

United States Government

Department of Energy

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# memorandum

Carlsbad Field Office  
Carlsbad, New Mexico 88221

DATE: October 28, 2016

REPLY TO  
ATTN OF: CBFO:OPM:DCG:ELN:16-1122:UFC 1410.00

SUBJECT: Interim Change Notice #1 to DOE/CBFO-01-3107, *Performance Demonstration Program Management Plan*, Revision 8

TO: All CBFO Staff

Interim Change Notice (ICN) #1 to Carlsbad Field Office (CBFO) document DOE/CBFO-01-3107, *Performance Demonstration Program Management Plan*, Revision 8, is effective immediately. This ICN is necessary to address the following editorial revisions to implement the recent CBFO restructuring:

- Change “TRU Sites and Transportation Division” to “Office of the National TRU Program” on the title page, in Section 1.0, and Figure 2.

If you have any questions, please contact Andy Walker at (575) 234-7407.

**//signature on file//**

Jeff Carswell, Assistant Manager  
CBFO Office of the National TRU Program

CC:  
DOE/CBFO-01-3107, Rev. 8 Records Package  
CBFO M&RC

**PERFORMANCE DEMONSTRATION PROGRAM  
MANAGEMENT PLAN**

**Revision 8**

**February 2016**



**U.S. Department of Energy  
Carlsbad Field Office  
TRU Sites and Transportation Division**

**This document supersedes DOE/CBFO-01-3107, Revision 7.**

## **Performance Demonstration Program Management Plan**

**DOE/CBFO-01-3107**

**Revision 8**

**February 2016**

Approved By: //signature on file// Date: 2/18/2016

Director  
CBFO TRU Sites and Transportation Division

Concurred By: //signature on file// Date: 2/18/2016

Director  
CBFO Office of Quality Assurance

Prepared By: //signature on file// Date: 2/18/2016

PDP Appointee  
CBFO TRU Sites and Transportation Division

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## ACRONYMS

<b>CAR</b>	Corrective Action Report
<b>CBFO</b>	Carlsbad Field Office
<b>CTAC</b>	Carlsbad Field Office Technical Assistance Contractor
<b>CCA</b>	Compliance Certification Application
<b>CRA</b>	Compliance Recertification Application
<b>DOE</b>	U. S. Department of Energy
<b>MP</b>	management procedure
<b>NDA</b>	nondestructive assay
<b>PDP</b>	Performance Demonstration Program
<b>QA</b>	quality assurance
<b>QAPD</b>	Quality Assurance Program Document
<b>TRU</b>	transuranic
<b>WAC</b>	Waste Acceptance Criteria
<b>WIPP</b>	Waste Isolation Pilot Plant

## CHANGE HISTORY

Changes to the CBFO *Performance Demonstration Program Management Plan*:

### REVISION 1

#### General

1. The Performance Demonstration Program (PDP) Management Plan, Rev. 0, references contractor-level documents that do not exist. Specifically, the plan references "work instructions." With the change in Carlsbad Field Office Technical Assistance Contractor (CTAC) contractor, the work instructions have been replaced with contractor-level management procedures. The PDP Management Plan was revised to reflect this change.
2. Editorial changes were incorporated as appropriate to improve technical clarity.

Specific (Section numbers refer to revision 0 unless otherwise noted)

Page 6	Added a description of the three elements of the PDP. Replaced reference to the National Transuranic Waste Certification Team with the National Transuranic Waste Program (NTWP). In first and last bulleted items, provided clarification between Drum NDA PDP Plan and Box NDA PDP Plan.
Figure 1	Changed "Work Instruction" to "Management Procedure" in three boxes under "Contractor documents."
Page 8	Replaced "work instruction" with "management procedure." Replaced "NTWCT Waste Characterization/Certification Manager" with "NTWP PDP Appointee" and showed that this individual will review the contractor-level management procedures rather than approve them.
Figure 2	Changed "CBFO-NTWCT Waste Characterization/Certification Manager" in first box with "CBFO NTWP PDP Appointee." Added a box under NDA PDP Coordinator.
Page 10	Added bulleted item "Contractor MPs for each of the PDP elements" to list of required reading for PDP management personnel.
Page 10	Added complete title for CBFO MP 1.2, <i>Selection of Quality Levels</i> .
Page 13	Text revised to clarify PDP assessment schedules and requirements.
Attachment 1	Replaced PDP Training Requirements form with the revised form currently in use.

### REVISION 2

#### General

1. The PDP Management Plan, Rev. 1, retained references to contractor-level documents that have been replaced. Specifically, Rev. 1 of the plan referenced "work instructions." With the change in CTAC contractor, the work instructions have been replaced with contractor-level management procedures. Rev. 1 of the PDP Management Plan retained the term "work instruction" in locations where the item referenced was not contained in the contractor-level management procedures to indicate that stand-alone documents of some sort existed for these materials. The PDP

Management Plan was revised to clarify that work instructions as they originally existed are no longer used, and avoids use of that term.

2. Editorial changes were incorporated as appropriate to improve technical clarity.
3. Throughout the PDP Plans for the various PDP elements (Headspace Gas [HSG], Resource Conservation and Recovery Act [RCRA], and Non-Destructive Assay), the term PDP coordinator is defined as an organization that CBFO designates to manage the PDP. In past revisions of this document, that term “contractor” has been used to define this organization. Because the PDP (or portions thereof) has been managed in the past by entities that were not under a contract to CBFO (e.g., the Idaho National Engineering and Environmental Laboratory), the term “contractor” has been deliberately avoided in the PDP Plans. All documents state that the PDP coordinator designates the PDP manager who, in turn, designates the PDP coordinators for the individual PDP elements. Language has been added to the text in this revision of the PDP Management Plan to make use of terminology consistent between the documents.

Specific (Section numbers refer to revision 0 unless otherwise noted)

- |          |   |
|----------|---|
| Page 6   | Replaced reference to the National Transuranic Waste Program (NTWP) with the Office of Characterization and Transportation.   |
| Figure 1 | Changed “Work Instruction” to “Management Procedure” in three boxes under Contractor documents.”  |
| Page 8   | Replaced “NTWP PDP Appointee” with “Office of Characterization and Transportation PDP Appointee.”   |
| Figure 2 | Changed “CBFO NTWP PDP Appointee” in first box with “Office of Char. and Trans. PDP Appointee”  |
| Page 12  | The section Data Review and Validation has been deleted. In past revisions of this document it stated that data submitted by participants were entered into spreadsheets that were maintained per Section 6.0 of the Carlsbad Field Office Quality Assurance Program Document (QAPD). The requirements for software used to be validated in accordance with QAPD Section 6.0 is already included in the section titled, PDP SOFTWARE REQUIREMENTS. Therefore, the material in this section was redundant and unnecessary. |

**REVISION 3**

General

1. The PDP Management Plan was revised to enhance language associated with software verification and validation, supplier selection, and evaluation of supplier performance to ensure Carlsbad Field Office QAPD requirements are met by PDP activities.
2. Editorial changes were incorporated as appropriate to improve technical clarity.

Specific (Section numbers refer to revision 2 unless otherwise noted)

- |         |   |
|---------|---|
| Page 11 | Basis for selection and evaluation of suppliers was revised to ensure conformance with the QAPD.  |
| Page 15 | Methods for verification and validation of calculations contained in Excel spreadsheets was added to ensure conformance to QAPD requirements. |

## **REVISION 4**

### General

1. The PDP Management Plan was revised to accurately reflect the CBFO organization.
2. Section 3.0, Training and Qualification, was revised to include the routine training records managed by the Program Coordinator training coordinator.
3. Figure 2 was revised to eliminate reference to Argonne National Laboratory-East as the HSG PDP Sample Preparation Contractor.

## **REVISION 5**

### General

1. Section 2 was revised to improve organizational roles and responsibilities.
2. Editorial changes were made for technical clarity.
3. Section 3 was revised to clarify training requirements.

## **REVISION 6**

### General

1. References to the HSG and RCRA PDP Plans were deleted. Because this revision affected the entire Management Plan, no change bars were used.
2. Editorial changes were made for technical clarity.

## **REVISION 7**

### General

1. Updates to the Carlsbad Field Office organizational structure were incorporated.
2. Editorial changes were made for technical clarity.

## **REVISION 8**

### General

1. A complete change history was included.
2. Clarifications to the requirements regarding the Program Coordinator quality assurance program and implementing documents were incorporated.
3. Editorial changes were made for technical clarity.

## 1.0 INTRODUCTION

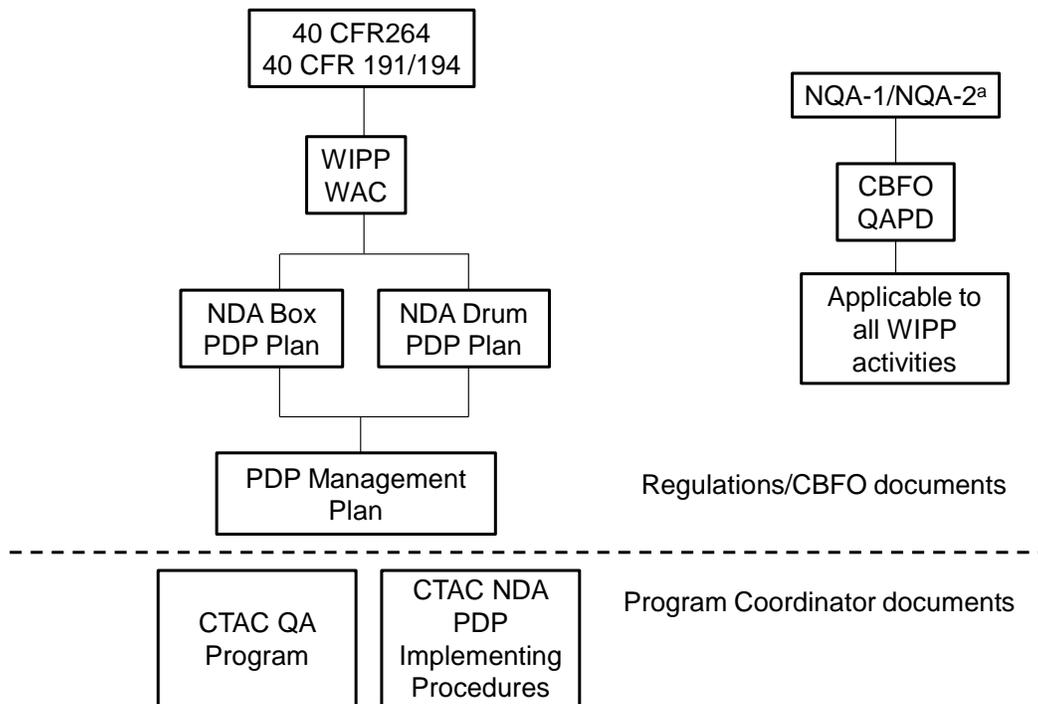
To demonstrate compliance with the U.S. Department of Energy (DOE) Waste Isolation Pilot Plant (WIPP) waste characterization program, each testing and analytical facility performing waste characterization activities participates in the Performance Demonstration Program (PDP). The PDP serves as a quality control check against expected results and provides information about the quality of data generated in the characterization of waste destined for WIPP. Single blind audit samples are prepared by an independent organization to each of the facilities participating in the PDP. The PDP consists of analysis for transuranic (TRU) radionuclides using nondestructive assay (NDA) techniques to conduct measurements of wastes in drums and in standard waste boxes. Separate NDA PDP Plans describe the activities associated with these NDA PDP elements. Within the DOE Carlsbad Field Office (CBFO), the TRU Sites and Transportation Division oversees the PDP as described in the current revisions of DOE/CBFO-01-1005, *Performance Demonstration Program Plan for Nondestructive Assay of Drummed Wastes for the TRU Waste Characterization Program* (Drum NDA PDP Plan), and DOE/CBFO-01-1006, *Performance Demonstration Program Plan for Nondestructive Assay of Boxed Wastes for the TRU Waste Characterization Program* (Box NDA PDP Plan).

The purpose of this Management Plan is to identify how the requirements applicable to the PDP are implemented during the management and coordination of PDP activities. The CBFO has tasked the CBFO Technical Assistance Contractor (CTAC) to serve as Program Coordinator for the PDP. The other participants in the program (organizations that perform site implementation and activities under CBFO contracts or interoffice work orders) are not controlled under this Management Plan. Activities of the other participants are governed by their respective quality assurance (QA) program and procedures, or as otherwise directed by CBFO.

The primary documents governing the conduct of the NDA PDP are:

- CBFO-94-1012, *Quality Assurance Program Document* (QAPD)
- DOE/CAO-1996-2184, *Compliance Certification Application* (CCA)
- DOE/WIPP 09-3424, *Compliance Recertification Application-2009* (CRA)
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WAC)

These documents require each of the measurement organizations and NDA systems that provide data for the characterization of TRU waste for disposal at WIPP to participate in the applicable PDP element. The two NDA PDP Plans implement the applicable general requirements of the QAPD, CCA, CRA, and WAC. The management and coordination of the PDP are conducted in full compliance with applicable requirements. The relationship of the applicable documents is illustrated in Figure 1. As shown in the figure, the NDA PDP Plans are higher-level documents than the PDP Management Plan. Therefore, in cases where requirements specified in these plans conflict, the element-specific NDA PDP Plan takes precedence.



<sup>a</sup>The complete reference for the applicable documents is: ASME NQA-1-1989 edition, ASME NQA-2a-1990 addenda, part 2.7 to ASME NQA-2-1989 edition, and ASME NQA-3-1989 edition (excluding Section 2.1 (b) and (c) and Section 17.1).

**Figure 1. Document Hierarchy**

Figure 1 also shows the relationship to the Program Coordinator QA program and procedures that implement the requirements of the applicable NDA PDP Plan(s) and this Management Plan. The PDP is a quality-affecting activity and work conducted under the Program Coordinator’s QA program must comply with the applicable requirements of the CBFO QAPD. These procedures shall be reviewed by the CBFO PDP Appointee to ensure adequate implementation of the respective PDP plans.

This Management Plan will be reviewed and revised as necessary to incorporate any changes in CBFO documents that affect the program, including the QAPD, WAC, CBFO management procedures (MPs), or PDP plan(s). The review of and any resultant changes to this Management Plan will be documented.

**2.0 ORGANIZATION AND RESPONSIBILITIES**

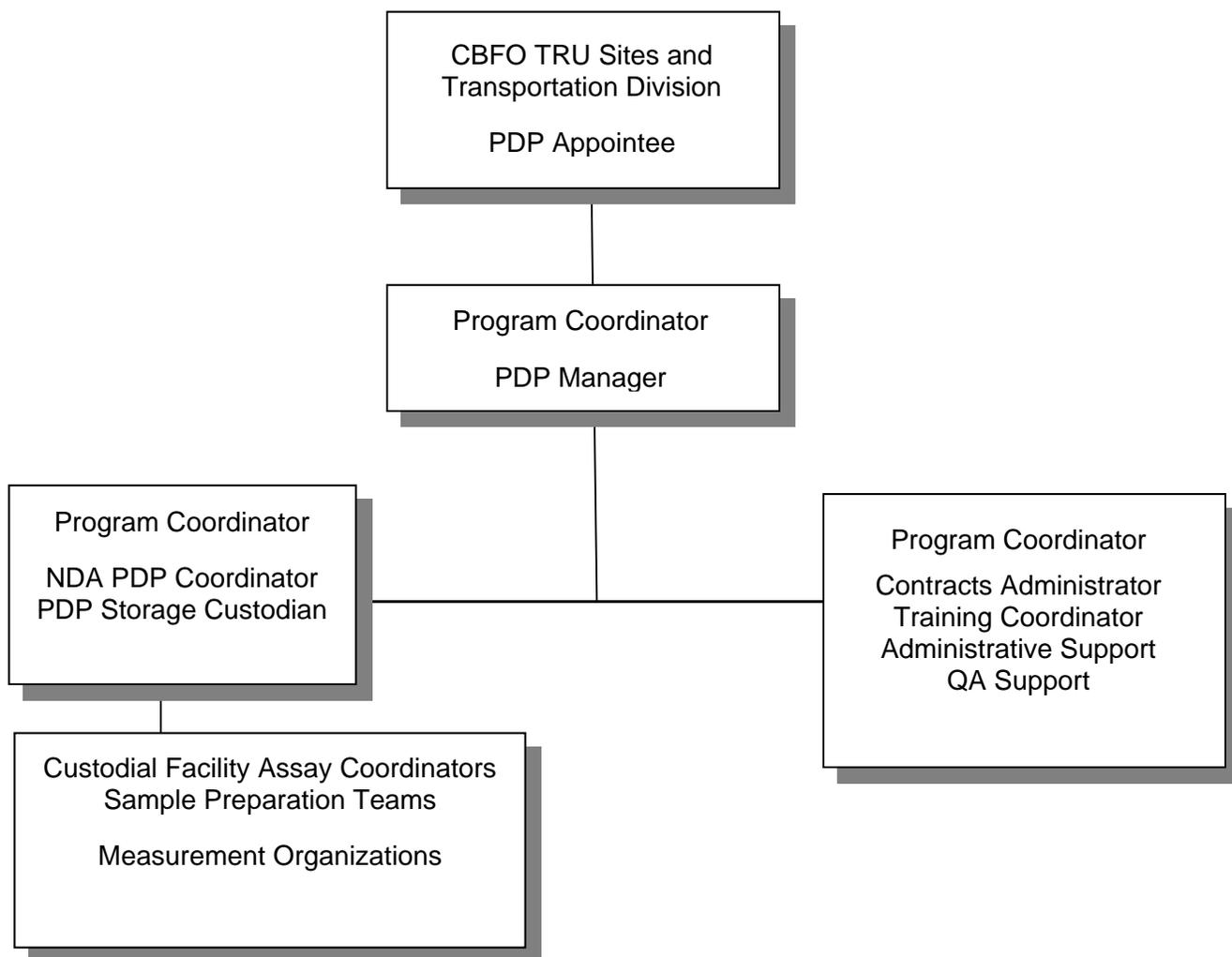
The CBFO is responsible for ensuring the implementation of this Management Plan and assigns an individual as the PDP Appointee to provide technical oversight and coordination for the program. The CBFO PDP Appointee is the reviewing and approving authority for all PDP activities. The Program Coordinator designates the PDP Manager and administers PDP functions to qualify facilities that are active in waste characterization for the participating TRU waste sites. The CBFO, supported by the Program Coordinator, evaluates and approves individual facility performance for participation in the WIPP TRU waste disposal characterization program.

The organizational structure for implementing the PDP requirements is shown in Figure 2, and the responsibilities for implementing and managing the program within the contractor organization are discussed below.

## **2.1 Program Coordinator PDP Manager**

The Program Coordinator assigns overall PDP responsibilities to the PDP Manager. The PDP Manager ensures that all PDP responsibilities identified in the NDA PDP Plans, and those implemented through this Management Plan and the applicable CBFO MPs, are met. The PDP Manager:

- Routinely evaluates PDP performance in support of the CBFO and reviews and approves outgoing documentation associated with the PDP.
- Reports to the PDP Appointee and oversees and coordinates PDP activities.
- Serves as the central point-of-contact for technical issues, scheduling, assessment interfaces, quality improvement, and other matters affecting the PDP.
- Designates an NDA PDP Coordinator.
- Designates a PDP Storage Custodian.
- Provides prime direction to the NDA PDP Coordinator and storage custodian, prepares corrective documentation, and coordinates the preparation of PDP budget documents to ensure that adequate resources are available to meet program goals and milestones.



**Figure 2. PDP Organizational Structure**

## **2.2 NDA PDP Coordinator**

The NDA PDP Coordinator is responsible for accomplishing the day-to-day tasks associated with the implementation of the PDP Management Plan. Tasks are defined in each of the PDP Plans and are conducted in accordance with the NDA PDP implementing procedure prepared by the NDA PDP Coordinator and approved by the PDP Manager. The NDA PDP Coordinator is responsible for ensuring quality and for promptly reporting all potential conditions adverse to quality to the PDP Manager for evaluation and action as outlined in Section 6 of this plan.

## **2.3 PDP Storage Custodian**

The Program Coordinator maintains an inventory of NDA PDP equipment and spare parts in support of CBFO and to ensure efficient programmatic operations. The PDP Manager designates a storage custodian responsible for maintaining NDA equipment (matrices, internal components, drums and boxes), providing shipping support for PDP equipment, and maintaining accountability of all PDP equipment in the storage unit. Detailed responsibilities for the storage custodian include, but are not limited to, the following:

- Assessing the condition of various PDP components to differentiate between conditions warranting refurbishment or components requiring replacement; supporting procurement-related activities such as drafting the statements of work and determining suitable vendors for necessary PDP components; overseeing the refurbishment; and providing support to QA activities such as receipt inspection to ensure the procured components and the refurbishment activities meet the documented design specifications and that the procurements are conducted in accordance with the QAPD.
- Securing drums or standard waste boxes to pallets, arranging bill of lading for freight carrier service, transporting to and from local establishments for refurbishment, and coordinating exchanges with site facility custodians.
- Conducting an annual inventory of the storage unit.

## **3.0 TRAINING AND QUALIFICATION**

Personnel involved in PDP management activities shall be qualified and trained as follows.

At a minimum, the PDP Manager and NDA PDP Coordinator shall have a bachelor's degree in science or engineering and at least five years of professional experience related to the type of PDP activities that are being coordinated. Qualification and contractor training documentation shall be entered into the CBFO records system. The PDP Manager is responsible for selecting qualified personnel and ensuring the appropriate training is completed.

The minimum required training elements for PDP personnel include reading the current revision of the documents listed below, and any other documents identified as required reading by the PDP Manager. Completion of the reading requirement shall be auditable and may be documented on a form such as shown in Attachment 1 (or on an equivalent form), via a "read and sign" notice, or in accordance with the Program Coordinator's approved training implementing procedure. The Program Coordinator's Training Coordinator is responsible for notifying PDP personnel of refresher training or training updates as documents are revised and formally issued. The Training Coordinator shall ensure that

documentation of completed training is maintained in QA records in accordance with CBFO MP 4.5, *Generating, Receiving, Storing, and Controlling Active CBFO Program Records*, and CBFO MP 4.9, *Quality Assurance Records*.

- CBFO QAPD (CBFO-94-1012)
- WIPP WAC (DOE/WIPP-02-3122)
- CBFO PDP Management Plan (DOE/CBFO-01-3107)
- CBFO NDA PDP Plan for Boxed Wastes (DOE/CBFO-01-1006)
- CBFO NDA PDP Plan for Drummed Wastes (DOE/CBFO-01-1005)
- CBFO MP 1.2, *Selection of Quality Levels*
- CBFO MP 3.1, *Corrective Action Reports*
- CBFO MP 4.5, *Generating, Receiving, Storing, and Controlling Active CBFO Program Records*
- CBFO MP 4.9, *Quality Assurance Records*
- Program Coordinator's NDA PDP Implementing Procedures
  - Portage PRC-5005, *Conduct of the Nondestructive Assay Performance Demonstration Programs*
  - Portage PRC-3022, *Procurement*
  - Portage PRC-3008, *Issues Management System*
  - Portage PRC-3005, *Nonconformance Reporting, Disposition and Closure*
  - Portage PRC-3028, *Records Management*

#### **4.0 QA GRADING ACTIVITIES**

The CBFO, assisted by the Program Coordinator, will perform PDP activity grading in accordance with CBFO MP 1.2, *Selection of Quality Levels*, and will also document and retain the evaluation as required by MP 1.2. The grading applies only to the specific controls placed on the activity and not the requirements. In no case will requirements be graded out of the program.

#### **5.0 PROCUREMENT**

CTAC, as the Program Coordinator, implements procurements for continuing operations of the PDP. These may include procurements for:

- Consultant support contracts to obtain the services of an individual with extensive experience in developing and maintaining operations of the PDP, or
- Supplier procurement contracts with commercial laboratories for sample preparation and verification support efforts or with commercial suppliers for manufacture of PDP equipment and accessories (e.g., NDA PDP drums, boxes, and the spare parts associated with these items).

Procurements may involve subcontractors who have previous documented and acceptable performance in support of the PDP. No procurement will exceed the scope of work currently being performed. All applicable procurement requirements of the QAPD shall be met. PDP procurements conducted by the Program Coordinator will be in accordance with approved Portage procedures written to support the procurement function and will be performed as follows.

Typically, procurement documentation is prepared by the NDA PDP Coordinator and reviewed and approved by the PDP Manager. The PDP Manager, Program Coordinator's Contracts Administrator, and a QA support individual shall ensure that all applicable elements required by the QAPD are appropriately incorporated in the procurement documents. The PDP Manager is responsible for final review and approval of procurement documentation and for ensuring that the applicable QAPD procurement requirements and the contractor organization's procurement requirements are addressed. The reviews and approvals shall be documented in accordance with the Program Coordinator's procedure for procurement.

The Program Coordinator's Contracts Administrator, in conjunction with the PDP Manager, shall select the procurement source and document the basis for selection.

Suppliers will be selected consistent with the requirements for supplier selection specified in the QAPD. Prospective suppliers shall initially be evaluated and selected on the basis of documented criteria and the PDP Manager and/or applicable PDP Coordinator shall verify that approved suppliers continue to provide acceptable items and services. Supplier selection shall be based on evaluation of the supplier's capability to provide items or services in accordance with procurement document requirements by performing one or more of the following elements:

1. An evaluation of the supplier's history for providing an identical or similar product that performs satisfactorily in actual use.
2. An evaluation of the supplier's current QA documentation, supported by any documented qualitative and quantitative information.
3. An evaluation of the supplier's technical and QA capability, based on an evaluation of the supplier's facilities, personnel, and quality program implementation.

An evaluation of the supplier's continued performance shall be conducted at least every three years. Evaluations entail review of the supplier's history for providing an identical or similar product that performs satisfactorily in actual use, and examination of the current QA documentation, supported by any documented qualitative and quantitative information, in accordance with approved implementing procedures to determine continued satisfactory performance. These surveillances or evaluations shall be conducted more frequently if performance problems are encountered or other situations warrant it.

Supplier bids shall be evaluated based upon the following criteria:

- Conformance to the procurement documents (statement of work)
- Technical considerations
- QA requirements
- Prospective supplier's personnel, production capability, past performance, and any exceptions taken. All unacceptable quality conditions shall be resolved prior to order placement.

The NDA PDP Coordinator will perform and document an annual review of each subcontracted supplier or conduct receipt inspections of quality-affecting items to ensure the supplier is performing acceptably. If the results of the review indicate the need, an onsite assessment will be performed.

The NDA PDP Coordinator shall review and document acceptance of the supplier's deliverables to ensure that they meet the procurement requirements. Items that do not conform to specified requirements shall be controlled to prevent inadvertent use or installation in accordance with Portage PRC-3005, *Nonconformance Reporting, Disposition and Closure*. The NDA PDP Coordinator shall also review and approve the disposition of any PDP supplier nonconformance documentation.

Changes to procurement documents require the same degree of control and review as the original procurement documents. Procurement documents and other records generated during the procurement of PDP items and services are QA records. QA records shall be processed in accordance with CBFO MP 4.5, *Generating, Receiving, Storing, and Controlling Active CBFO Program Records*, and CBFO MP 4.9, *Quality Assurance Records*. PDP procurement QA records have been determined to be nonpermanent.

## **6.0 NONCONFORMANCES AND CORRECTIVE ACTION**

Conditions adverse to quality identified during the conduct of the PDP and related to the measurement organization's operation are documented and evaluated in accordance with CBFO MP 3.1, *Corrective Action Reports*. Conditions adverse to quality that are specific to the Program Coordinator will be addressed in accordance with the approved Program Coordinator QA program documents.

Nonconformances associated with procurement of items or services must be addressed the Program Coordinator implementing procedures. Whenever significant conditions adverse to quality are identified, the corrective action process must address appropriate remedial actions, investigation, root cause determination, and actions to preclude recurrence.

## **7.0 PDP QA RECORDS**

PDP QA records are designated as nonpermanent. All PDP documents classified as QA records that are prepared by the Program Coordinator in its PDP support capacity shall be transmitted to the CBFO for appropriate management and retention. Documentation in process is maintained with reasonable protection prior to completion. (In accordance with the CBFO QAPD, documentation is not considered to be a QA record until it has been completed.) CBFO accepts the data, approves the final issuance of results and other documentation, and processes the records in accordance with CBFO MP 4.5 and CBFO MP 4.9.

Records generated by participants that are associated with PDP analyses and measurements are considered QA records and must be maintained by the individual participant in accordance with the CBFO QAPD (section 1.5, Records).

PDP QA records are identified in each of the NDA PDP Plans. The Program Coordinator's procedure for conduct of the NDA PDP should identify the specific records that are generated during PDP implementation. QA records management, including disposition, when applicable, will be maintained in accordance with CBFO MP 4.5.

## **8.0 PDP ASSESSMENTS**

In addition to the routine reviews of internal activities by the PDP Manager during the conduct of the PDP cycles, the Program Coordinator shall ensure management assessments are conducted periodically. CBFO will review and approve applicable aspects of the Program Coordinator's QA

program. CBFO will perform periodic (not to exceed three years) assessments of the PDP, including the Program Coordinators processes for assuring specified quality objectives are achieved during procurements of PDP related items or services and acceptance and receipt activities. These assessments are performed in accordance with the requirements of the CBFO QAPD.

## **9.0 PDP SOFTWARE REQUIREMENTS**

Any PDP software used for scoring analytical and other measurement results (i.e., spreadsheets developed using commercial software such as Microsoft Excel) shall be in conformance with QAPD requirements. Commercial software is exempt from the software control requirements of QAPD section 6.0; however, the applications of such commercial software are not exempt from the software control requirements of section 6.0.

Spreadsheet applications produced using the software shall be fully documented and validated according to applicable QAPD requirements. The NDA PDP Coordinator is responsible for ensuring that any spreadsheet development and use is properly documented and validated.

Any spreadsheet developed and used for a PDP activity to obtain final results shall be identified with a revision or version number. Because these spreadsheets will be used only by the NDA PDP Coordinator and possibly a trained backup individual, software distribution and control does not pose a concern. Any newly developed spreadsheets used to obtain final results and any changes to existing spreadsheets used to obtain final results shall be validated by comparing software results with hand calculations or other appropriate means. Any subsequent revision shall be revalidated by comparing the new results with the values obtained before the change or through some other comparison. The specific validation tests shall be designed to cover the entire range of interest and shall be documented. Records associated with validation of such scoring spreadsheets shall be maintained in the CBFO records system.

If a spreadsheet is used to obtain final results, the calculations performed by the spreadsheet will be verified and validated by verifying that the spreadsheet works correctly over the expected range of the input variables, and documented by issuing a memorandum record containing the following information to the CBFO PDP Appointee:

- Name and version of the software used
- Name and version number (required) of the spreadsheet, and the name of the developer
- Scope of the computation
- Data entry process description
- List and definition of named variables
- Definition of complex formulas (i.e., formulas not easily deduced by inspection of the spreadsheet or macro)
- Documentation of the verification of the software (by hand calculation or other means)
- An electronic disk copy of the spreadsheet set up to run one of the documented verification tests
- Inputs, output results, and ancillary data (if used)

If spreadsheets containing formulas are used to obtain preliminary results, the results of all formulas used in the spreadsheet must be verified and documented prior to using the results as final data.

## 10.0 REFERENCES

- DOE/CBFO-94-1012, *Quality Assurance Program Document*, current revision, U.S. Department of Energy Carlsbad Field Office
- DOE/CAO-1996-2184, *Title 40 Part 191, Compliance Certification Application for the Waste Isolation Pilot Plant*, U.S. Department of Energy Carlsbad Field Office
- DOE/CBFO-01-1005, *Performance Demonstration Program Plan for Nondestructive Assay of Drummed Wastes for the TRU Waste Characterization Program*, current revision, U.S. Department of Energy Carlsbad Field Office
- DOE/CBFO-01-1006, *Performance Demonstration Program Plan for Nondestructive Assay of Boxed Wastes for the TRU Waste Characterization Program*, current revision, U.S. Department of Energy Carlsbad Field Office
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, current revision, U.S. Department of Energy Carlsbad Field Office
- DOE/WIPP 09-3424, *40 CFR Part 191 and 194, Compliance Recertification Application for the Waste Isolation Pilot Plant*, U.S. Department of Energy Carlsbad, New Mexico
- CBFO MP 1.2, *Selection of Quality Levels*, current revision, U.S. Department of Energy Carlsbad Field Office
- CBFO MP 3.1, *Corrective Action Reports*, current revision, U.S. Department of Energy Carlsbad Field Office
- CBFO MP 4.5, *Generating, Receiving, Storing, and Controlling Active CBFO Program Records*, current revision, U.S. Department of Energy Carlsbad Field Office
- CBFO MP 4.9, *Quality Assurance Records*, current revision, U.S. Department of Energy Carlsbad Field Office
- Portage PRC-5005, *Conduct of the Nondestructive Assay Performance Demonstration Programs*
- Portage PRC-3005, *Nonconformance Reporting, Disposition and Closure*
- Portage PRC-3022, *Procurement*
- Portage PRC-3008, *Issues Management System*
- Portage PRC-3028, *Records Management*

**Attachment 1—Example Form for Documentation of Completion of Required Training  
CTAC Training Requirements for Performance Demonstration Program (PDP)  
Program Management Support to CBFO**

**NAME:** \_\_\_\_\_ **POSITION:** \_\_\_\_\_

1. Prior to performing quality-affecting work, training must be completed and documented.
2. Specific training requirements for your position are identified by an “X” in the “Req.” column.
3. Be sure to document the training for the last revision of the document; list the revision number.
4. List the Training Type(s) used:  
C = Classroom  
R = Reading  
B = Briefing  
T = Test Required at Completion
5. For each of the required training elements, acknowledge that you have completed each assigned element by listing the date completed

Training Element	Rev.	Req.	Training Type(s)	Date
CBFO QAPD (CBFO-94-1012)				
WIPP WAC (DOE/WIPP-02-3122)				
CBFO NDA PDP Plan for Drummed Wastes (DOE/CBFO-01-1005)				
CBFO NDA PDP Plan for Boxed Wastes (DOE/CBFO-01-1006)				
CBFO PDP Management Plan (DOE/CBFO-01-3107)				
CBFO MP 1.2, <i>Selection of Quality Levels</i>				
CBFO MP 3.1, <i>Corrective Action Reports</i>				
CBFO MP 4.5, <i>Generating, Receiving, Storing, and Controlling Active CBFO Program Records</i>				
CBFO MP 4.9, <i>Quality Assurance Records</i>				
Portage PRC-5005, <i>Conduct of the Non-Destructive Assay Performance Demonstration Program</i>				
Portage PRC-3022, <i>Procurement</i>				
Portage PRC-3005, <i>Nonconformance Reporting, Disposition and Closure</i>				
Portage PRC-3008, <i>Corrective Action Reporting System</i>				
Portage PRC-3028, <i>Records Management</i>				
Other				
Other				

Training Assigned By: \_\_\_\_\_

Date: \_\_\_\_\_