air circulation with filter system? • Fire protection system? • Only those penetrations used exclusively for fire protection, communication, lighting or temperature/humidity control are allowed (all penetrations are sealed or dampered to comply with the minimum 2-hour fire protection rating)?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 6 CCP-QP-008, Revision 26, CCP Records Management, section 4.15, Destruction of QA and Non-QA Records
23. Were the construction details of the quality assurance records storage facility reviewed for adequacy of protection of contents by a person who is competent in the technical field of fire protection and fire extinguishing?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 7 CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Storage, Maintenance and Control of QA Records; section 4.1.5, Destruction of QA and Non-QA Records Letter from The Fire Protection International Consortium, Inc. to Michael Fox, TFE Inc.

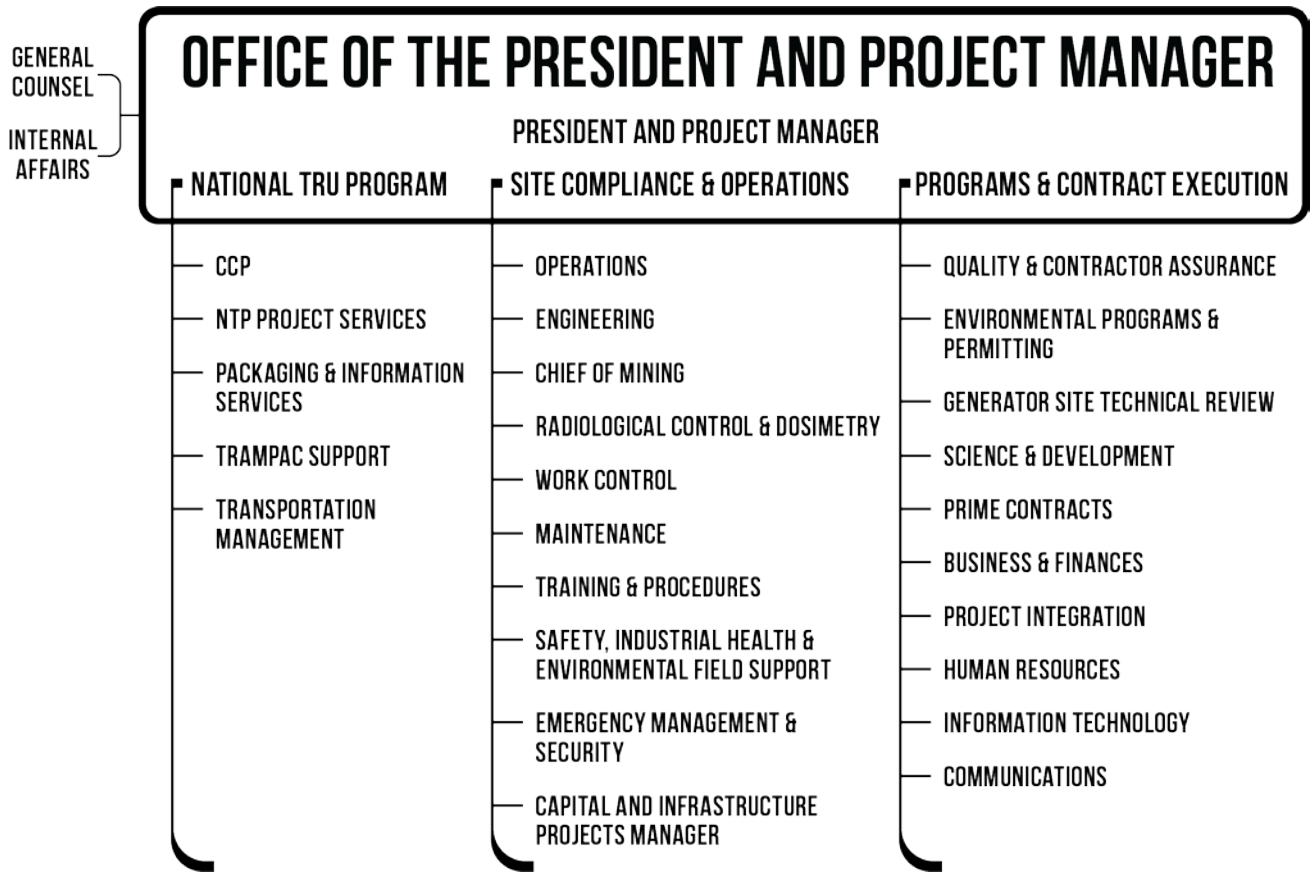
Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
24. Does the design and construction of an alternative single record storage facility meet the following criteria: • 2-hour fire rated vault meeting National Fire Protection Association (NFPA) 232-1986 or NFPA 232AM-1986 or both? • 2-hour fire rated Class B file containers meeting the requirements of NFPA 232-1986 or NFPA 232AM-1986 or both? • 2-hour fire rated file room meeting the requirements of NFPA 232-1986 or NFPA 232AM-1986 or both, with the following provisions: – Early warning fire detection and automatic fire suppression capability with electronic supervision at a constantly attended central station? – Records storage in fully-enclosed metal cabinets? – Adequate access and aisle ways? – Prohibition in the room of work not directly associated with record storage or retrieval? – Prohibition in the room of smoking, eating or drinking? – 2-hour fire rated dampers or doors in all boundary penetrations?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 8 Letter from The Fire Protection International Consortium, Inc. to Michael Fox, TFE Inc. Letter from National Archives and Records Administration to Margaret Gee, Records Management Field Officer, DOE CBFO
25. When temporary storage of quality assurance records is required by an organization's procedures, are the records stored in a 1-hour fire rated container? Do these procedures specify the maximum allowable time limit for temporary storage? Does the container bear a UL label (or equivalent) certifying 1-hour fire protection, or is it certified by a person competent in the technical field of fire protection?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 10 WP 15-RM, Revision 10, section 7.5, Storage, Protection, and Maintenance of QA Records
26. If storage at dual facilities for each quality assurance record is provided, are the facilities at locations sufficiently remote from each other to eliminate the chance of exposure to a simultaneous hazard? Although dual storage facilities are not required to satisfy the requirements of a single storage facility, are all other requirements of this standard met?	Y	WP 13-1, Revision 38, section 1.5.5, Storing, Preserving, and Dispositioning QA Records, paragraph 9 WP 15-RM, Revision 10, section 7.5, Storage, Protection, and Maintenance of QA Records
27. Does the storage system provide for retrieval of information in accordance with planned retrieval times, based on the record type?	Y	WP 13-1, Revision 38, section 1.5.6, Retrieval of QA Records, paragraph 1 WP 15-RM3011, Revision 8, Retrieving Records from the WIPP Records Archive WP 15-RM3013, Revision 5, Destruction of Nonpermanent Records

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
28. Is a list maintained designating those personnel who shall have access to quality assurance files?	Y	WP 13-1, Revision 38, section 1.5.6, Retrieval of QA Records, paragraph 2 WP 15-RM, Revision 10, section 8.2, Control of Records at the WRA
29. Are records maintained by a supplier at its facility or other location accessible to the purchaser or its designated alternate (e.g., the owner)?	Y	WP 13-1, Revision 38, section 2.3.2.1, Procurement Document Preparation Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300)
30. Are records accumulated at various locations, prior to transfer, made accessible to the owner directly or through the procuring organization?	Y	WP 13-1, Revision 38, section 2.3.2.1, Procurement Document Preparation Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300)
31. Does the custodian of quality assurance records inventory the submittals, acknowledge receipt, and process these records in accordance with NQA-1?	Y	WP 13-1, Revision 38, section 1.5.4, Receiving QA Records WP 15-RM3007, Revision 14, Receipt of Records Containers into the WIPP Records Archive
32. Are the records storage and maintenance requirements of regulatory agencies followed in determining final disposition of quality assurance records?	Y	WP 13-1, Revision 38, section 1.5.2, Classifying QA Records, paragraph 5; section 1.5.5, Storing, Preserving, and Dispositioning QA Records WP 15-RM, Revision 10, section 2.3, WIPP Records Management Services WP 15-RM3002, Revision 9, Attachment 3, Instructions for Preparing the RIDS (EA15RM3002-2-0) EA15RM3002-2-0, Revision 2, WIPP Records Inventory and Disposition Schedule (RIDS) Working Copy Copy of CCP General Records Inventory and Disposition Schedule
33. Are the supplier's nonpermanent records disposed of only if the applicable conditions listed below are satisfied: • Items are released for shipment, a Code Data Report is signed or a Code Symbol Stamp is affixed? • Regulatory requirements are satisfied?	Y	WP 13-1, Revision 38, section 2.3.2.1, Procurement Document Preparation WP 15-RM3003, Revision 4, section 1.0, Disposal of Nonpermanent Records in the Office, paragraph 1.1.4 Statement of Work for Site Fire Protection System Upgrade Construction Services Phases 1 & 2 Statement of Work for Fabrication of Shielded Container Prototype Units and

Does the reference document adequately define, describe, address or satisfy the following:	Y, N, I, N/A*	Applicable Procedure and Paragraph; Additional Objective Evidence
• Operational status permits? • Warranty consideration is satisfied? • Purchaser's requirements are satisfied?		Shielded Container Testing Activities Statement of Work for the Fabrication of Pipe Overpacks (Standard, S100, S200 and S300) Interviews with NWP Procurement and Packaging Engineering Personnel CCP-QP-008, Revision 26, CCP Records Management, section 4.5, Destruction of QA and Non-QA Records

*Y: The referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N: The referenced documents do not adequately define, describe, address or satisfy the NQA-1-1989 requirement.
I: The EPA requires additional information to determine if the referenced documents adequately define, describe, address or satisfy the NQA-1-1989 requirement.
N/A: The specific NQA-1-1989 requirement is not applicable to the subject QA program.

ATTACHMENT I: NUCLEAR WASTE PARTNERSHIP ORGANIZATIONAL CHART



ATTACHMENT J: AUDIT SCOPE

Scope of the EPA Audit of Nuclear Waste Partnership Quality Assurance

Organization Audited: Nuclear Waste Partnership (NWP)

Organizations Notified: NWP, DOE Carlsbad Field Office of Quality Assurance, EPA Region 6, New Mexico Environmental Department, DOE HQ

Audit Dates: February 13–15, 2018

Audit Location: NWP Quality Assurance Offices

Audit Purpose: The purpose of this audit is to verify the proper establishment and implementation of selected elements of the ASME Nuclear Quality Assurance (NQA-1-1989) for the NWP Quality Assurance (QA) program, with regards to activities affecting the long-term isolation of transuranic waste within the Waste Isolation Pilot Plant (WIPP).

Audit Scope: The scope of this audit is the evaluation of the implementation of NQA-1-1989 Element Nos. 1, 2, 4, 6, 7, 16 and 17. The EPA will evaluate these elements by taking samples of procedures and records from NWP operations to verify proper implementation of the QA program.

EPA Audit Team:

- Jerry Ellis, U.S. EPA Audit Lead
- Kira Darlow, Lead QA Auditor (SC&A)
- Patrick Kelly, QA Auditor (SC&A)

Proposed Audit Schedule:

Tuesday, February 13

9:00 a.m.–9:30 a.m.	Audit Opening Meeting
9:00 a.m.	Commence audit
Noon–1:00 pm	Lunch (Flexible)
4:00 p.m.	EPA Audit Team Caucus

Wednesday, February 14

8:00 a.m.	Resume auditing in two teams
8:30 a.m.	Management briefing (if needed)
9:00 a.m.	Continue audit
Noon–1:00 pm	Lunch (Flexible)
4:00 p.m.	EPA Audit Team Caucus

Thursday, February 15

8:00 a.m.	Resume auditing in two teams
8:30 a.m.	Management briefing (if needed)
9:00 a.m.	Continue audit
Noon–1:00 pm	Lunch (Flexible)
2:00 p.m.	EPA Audit Team Caucus
3:00 p.m.	Audit Closing Meeting. The EPA will provide a written list of concerns or findings at this meeting.

* Face-to-face interview is preferred, but interview may be conducted by telephone if interviewee is not available onsite.

Initial Document and Information request provided electronically on the CCP-CBFO FTP site. Please provide the following information no later than January 12, 2018:

- High-level NWP QA document(s) such as a QAPD (in 2014, WP 13-1 was the document that fit this description)
- Current organization charts for NWP and NWP QA, showing how NWP QA fits into the overall NWP structure and any QA positions assigned at other levels of operations, as applicable
- NWP procedures or project plans owned by or applicable to NWP QA that implement NQA-1-1989 Elements 1, 2, 4, 6, 7, 16 and 17, may include:
    - Training and qualification procedures, including procedures that address general training and qualification, training and qualification of audit personnel, training and qualification of inspection and test personnel and training and qualification of nondestructive examination personnel, as applicable
    - QA grading procedures
    - Corrective action procedures
    - Document control procedures
    - Procurement procedures
    - Records management procedures
- Current list of all NWP procedures
- List of procurement activities for 2016–2017
- List of issues identified as conditions adverse to quality in the past 12 months, including current status and indication if determined to be a significant condition adverse to quality
- Current list of open corrective actions
- Corrective action trend report
- Any program description documents
- Documents describing interfaces with other organizations (internal and external) responsible for completing QA activities

- Key position descriptions

ATTACHMENT K: DESCRIPTIONS OF NQA-1 BASIC REQUIREMENTS (ELEMENTS)[5]

As stated in the introduction to the ASME NQA-1-1989 standard, the requirements of the standard apply to activities which could affect the quality of structures, systems, and components of nuclear facilities. Activities affecting quality include siting, designing, purchasing, fabricating, handling, shipping, receiving, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, modifying, and decommissioning. "Entity," in the context of this summary, refers to the organization responsible for implementing the ASME NQA-1-1989 standard.

The summaries included in this attachment are for general information only and are not intended to supersede the language of ASME NQA-1-1989.

Element 1, *Organization*, requires that the entity document the following for activities affecting quality:

- Organizational structure
- Functional responsibilities
- Levels of authority
- Lines of communication

The entity shall establish the organizational structure and responsibilities such that:

- Senior management establishes overall expectations for effective QA program implementation and is responsible for obtaining desired end result.
- Quality is achieved and maintained by those performing work.
- Quality achievement is verified by those not directly responsible for performing work.
- Persons responsible for assuring implementation of the QA program have required authority and organization freedom, including sufficient independence from cost and schedule considerations.

Element 2, *QA Program*, requires that the QA program be planned, implemented and maintained, and that management shall regularly assess the adequacy and effective implementation of the QA program. The QA program shall:

- Identify the activities and items to which it applies.
- Provide control over activities affecting quality consistent with their importance (i.e., follow a graded approach to apply varying degrees of control and verification to items and services to ensure compliance with requirements).

5 Adapted from: History, Evolution and Content of NQA-1, Ron Schrotke, Member, ASME NQA-1 Main Committee and ASME Board of Nuclear Codes and Standards, presented on May 14, 2015, to DOE Quality Assurance Framework: Application to DOE Nuclear Projects, Emphasis on ASME NQA-1, Training Workshop.

- Provide for planning and accomplishment of activities affecting quality under suitably controlled conditions.
- Provide for indoctrination and training of personnel, as necessary, including inspection and test personnel, nondestructive examination personnel and QA program audit personnel.

Element 3, *Design Control*, requires that designs, including design inputs, design documents, design interfaces and design changes be defined, controlled and verified. Design adequacy shall be verified by qualified persons that were not part of the original design work.

Element 4, *Procurement Document Control*, requires that procurement documents include applicable design bases and other technical and quality requirements, including any requirements for the supplier's quality assurance program to be consistent with ASME NQA-1-1989. Procurement documents and changes to these documents shall be reviewed for completeness and adequacy prior to issuance to the supplier.

Element 5, *Instructions, Procedures and Drawings*, requires that activities affecting quality be performed in accordance with documented instructions, procedures or drawings, as appropriate to the activity. The instructions, procedures or drawings shall include quantitative or qualitative acceptance criteria for determining successful completion of the activity.

Element 6, *Document Control*, requires that documents, including those identified in Element 5, that specify quality requirements or prescribe activities affecting quality be controlled. The document control system includes identification of documents to which it applies; assignment of responsibility for preparing, reviewing, approving, and issuing documents; and review of documents, including changes to the documents, prior to issuance.

Element 7, *Control of Purchased Items and Services*, requires that procurement of items and services be controlled to assure conformance with specified criteria. Requirements are specified to achieve control of procurement planning, source evaluation and selection, bid evaluation, supplier performance evaluation, supplier generated documents, changes in items or services, acceptance of items or services, supplier nonconformances, and commercial grade items and services.

Element 8, *Identification and Control of Items*, requires that controls be established to assure only correct and accepted items are used or installed and that identification be maintained on items or documents traceable to the items.

Element 9, *Control of Special Processes*, applies to processes that require a high degree of skill and cannot be verified after completion (e.g., heat treating, welding, etc.). These processes shall be performed by qualified personnel using specified instructions, procedures, drawings, checklists, process travelers or other appropriate means that also specify the acceptance criteria.

Element 10, *Inspection*, requires inspections be performed to verify conformance of an item or activity to specified requirements or continued acceptability of items in service. Inspection personnel shall be independent of the work being inspected and the inspection results shall be documented.

Element 11, *Test Control*, requires that tests to be performed to verify conformance of an item or computer program to specified requirements and demonstrate satisfactory performance shall be planned and executed according to specified methods and evaluated against specified criteria. Test results shall be documented.

Element 12, *Control of Measuring and Test Equipment*, requires that tools, gauges, instruments and other measuring and test equipment used for activities affecting quality be controlled, calibrated at specific periods, adjusted and maintained to required accuracy limits.

Element 13, *Handling, Storage and Shipping*, requires that handling, storage, cleaning, packaging, shipping and preservation of items be conducted in accordance with established documents or procedures to prevent damage and loss and to minimize deterioration.

Element 14, *Inspection, Test, and Operating Status*, requires that the status of inspection and test activities be identified either on the items or in documents traceable to items where it is necessary to ensure that required inspections and tests are performed and only those items that passed the required inspections or tests are installed, used and operated.

Element 15, *Control of Nonconforming Items*, requires that items not conforming to specified requirements be controlled to prevent inadvertent installation or use. Nonconforming items shall be identified and segregated when practical. The nonconformances shall be documented and evaluated. Disposition of the nonconforming items shall be documented, and the affected organizations notified.

Element 16, *Corrective Action*, requires that conditions adverse to quality be identified promptly and corrected as soon as practical. Additional requirements apply to significant conditions adverse to quality:

- The cause of the condition shall be determined.
- Corrective action shall be taken to preclude recurrence.
- The identification, cause and corrective action shall be documented and reported to appropriate levels of management.
- Completion of corrective actions shall be verified.

Element 17, *Quality Assurance Records*, requires that records providing evidence of quality be specified, prepared and maintained. Records shall be protected against loss, damage or deterioration and shall be legible, identifiable and retrievable. The records control system shall specify requirements and responsibilities for record generation, transmittal, distribution, retention, maintenance and disposition.

Element 18, *Audits*, requires that audits be performed to verify compliance with all aspects of the QA program and determine the effectiveness of the QA program. Audits shall be planned and performed in accordance with written procedures or checklists. The audit team shall be independent of the activities being audited and shall include at least one lead auditor appointed to lead the audit; the lead auditor shall select and assure qualification of the rest of the audit team. Audit results shall be documented and reported to and reviewed by responsible management;

responsible management shall respond to adverse audit findings as appropriate and the auditing organization shall follow up to verify completion of corrective action.