



Nevada
Environmental
Management
Operations
Activity

FFACO Handbook

Revision No.: 3

April 2013

U.S. Department of Energy
National Nuclear Security Administration
Nevada Field Office



FFACO Handbook

U.S. Department of Energy
National Nuclear Security Administration
Nevada Field Office
Las Vegas, Nevada

Revision No.: 3

April 2013

FFACO Handbook

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List of Acronyms and Abbreviations

A-E	Architectural and engineering
AL	Activity Lead
BLM	Bureau of Land Management
CADD	Corrective action decision document
CAI	Corrective action investigation
CAIP	Corrective action investigation plan
CAP	Corrective action plan
CAS	Corrective action site
CAU	Corrective action unit
CNTA	Central Nevada Test Area
CFR	<i>Code of Federal Regulations</i>
CR	Closure report
D&D	Decontamination and decommissioning
Decon	Decontamination
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DP	Defense Program
DQO	Data quality objective
DRS	Document Review Sheet
DTRA	Defense Threat Reduction Agency
DU	Depleted uranium
EM	Environmental Management
EMIS	Environmental Management Information System
ER	Environmental Restoration
FAL	Final action level

List of Acronyms and Abbreviations (continued)

FFACO	<i>Federal Facility Agreement and Consent Order</i>
FIMS	Facility Information Management System
ft	Foot
FY	Fiscal year
GCP	Groundwater Characterization Program
GIS	Geographic Information Systems
GPS	Global Positioning System
in.	Inch
LM	Legacy Management
M&O	Management and operating
NAD 83	North American Datum of 1983
NAFR	Nellis Air Force Range
NDEP	Nevada Division of Environmental Protection
NNSA/NFO	U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office (current name, since March 10, 2013)
NNSA/NSO	U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office (used January 2003-March 2013)
NNSS	Nevada National Security Site
NSSAB	Nevada Site Specific Advisory Board
NTTR	Nevada Test and Training Range
OAM	Operations Activity Manager
OSTI	Office of Scientific and Technical Information
PCB	Polychlorinated biphenyl
PCM	Post-closure monitoring
PM	Project Manager
ppm	Parts per million
PRF	Public Reading Facility

PSA

Project Shoal Area

List of Acronyms and Abbreviations (continued)

Pu	Plutonium
Rad	Radiation
RCRA	<i>Resource Conservation and Recovery Act</i>
RG	Range
ROTC	Record of Technical Change
SAFER	Streamlined Approach for Environmental Restoration
TA	Target Area
TIRP	Technical Information Review Program
TPH	Total petroleum hydrocarbons
TTR	Tonopah Test Range
UGTA	Underground Test Area
UR	Use restriction
USAF	U.S. Air Force
UST	Underground storage tank
UTM	Universal Transverse Mercator

1.0 Introduction

In 1996, the *Federal Facility Agreement and Consent Order* (FFACO) was signed to govern the process for identifying, characterizing, and providing corrective actions for historical sites within the state of Nevada related to the development, testing, and production of nuclear weapons. The FFACO is a tri-party agreement entered into by the State of Nevada, acting by and through the Department of Conservation and Natural Resources, Nevada Division of Environmental Protection (NDEP); the U.S. Department of Energy (DOE), National Nuclear Security Administration Nevada Field Office (NNSA/NFO [previously known as the National Nuclear Security Administration Nevada Site Office [NNSA/NSO]]); and the U.S. Department of Defense (DoD). The Agreement is a legally binding document that supersedes the corrective action requirements of the *Resource Conservation and Recovery Act* (RCRA) Permit. With the transfer of the Offsites Activity to DOE, Legacy Management (LM), on October 1, 2006, a modification to the Agreement dated August 5, 2006, was put into place and DOE-LM became a signatory to the Agreement.

1.1 Purpose of the Handbook

The purpose of the *FFACO Handbook* is to aid the implementation of the requirements of the FFACO by creating a central repository for FFACO-related policy and guidance for use by DOE and its contractors. Users can check with the appropriate DOE Activity Lead (AL) for activity-specific applicability.

Sources for statements made in this handbook are either mentioned in the text or noted parenthetically after the relevant section.

1.2 Table of FFACO Obligations and Commitments

Key elements of the FFACO and the parties responsible for their completion are outlined in the [“Obligations and Commitments Federal Facility Agreement and Consent Order.”](#)

1.3 Handbook Modification

This handbook will be updated as FFACO policy is created and/or modified. Any DOE or contractor personnel may initiate an update. However, approval of changes will ultimately reside with DOE. Changes will be executed by the FFACO Support Group. Depending on the extent of the change, an addendum or full revision may be published.

When the need for a modification is identified, the change initiator will forward the change to the FFACO Support Group (FFACO@nv.doe.gov). The FFACO Support Group will review the change and forward it to the DOE FFACO Administrator.

The DOE FFACO Administrator will review the change, and approve or disapprove it in conjunction with other DOE personnel, as needed. He/she will notify the FFACO Support Group of his/her decision.

The FFACO Support Group will notify the change initiator of the result of the DOE FFACO Administrator review of the submitted modification request. If the change is approved, it will be incorporated into the next revision of the *FFACO Handbook*, or an addendum will be issued. If the change is disapproved, then no further action is required.

2.0 Structure and Issuance of the FFACO and Appendices

The State of Nevada, DoD, and DOE signed the [FFACO on May 10, 1996](#). The DOE and its contractors can view a copy of the Agreement and the majority of the supporting data on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>). This section provides an overview of the Agreement and the FFACO dataset.

2.1 DOE/DoD Transfer of Authority

The federal government is bound to the requirements of the FFACO regardless of the creation or deletion of specific federal agencies. The Agreement is “binding on all successors in interest and on any successor agency” to DOE or DoD. DOE and DoD are required to provide notice of the FFACO (including all appendices and any amendments) to every successor in interest and to any successor agency before any transfer of ownership or operation of the real property subject to this Agreement (FFACO Part I.2).

2.2 Agreement Coordinators

Each party to the Agreement must designate an individual to serve as the Agreement coordinator. The Agreement coordinator, on behalf of the designating organization, is responsible for the overall implementation of the Agreement (FFACO Part IV.4).

The Agreement coordinators are as follows:

- Environmental Management (EM) Operations Activity Manager (OAM), DOE/EM
- Environmental Program Manager, Defense Threat Reduction Agency (DTRA) for DoD
- Bureau Chief, NDEP
- Nevada Offsites Manager, DOE/LM

NDEP personnel will initially contact DOE ALs for requests concerning field-activity coordination. NDEP personnel may contact the DOE Agreement coordinator if there is no response 24 hours after the initial request per an agreement reached at the [August 15, 1996, FFACO meeting](#).

2.2.1 Corrective Action Coordinators

Per Part XVI of the FFACO, *Notification and Agency Coordination*, each Agreement coordinator works with the other agencies' corrective action coordinators and ensures that all communications from the other agencies are appropriately disseminated and processed within his/her organization.

The corrective action coordinators are as follows:

- EM OAM, DOE/EM
- Environmental Program Manager, DoD
- FFACO Coordinator, NDEP
- Nevada Offsites Manager, DOE/LM

2.3 NDEP Signature Authority

It is the responsibility of the NDEP Bureau Chief to approve various types of documents and field activities (NDEP correspondence dated [July 16, 1998](#), and [May 30, 2000](#); a letter agreement dated [June 19, 2000](#)). The following determinations must be issued under the signatory block of the NDEP Bureau Chief:

- Regulatory determinations (e.g., a change to a permit condition, waiver of requirements, determination of compliance, change to compliance schedules)
- Modification to the FFACO (e.g., movement of corrective action units [CAUs], Appendix III changes in CAU scope, establishment of or changes to deadlines)
- Approval of any final document outlined in the FFACO
- Approval of any major changes to an already approved FFACO final document

Note: Any change to an already approved FFACO final document requires that DOE submit an addendum, errata sheet, revision, or Record of Technical Change (ROTC) to NDEP.

- Concurrence with budget reprogramming and funding requests
- Formal requests for information under Part XIII of the FFACO

The NDEP Las Vegas Office Branch Supervisor and NDEP Programs Supervisor have signature authority for letters under the Bureau Chief's purview. The NDEP Project Manager(s) (PM) may sign other correspondence.

2.4 FFACO and Appendices

The FFACO consists of the Agreement (i.e., the main body of the document) and appendices that contain important information about the implementation and status of the Agreement scope. The following sections provide an overview of both the Agreement and the appendices.

The current revision of the FFACO can be found on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>). Additionally, controlled and uncontrolled copies of the FFACO are distributed twice a year to specific recipients per an agreement reached at the FFACO meeting on [February 12, 1997](#) (contact the DOE FFACO Administrator or the FFACO Support Group for details).

2.5 Facilities

The FFACO applies to land controlled, managed, owned, or withdrawn by DOE and/or DoD in the state of Nevada. This includes the Nevada National Security Site (NNSS), Central Nevada Test Area (CNTA), Project Shoal Area (PSA), and parts of the Tonopah Test Range (TTR) and the Nevada Test and Training Range (NTTR) (formerly the Nellis Air Force Range [NAFR]). The facilities are defined in the FFACO Appendix I, Part 1.0.

2.6 Interpretation of the Agreement by DOE Personnel and Contractors

During implementation, the Agreement and/or appendices may need clarification. If clarification is needed, DOE personnel and contractors should contact the DOE FFACO Administrator or the FFACO Support Group. The DOE FFACO Administrator or the FFACO Support Group will investigate the issue and provide guidance on interpretation. If needed, the DOE FFACO Administrator or the FFACO Support Group will initiate a proposal for a new agreement or other instrument to clarify passages that might lend themselves to misinterpretation.

2.7 The Agreement and Consent Order

The main body of the FFACO contains the basis for the environmental work that is conducted by DOE and DoD in the state of Nevada resulting from historical nuclear testing and weapons delivery systems development. Key facets of the Agreement presented in the main body of the FFACO are listed below:

- Legal authority for the FFACO
- Definitions of all FFACO terms
- Purpose and scope of the Agreement
- Enforceability of the Agreement

- Reporting requirements
- Amendments and modifications
- Severability of the Agreement
- Classified and confidential information

There have been six modifications to the Agreement since its inception. These modifications were approved on [July 19, 2000](#); [April 5, 2004](#); [August 5, 2006](#); [January 14, 2007](#); [February 20, 2008](#); and [March 17, 2010](#), respectively.

- The July 19, 2000, modification clarified what constituted a modification of the Agreement.
- The April 5, 2004, modification changed the biweekly field report to a monthly field report (see Section 3.3 for the details on the monthly field report).
- The August 5, 2006, modification added the DOE/LM as a signatory to the Agreement.
- The January 14, 2007, modification affected the setting of milestones and progress reporting.
- The February 20, 2008, modification consisted of administrative changes.
- The March 17, 2010, modification changed FFACO meeting frequency from a semiannual basis to an annual basis and instituted some administrative changes to accommodate the new meeting frequency.

2.7.1 CAU/CASs Defined

The FFACO defines CAUs and corrective action sites (CASs). A CAS is a solid waste management unit, disposal site, or release site within a CAU that potentially requires corrective action. One or more CASs are grouped into a CAU for remediation. Any change—including additions, archive, or movement of CASs or CAUs—requires an FFACO modification. Section 7.0 details the modification process.

2.7.1.1 CAS Numbering and Descriptions

Systems have been established to number CASs. All numbers are issued by the FFACO Support Group. The system for numbering CASs is described as follows:

- All CAS descriptions are designated through the modification process (see Section 7.0 for more detail).
- No CAS numbers and descriptions may be entered into the appendices until approved by DOE FFACO Administrator.

2.7.1.1.1 Numbering of CASs on the NNSS, TTR, and NTTR

Numbers assigned to CASs on the NNSS usually have three sets of two-digit numbers separated by hyphens. The first two digits or letters are the NNSS area. If the area is unknown, the number entered is “00.” The second set of two-digit numbers is the functional category (see [Attachment A, Functional Categories and Associated Numbers](#)). The final two digits are assigned sequentially based on existing CASs within the same area with the same functional category.

An example of an NNSS CAS is CAS 25-05-04, Leachfield, which is

- in Area 25 of the NNSS,
- in the Leachfield functional category (coded as 05), and
- the fourth site with a Leachfield functional category in Area 25 to be entered into the FFACO.

The TTR CAS numbers may include alphanumerics of four segments, instead of just three. The first segment indicates the general TTR area in which the CAS is located. (If the area is unknown, the number entered is “00.” Older TTR sites have the designator “TA” [Target Area] or “RG” [Range]). The second segment is the functional category of the CAS, and the third segment is a sequential counter. The additional fourth and fifth segments (which are sometimes combined) are a more specific area location. See [Attachment B, Alphanumeric TTR CAS Abbreviations](#), for the meanings of the abbreviations used for the general and specific areas.

An example of an alphanumeric TTR CAS number is TA-55-001-TAB2, which is

- in the Target Area of the TTR,
- in the Buried Ordnance Site functional category (coded as 55),
- the first site in this area and functional category, and
- in a specific area designated as Target Area, Bunker 2 (B2).

The NTTR CAS numbers have three segments. The first designates the location. The second designates the functional category. The third is a numeric sequence. An example of an alphanumeric NTTR CAS number is NAFR-23-01, which is

- on the NTTR,
- in the Radiation (Rad) Contamination functional category (coded as 23), and
- the first site in this area and functional category.

Each CAS is numbered based on the knowledge at the time of creation. Once a number is assigned for a specific site, the number remains unchanged, even if information is later revealed that would have led to a different designation.

For example, when CAS 25-26-22 Lead Sheets (2) was created, it was thought this site was located in Area 25. However, in early 2000, it was determined that the site was located in Area 26. The “DOE Area” field in the FFACO dataset was updated to reflect the new information; however, the CAS number remained the same.

2.7.1.1.2 Numbering of CASs on the CNTA and PSA

Numbers assigned to sites on the Offsites locations (i.e., the CNTA and PSA) have three sets of two-digit numbers separated by hyphens. The first two digits are either “57” if on the PSA or “58” if on the CNTA. The second set of two-digit numbers is the functional category (see [Attachment A](#)). The final two digits are assigned sequentially based on existing CASs within the same area with the same functional category. An example of an Offsites CAS is CAS 57-06-01, Muckpile, which is

- in Area 57 (i.e., the PSA),
- in the Muckpile functional category (coded as 06), and
- the first site with a Muckpile functional category in Area 57 to be entered into the FFACO.

2.7.2 CAU Numbering

Two-, three-, or four-digit numbers are used to identify CAUs. Numbers are assigned by the FFACO Support Group in ascending order. Numbers for CAUs are never reused.

All CAU descriptions are assigned and changed through the modification process (see Section 7.0 for more details).

The creation of a CAU must be approved by NDEP, DOE, or DoD (the approval level required is discussed in per Section 7.1.1.1) before the CAU number may be entered into the appendices.

2.7.2.1 CAU 4000, No Further Action Sites, and CAU 5000, Archived Corrective Action Sites

Two CAUs in Appendix IV of the FFACO have four-digit CAU numbers: CAU 4000, No Further Action Sites; and CAU 5000, Archived Corrective Action Sites.

CAU 4000, No Further Action Sites, contains CASs that are found to have no remaining contamination (e.g., because of natural attenuation or historical corrective actions); that is, these sites exist but require no further actions to be closed. Previously, these sites were kept in their original CAU throughout the corrective action process (even though the sites were not undergoing corrective action) or were transferred to a similar CAU that was previously closed and promoted to Appendix IV. Both these methods were confusing, so CAU 4000 was created as a central repository for sites that require no further action ([letter from NDEP to NNSA/NSO dated May 11, 2004](#)). Sites are moved to CAU 4000 before beginning either the Streamlined Approach for Environmental Restoration (SAFER) Plan or the Corrective Action Plan (CAP) through the modification process (see Section 7.0 for details). Sites in which the SAFER Plan or the CAP has begun need to be referred to the DOE AL before they can be moved to CAU 4000 to verify the appropriateness of the modification and gain DOE AL approval. Sites transferred out of CAU 4000 will be handled on a case-by-case basis.

CAU 5000, Archived Corrective Action Sites, contains the following:

- **CASs that become or were always active.** Because the FFACO addresses only currently inactive sites, active sites are removed from the Agreement.
- **CASs that do not exist or are duplicative of other CASs.** No action is needed for these sites, so they are archived in CAU 5000.

Sites are moved to CAU 5000 through the modification process (see Section 7.0 for details). Sites transferred out of CAU 5000 will be handled on a case-by-case basis.

2.8 Activities

All CAUs and CASs in the Agreement are assigned to the following:

- **DTRA.** Sites planned for remediation by DoD (DTRA).
- **Industrial Sites.** DOE sites where activities were conducted that supported nuclear testing and weapons delivery system activities.
- **Underground Test Area (UGTA).** DOE sites where underground nuclear tests were conducted.
- **Soils.** DOE sites of surface or subsurface contamination that resulted from atmospheric and safety experiments.
- **Nevada Offsites.** DOE sites of historical testing activities off the NNSS (i.e., on the CNTA or PSA). **Note:** As of October 1, 2006, the Nevada Offsites have been transferred

to and are under the purview of LM; however, they remain part of the FFACO and are governed by the Agreement.

2.9 Appendices

The FFACO has the following six appendices:

- Appendix I, *Description of Facilities*, is a description of the facilities addressed by the FFACO (i.e., the NNSS, CNTA, PSA, and parts of the TTR and NTTR).
- Appendix II, *Corrective Action Sites/Units*, includes CASs and CAUs that have been identified to be addressed through the FFACO, but have not yet been prioritized for remediation and milestone assignment.
- Appendix III, *Corrective Action Investigations/Corrective Actions*, is a list of CAUs currently undergoing corrective actions tied to milestones enforceable through the FFACO.
- Appendix IV, *Closed Corrective Action Units*, is a list of CAUs and CASs closed through the FFACO or requiring no further corrective action. Sites requiring a use restriction (UR) or long-term monitoring are specifically annotated.

Note: Sites are closed when NDEP issues a Notice of Completion for a CAU and authorizes its promotion to Appendix IV.

- Appendix V, *Public Involvement Plan*, provides information about how information related to the FFACO will be disseminated to the public. Many public involvement strategies are implemented by or in coordination with the Nevada Site Specific Advisory Board (NSSAB). The Public Involvement Plan is reviewed and updated as the program changes and new methods are identified to make public involvement activities more efficient.
- Appendix VI, *Corrective Action Strategy*, is the technical basis for the remediation work. Appendix VI defines the process for implementing corrective actions pursuant to the FFACO. The strategy has four steps: (1) identify CASs, (2) group identified CASs into CAUs, (3) prioritize CAUs for remediation, and (4) implement corrective actions.

2.10 FFACO Database and the EMIS

A dataset of information critical to the implementation and recordation of the FFACO is maintained by the FFACO Support Group on behalf of DOE and the other Agreement signatories. The dataset is used to populate the FFACO appendices and other facets of the Agreement implementation.

The dataset is currently contained in the FFACO database and can be accessed via the FFACO website, which is a part of the Environmental Management Information System (EMIS). All

reports and data supporting the Agreement may be accessed via EMIS through the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

2.11 *Maps of CAU and CAS Locations Pertaining to URs*

In August 2006, ArcGIS replaced the GeoMedia website, and maps (aerial photos) of CASs that have URs became available. These maps have been linked to the corresponding CAS URs in the FFACO database, which is accessible via the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

3.0 **Communication Process**

Signatories to the Agreement use a number of formal communication processes to communicate with one another, including the following:

- FFACO annual meeting
- *Ad hoc*/topical meetings
- Field activity reports
- Correspondence

Additionally, the Information Exchange process is used to communicate FFACO issues and policy to DOE, DoD, and their contractors.

The following sections detail these processes.

3.1 **Annual Meeting Requirements**

The FFACO annual meeting is typically held on the first Wednesday of February. The meeting allows the signatories to discuss issues related to the FFACO and its implementation in a formal setting.

3.1.1 **Required Meeting Topics**

In addition to other agenda items, Part XII.4 of the FFACO requires certain topics to be addressed at the annual meeting:

- The parties propose CAU milestones for the fiscal year (FY)+2 (i.e., the two FYs from the current FY) based on target and planning funding levels, as appropriate (milestones that require funding above the target level will be designated as such).

Note: Per the FFACO Part XII.4.a (Letter Agreement Change of January 2007), DoD cannot commit to enforceable FY+2 dates.

- The parties review and reconsider established priorities, milestones, due dates, and deadlines for the current FY.
- The parties consider approved funding program.
- The parties consider prioritization criteria.

Per the March 17, 2010, modification to the FFACO, the FY+1 milestone chart will be distributed to all stakeholders in August of each year. Stakeholders will then review and

reconsider established priorities, milestones, due dates, and deadlines based on the corrective action strategy (i.e., Appendix VI of the FFACO) and the budget/milestones for FY+1.

3.1.2 Meeting Agendas and Minutes

Agenda items for annual meetings are provided by DOE, NDEP, and DoD. The DOE, DoD, and their contractors can suggest items for the agenda or meeting topics via the DOE FFACO Administrator or the FFACO Support Group.

Draft minutes are developed by the FFACO Support Group and circulated for review by DOE, NDEP, and DoD in accordance with the agreement reached at the [FFACO meeting on May 14, 1997](#). Final agendas, handouts, signed agreements, and minutes are available on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

3.2 Ad Hoc/Topical Meetings

As needed, the signatories can schedule formal meetings to discuss and resolve specific policy and implementation issues. Past meetings have addressed a myriad of topics including the following:

- Document outlines
- The data quality objective (DQO) process
- Closure procedures for sites located on U.S. Air Force (USAF) property
- Substantially deficient document criteria

3.2.1 Calling Meetings and Minutes

When calling an *ad hoc* or topical meeting, DOE, DoD, or their contractors should suggest meeting topics to the DOE FFACO Administrator or the relevant DOE AL, or the NDEP FFACO Coordinator. If an *ad hoc* meeting is called, the FFACO Support Group will assist in setting up and recording minutes at the meeting.

Draft minutes for *ad hoc* meetings will be developed by the FFACO Support Group and circulated for review by NDEP, DOE, and DoD. Final minutes are available on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

3.3 Field Activity Reports

Part VII.4 of the FFACO requires that DOE and DoD submit reports detailing the planned field activities for the current month and following two months.

The field activity reports contain information related to fieldwork, DQO meeting schedules, document submittals, and post-closure monitoring (PCM) activities. The reports are compiled for DOE and DoD by the FFACO Support Group. Reports are posted on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

The reports must conform to a set format that was agreed upon at the [February 12, 1997, FFACO meeting](#).

To be added to or removed from the distribution list of field activity reports, contact the DOE FFACO Administrator or the FFACO Support Group.

3.4 Correspondence

All correspondence regarding or related to the FFACO is retained as part of the administrative record on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

Properly completed letters of submittal must accompany all documents to NDEP. When a document is ready for submittal to NDEP, the FFACO Support Group should be notified via email; a submittal letter will then be prepared using the templates available on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>). When the letter is complete, it will be sent to the originating contractor for distribution. These templates are the most recent versions and are changed within 48 hours of any notification of personnel or policy changes.

Correspondence can be found by searching on the “Correspondence” or “CAU” query of the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

3.5 Information Exchange

Information Exchange meetings were started in October 1996 by DOE and DoD personnel and their contractors. The Information Exchange was developed to help

- facilitate coordination,
- provide a forum for discussing FFACO issues and possible solutions, and
- ensure compliance with the FFACO.

Since February 2000, no face-to-face Information Exchange meetings have been convened, and email has become the method used in this process. An email is sent out biannually by the FFACO Support Group: (1) after minutes from the annual meeting are complete and (2) again in August. The Information Exchange is intended to communicate relevant information from the annual FFACO meeting and any other topics that may have arisen since the last Information

Exchange notification. To be added to or deleted from the Information Exchange email list, contact the DOE FFACO Administrator or the FFACO Support Group (FFACO@nv.doe.gov).

Historical agendas and minutes from Information Exchange meetings are available on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

4.0 Corrective Action Process

The FFACO provides the framework for defining, scheduling, and documenting the corrective action process. Per the Agreement, a corrective action is defined as “an action or series of actions taken to correct deficiencies in the disposal or containment of pollutants, hazardous wastes, and solid wastes to prevent releases and/or potential releases into the environment or discharges and/or potential discharges of such materials into waters of the state in accordance with the approved corrective action plan. A corrective action may range from no action to clean closure” (FFACO, Part IV.11).

The primary guide for FFACO corrective actions is Appendix VI of the FFACO, *Corrective Action Strategy*. Agreements and correspondence among the signatories generated during the implementation of the Agreement also guide the corrective action process.

All aspects of potentially contaminated sites will be dealt with in the FFACO CAUs, decontamination and decommissioning (D&D) planning, or the Sectorized Clean-up Work Plan (see Section 4.3.1.2) per the agreement reached at the [FFACO meeting dated May 5, 1999](#).

Corrective actions for CAUs within the FFACO can range from no further action to clean closure depending on the technical challenge of the site, extent and type of contamination (if any), and the geographic environment.

4.1 Selection of Corrective Action Process

The corrective action process for an Appendix II site is selected at planning meetings held between DOE/DoD and NDEP based on existing site knowledge and historical corrective actions. Current planned corrective action processes for Appendix II sites can be found on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

When a site is promoted into Appendix III (per the process in Section 7.0), DOE/DoD proposes at least one enforceable milestone for establishment under the FFACO. Approval of this milestone by NDEP is considered tacit approval of the corrective action process.

4.2 Prioritization and Selection of CAUs for Corrective Action

Appendix II contains CAUs planned for future corrective action under the FFACO. Those CAUs ready to undergo corrective action are promoted to Appendix III using the FFACO modification process (see Section 7.0) via a letter or with the submission of the FY+ 2 milestone chart. In some cases, the relevant DOE/DoD AL/Manager may propose promotion of CAUs to

accommodate funding. Assigned milestones are proposed by DOE/DoD to NDEP for approval with the completion of at least one document associated with the given corrective action process.

4.2.1 Prioritization of CAUs

In the past, corrective actions were prioritized through the approved FFACO Prioritization Model. The model applied a series of mathematical values and weights to Appendix II CAUs based on a series of questions regarding the CAUs. The resulting score was used to inform decision makers regarding which CAUs should be promoted to Appendix III.

The Prioritization Model and scores were formerly maintained by the FFACO Support Group. For information pertaining to current prioritization methods and procedures, personnel from NDEP, DOE, DoD, and their contractors may contact the DOE FFACO Administrator or the FFACO Support Group (FFACO@nv.doe.gov).

4.3 Corrective Action Processes

There are three primary FFACO corrective action processes: housekeeping, SAFER, and complex. An overview of each process is provided in the following subsections. The processes are also outlined in the FFACO, Appendix VI, Part 1.5.

4.3.1 Housekeeping Process

The housekeeping process (Appendix VI, Part 1.5.1) applies to “CASs that do not require further investigation before the corrective action is completed.” Contaminated soil in excess of 30 cubic yards may not be removed from a housekeeping site without specific NDEP approval per the Sector Clean-up Work Plan (see Section 4.3.1.2).

4.3.1.1 Housekeeping CASs with Stained Soil

The CASs in the FFACO that are being remediated using the housekeeping corrective action process and contain soil staining of unknown contaminants will be handled as follows:

- First, the stained soil will be given a new CAS number with the same location as the original CAS number and grouped into an Appendix II CAU in either the Industrial Sites or Soils Activity.
- Second, the original housekeeping CAU will be submitted for closure (per an agreement reached at the [FFACO meeting dated August 15, 1996](#)).

4.3.1.2 Sectored Clean-up Work Plan

The [Sectored Clean-up Work Plan for Housekeeping Category Waste Sites](http://empcs.nv.doe.gov/FFACO/) provides a process by which one or more existing housekeeping sites are remediated as individual sites or, when appropriate, grouped into a sector for cleanup. This increases effectiveness and efficiencies in planning, labor, materials, equipment, cost, and time. The latest plan is available from DOE, the M&O contractor, or characterization contractor, or may be found on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

4.3.1.3 Documenting Housekeeping Corrective Actions

Closure of a housekeeping site is documented in a closure report (CR), or in the appropriate CR for complex or SAFER corrective actions.

4.3.2 SAFER Process

The SAFER process (Appendix VI, Part 1.5.2) “will be employed at CAUs where the parties agree that enough information exists about the nature and extent of contamination to propose an appropriate corrective action before a [Corrective Action Investigation] CAI is completed.”

4.3.2.1 Documenting the SAFER Corrective Actions

The CAUs closed using the SAFER process require that the following two documents be submitted to NDEP:

- **SAFER Plan.** This document provides the proposed method for characterizing and undertaking corrective action at a given site in conformance with the approved FFACO Outline as discussed in Section 5.1.2. A SAFER Plan may have decision points incorporated into it for multiple corrective actions depending upon the type and extent of contamination.
- **CR.** Once corrective actions are completed, a CR in conformance with the approved FFACO Outline as discussed in Section 5.1.2 is submitted to NDEP that describes the corrective action activities and verifies closure results. Any URs or PCM required for any of the sites contained in the CAU will also be documented in the CR.

4.3.3 Complex Process

Per Appendix VI, Part 1.5.3, the complex process is used for CAUs where additional information is needed for the evaluation of possible corrective action alternatives.

4.3.3.1 Documenting Complex Corrective Actions

With the exceptions noted in Section 4.3.3.2, the complex process requires the submittal of four documents to NDEP:

- **Corrective Action Investigation Plan (CAIP).** This document provides or references all the specific information for planning investigation activities. The CAIP must conform to the approved FFACO Outline as discussed in Section 5.1.2 and is developed using the DQO process. The CAIP must include or reference all information needed to conduct the investigations in compliance with established procedures and protocols.
- **Corrective Action Decision Document (CADD).** This document provides the results of the characterization, multiple corrective action alternatives, and the recommended corrective action alternative (based on the characterization results) and the rationale for its selection. The rationale for the selected alternative includes an analysis of the possible alternatives and may reflect a decision ranging from no action to clean closure. The CADD must conform to the approved FFACO Outline as discussed in Section 5.1.2.
- **CAP.** This document provides the plan for implementing the selected corrective action for a CAU. This plan must conform to the approved FFACO Outline as discussed in Section 5.1.2 and will contain a detailed description of the proposed actions that will be taken to achieve the degree of containment set forth in the NDEP-approved CADD.
- **CR.** This document provides an overview of the corrective actions implemented at a CAU, the results of the corrective actions, any deviations from the approved CAP, closure verification information, and UR and monitoring requirements (when applicable). The CR must conform to the approved FFACO Outline as discussed in Section 5.1.2.

4.3.3.2 Alternative Methods for Documenting Complex Corrective Actions

The two alternative documents that are accepted by NDEP for complex corrective actions are as follows:

- **CADD/CR.** This document is used for CAUs where no further corrective actions are needed following completion of the CAI. This may include minor corrective actions as agreed to by NDEP. The document must conform to the approved FFACO Outline as discussed in Section 5.1.2 and provide rationale for no further corrective action, and may recommend closure with or without URs or long-term monitoring. This document is submitted to fulfill a CADD milestone. However, if approval is granted, this document would also fulfill the CR milestone, and the CAP milestone would no longer be required (agreements resulting from the [FFACO meeting dated May 13, 1998](#), and the [June 2012 approved document outline](#)).
- **CADD/CAP.** This document uses site knowledge gained through characterization and similar historical corrective actions to provide a plan for corrective action. The CADD/CAP must conform to the approved FFACO Outline as discussed in

Section 5.1.2. This document is submitted to fulfill a CADD milestone. However, if approval is granted, the CAP milestone also is completed.

4.3.4 Closure of Underground Storage Tanks

Per an agreement that resulted from the [August 15, 1996, meeting](#), the following method will be used for closing an underground storage tank (UST) (under any corrective action process):

- The DOE should complete the tank pull.
- If a spill is discovered and it can be addressed under current procedures or work plans, then the contaminated soil will be removed and confirmatory sampling performed.
- If the spill is large, DOE will propose that the CAS be removed from the CAU and closed later using a more complex process.
- All information related to verifying the closure of the UST will be included in the CR.

5.0 Documentation of Corrective Actions and Milestones

As established in the FFACO, Appendix VI, Part 1.4, a series of documents designed to plan and guide the CAI and corrective action activities will be prepared (Section 4.3). Most documents are associated with a milestone established and enforceable through the Agreement.

5.1 Document Development Process

All FFACO-required documents (i.e., CAIPs, CADDs, CADD/CRs, CADD/CAPs, SAFER Plans, CAPs, CRs, and Post-closure Reports) pass through three development stages: draft, final, and NDEP-approved. Each stage has specific requirements for distribution, review, revision, and approval.

Some FFACO documents require amendments or additions subsequent to NDEP approval. In this case, an addendum, errata sheet, or ROTC is required. These additions to an NDEP-approved document must also be reviewed and distributed in accordance with Sections 5.1.5.2 and 5.1.5.3. The errata sheets do not need NDEP approval; however, DOE/DoD may choose to seek oral concurrence from NDEP.

5.1.1 Multiple CAUs in One Document

Each of the following groups of CAUs—CAUs 101 and 102; CAUs 230 and 320; CAUs 406 and 409; CAUs 461 and 495; and CAUs 530, 531, 532, 533, 534, and 535—was addressed concurrently in the same FFACO documents. However, it is NDEP’s stated policy that multiple CAUs should not be addressed in a single document but, instead, CASs should be moved between CAUs to create more effective groupings as needed. The policy is clearly stated in an [August 31, 1998, letter from NDEP to DOE](#).

Any exceptions must be handled on a case-by-case basis and must receive EM OAM and NDEP approval before work starts on the document.

5.1.2 Document Outlines

All documents (draft or final) must conform to the approved FFACO Outlines. The FFACO Outlines provide the order and titles of sections required in the document, as well as guidelines for the type of information required in each section. The FFACO Outlines are a key element in the determination of a substantially deficient milestone. Section 5.2.1.1 contains the details regarding substantially deficient documents.

The latest versions of the FFACO Outlines are located on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

5.1.3 Draft Stage Documents

A document is considered draft before its formal submittal to NDEP.

Draft documents are reviewed by DOE and/or DoD, NDEP, contractor personnel, and the FFACO Support Group.

Before distributing a draft document for review, the PM of the originating contractor should verify the document

- is considered by the originating contractor to be complete,
- is formatted with a header template for the controlled copy distribution,
- does not refer to the originating contractor on the title page, and
- has been reviewed by a Derivative Classifier of the originating contractor.

The FFACO does not require submittal of draft documents to NDEP. However, DOE/DoD submit a draft document to solicit preliminary comments from NDEP to increase the chances of document approval and decrease the likelihood of the document being deemed substantially deficient. If DOE and/or DoD sends a draft document to NDEP for review, the sender also ensures the document

- is distributed as an unsigned and uncontrolled document,
- front cover is marked “DRAFT,” and each internal page has the required “DRAFT” watermark,
- includes a footer with the following statement “This is a draft, predecisional U.S. Department of Energy document and is not releasable to the public.” on the front cover and all internal pages, and
- has been reviewed by a Derivative Classifier of the originating contractor.

The FFACO Support Group will prepare a distribution letter using the FFACO letter template for submitting documents to NDEP. The signed submittal letter will be returned to the document’s originating contractor for distribution per the cc list on the letter.

5.1.3.1 Distribution of Draft Documents

5.1.3.1.1 Technical Information Review Program

As part of the final draft distribution, copies of the final draft document are sent by the originating contractor to the Technical Information Review Program (TIRP), which consists of a

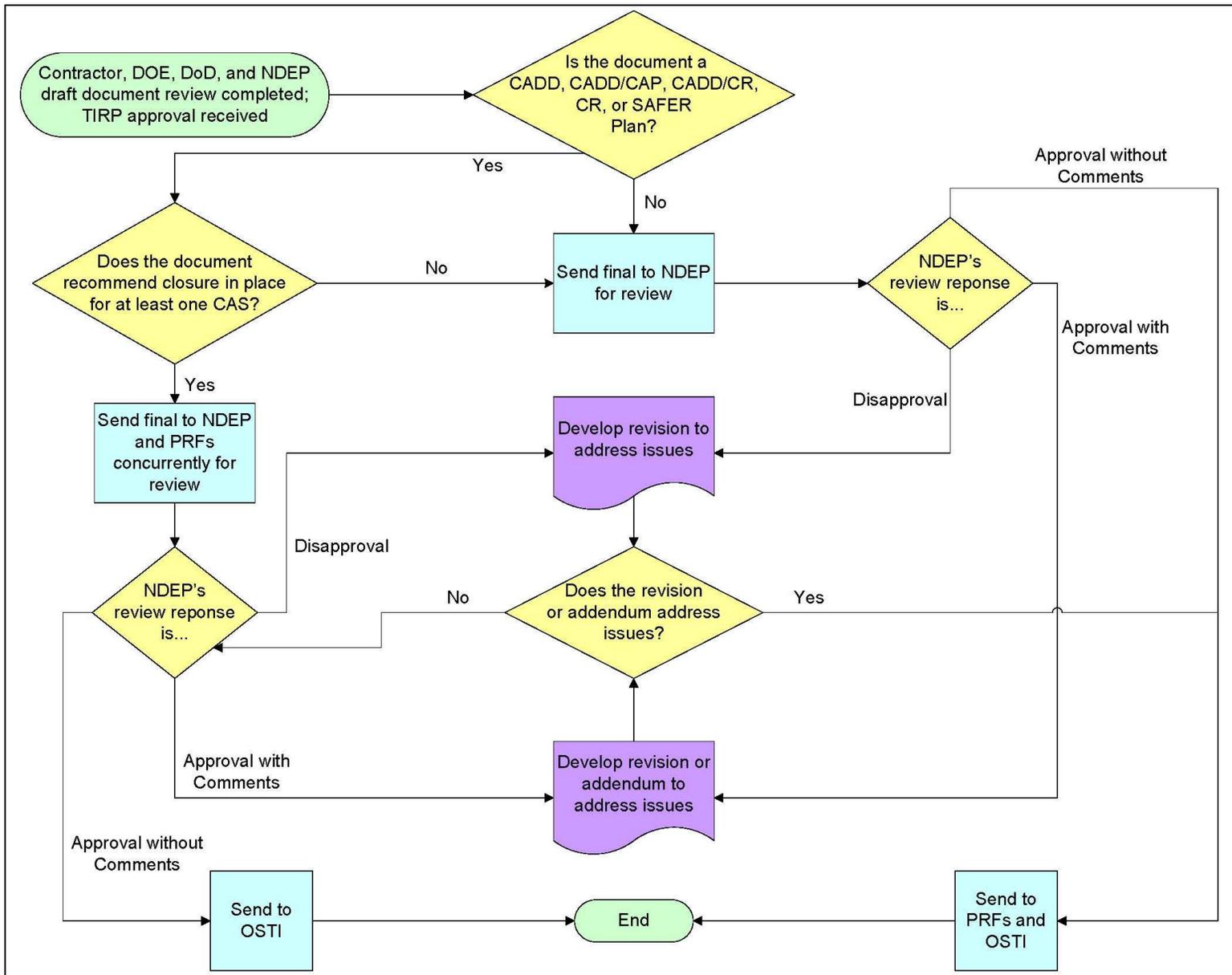
Technical Information Specialist within the NNSA Office of Safety and Security, the NFO Office of Public Affairs, a Copyright and Patent Reviewer, and an NFO Classification Officer. TIRP must approve every product intended for external distribution or public release. TIRP requires a review period of at least 30 calendar days. After TIRP reviews the product, any changes resulting from comments received from the TIRP review must be resubmitted to TIRP before the product is finalized and approved for public release. TIRP will grant final approval based on its review of the comments and responses contained in completed Document Review Sheets (DRSs), that all the comments have been addressed satisfactorily. TIRP will then assign a product number to the final approved product (the product number must appear on the cover and all pages of the document in the upper right hand corner of the document. TIRP review and approval is also required for addenda, errata sheets, any revisions, and ROTCs to an approved document.

5.1.3.1.2 *Draft Document Comments*

All DOE/DoD, non-originating contractor, and NDEP review comments must be recorded on DRSs. If NDEP supplies comments on the draft, then these comments must be documented on DRSs along with a comment response and included as an appendix in the final document.

5.1.4 *Final Stage Documents*

To obtain NDEP approval, DOE/DoD must submit a document to NDEP in final format before the deadline listed in Appendix III of the FFACO. The first submittal of a final document is Revision 0; subsequent submittals are designated with sequentially higher revision numbers. An overview of this process can be found in Figure 5-1.



**Figure 5-1
Final FFAO Document Issuance Overview**

5.1.4.1 Distribution of Final Documents

Before a final document may be submitted to NDEP, the following process and actions must be completed:

- The draft review process as described in Section 5.1.3
- Mandatory review by the NFO FFACO Administrator
- Receipt of approval from TIRP for public distribution

The FFACO Support Group will prepare a submittal letter to NDEP. The final, signed submittal letter will be returned to the originating contractor for appropriate distribution.

Before a final document is submitted to NDEP, the cover letter and document should be reviewed for the following:

- The title and description of the CAU on the correspondence subject line match the title and description of the document cover page.
- The date and revision number of the document are included on the subject line and match the date and revision number on the document cover page.
- The Library Distribution is in the back of the document.
- For ROTCs, the document revision and date in the subject line of letter matches the date and revision number on the document it is amending (not the ROTC date).
- For ROTCs, the ROTC number is the next sequential number for the given document.
- The letter has an issuance date stamped on it.

Figure 5-1 provides a detailed flowchart for the issuance of final FFACO documents.

5.1.4.1.1 Post-closure Monitoring

Some CRs require PCM to be documented in a Post-closure Monitoring Report. PCM should conform to the process depicted in the Post-closure Monitoring Report Flowchart (Figure 5-2) and should use the appropriate letter template on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>).

Post-closure Monitoring Reports are distributed like a draft or final document, as appropriate.

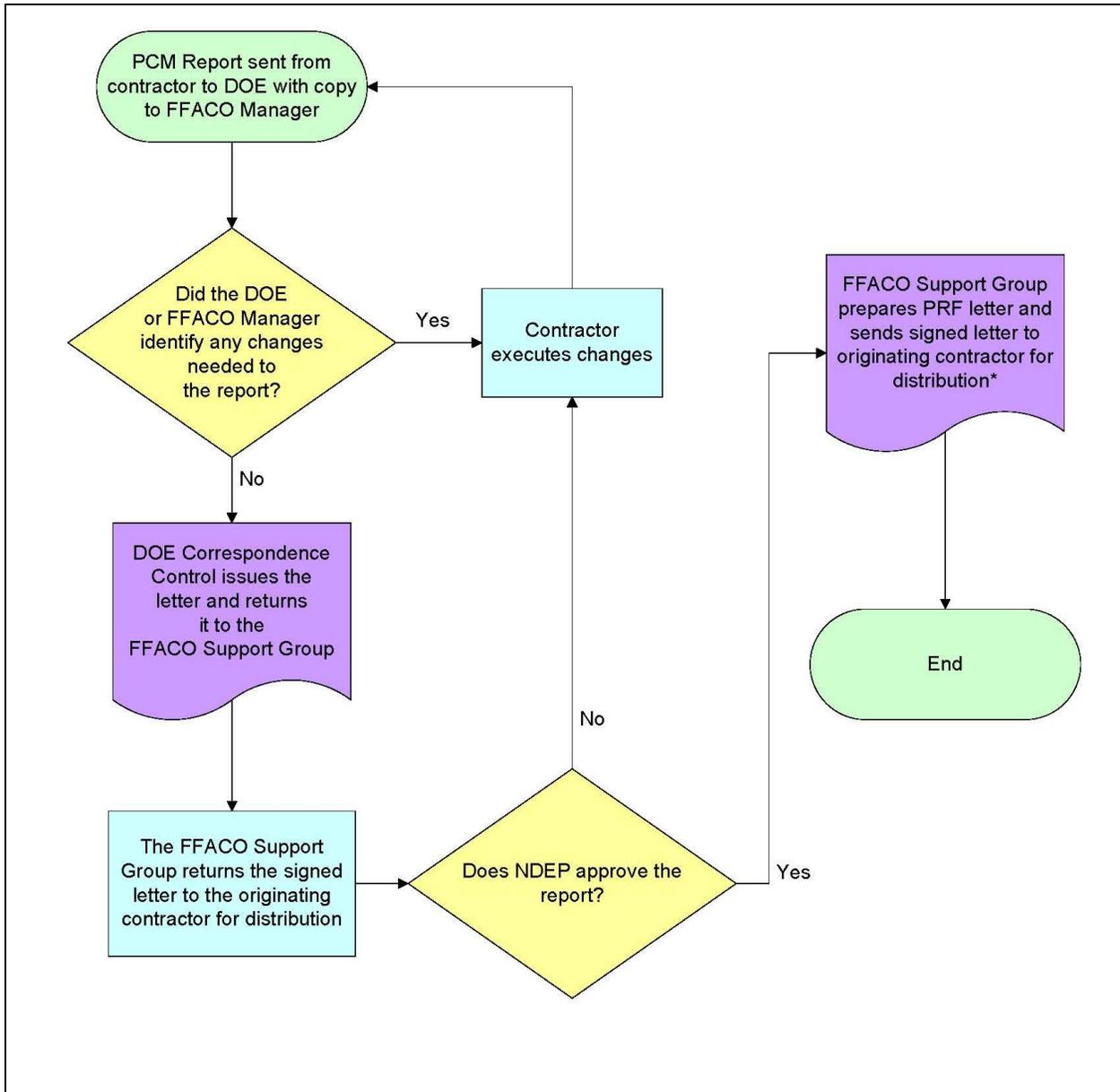


Figure 5-2
Post-closure Monitoring Letter Report Flowchart

5.1.4.2 NDEP Review of Final Documents

NDEP will review a final document and determine whether it meets the requirements of the given FFACO milestone.

There are four possible outcomes of the NDEP review of a final document:

- Approved
- Approved with comments
- Disapproved with comments
- Substantially deficient

If a document is approved, it is considered ready for final distribution (see Section 5.1.6).

If a document is approved with comments, NDEP may require an addendum, errata sheet, revision, or ROTC (see Section 5.1.5), or have the comments included in the subsequent document in the corrective action process. For example, a comment on a CAIP may need to be addressed in the CADD.

If a document is disapproved with comments, a revision will be needed (see Section 5.1.4.3).

If a document is found to be substantially deficient, a revision will be needed (see Section 5.1.4.3), and fines and penalties may be levied (see Section 5.2.1.1).

5.1.4.3 Revisions of Final Documents

When NDEP informs DOE/DoD that a document is disapproved for any reason, additional revisions of the document will be required.

The first revision of a document is designated “Revision 1,” excluding UGTA documents, and subsequent revisions are designated with sequentially higher revision numbers.

UGTA draft documents are designated as “Revision 0,” and the final version is “Revision 1.” The first revision of the final document will then be designated as “Revision 2,” and subsequent revisions are designated with sequentially higher revision numbers.

5.1.4.3.1 Requirements for Revisions of Final Documents

Revised documents must meet the following requirements:

- Address NDEP comments (if any).
- Be reviewed and approved by TIRP.

- Be reviewed by the DOE FFACO Administrator.
- Be reviewed by the DOE EM AL/OAM or the DoD Manager.

5.1.5 Addenda, Errata Sheets, or ROTCs

Additions or amendments to formal documents can take the form of addenda, errata sheets, or ROTCs. Per the [June 1, 2002, Information Exchange email](#),

- addenda are used when extensive corrections/additions to a section or multiple sections of an FFACO document are necessary;
- ROTCs are used when correcting limited technical information; and
- errata sheets are used when correcting limited, non-technical information, such as typographical errors.

If there is a change to the scope of the investigation or remediation that was approved in the CAIP, CADD, CAP, or CR, the contractor must contact the DOE/DoD AL/Manager immediately. The DOE/DoD AL/Manager will provide written notification of the ROTC via scanning and email to NDEP. Then NDEP will provide written concurrence with the ROTC via scanning and email to DOE/DoD. Once written concurrence is received from NDEP, DOE/DoD will give the contractor approval to continue work. Lastly, DOE/DoD will issue a controlled copy of the ROTC in accordance with the [NNSA/NSO letter to NDEP dated April 13, 2000](#).

5.1.5.1 ROTC Numbering

To help ensure consistency in ROTC development, DOE approved a numbering system for all ROTC documents in August 2004. The sequential number of an ROTC will be preceded by the document number of the document the ROTC is modifying. For instance, the third ROTC issued to modify the document numbered DOE/NV--XXX will be numbered DOE/NV--XXX ROTC-3.

5.1.5.2 ROTC Issuance Process

To issue an ROTC, follow these steps:

Step 1. The contractor works with the DOE/DoD AL/Manager to develop a final draft of the proposed ROTC (i.e., it is ready for transmission to NDEP) and obtain TIRP review and approval of the draft ROTC.

Step 2. The contractor sends the draft ROTC electronically to the FFACO Support Group (FFACO@nv.doe.gov) for review. The email will indicate the associated DOE/DoD

AL/Manager. Any attachments should be sent with the email, which should state that paper copies of the attachments are being delivered to the FFACO Support Group.

Step 3. The FFACO Support Group reviews the draft ROTC and works with the contractor to resolve any issues or comments.

Step 4. Once the FFACO Support Group has completed its review, it performs the following:

- Enters the ROTC number.
- Has the DOE/DoD AL/Manager and EM OAM sign the ROTC.
- Sends the ROTC to NDEP for approval and signature (via email or fax).
- Drafts the DOE/DoD submittal letter using the appropriate template for ROTC distribution/submittal.

Step 5. The FFACO Support Group forwards the submittal letter to the originating contractor for distribution of the signed controlled copy of the ROTC, including distribution to the Public Reading Facilities (PRFs) and the Office of Scientific and Technical Information (OSTI). The originating contractor makes distribution in accordance with the original document distribution (final and NDEP-approved) (agreement resulting from the [FFACO meeting dated February 11, 1998](#)). The ROTC is transmitted to the PRFs and OSTI per Section 5.1.6.

5.1.5.2.1 ROTC Submittal to NDEP Flowchart

Figure 5-3 provides a detailed flowchart for the issuance of ROTC submittals to NDEP.

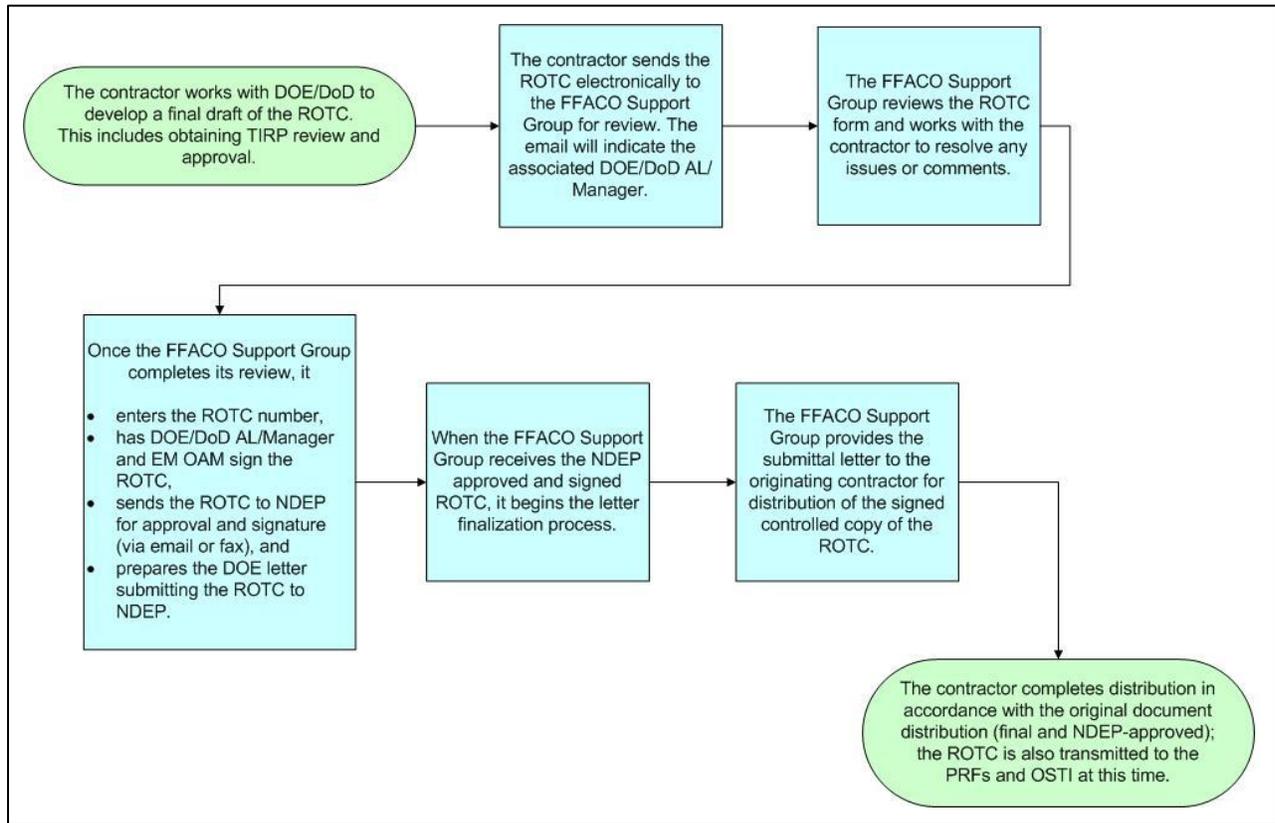


Figure 5-3
ROTC Submittal to NDEP

5.1.5.3 Distribution of Addenda and Errata Sheets

All addenda and errata sheets require TIRP approval and a review by the FFACO Support Group before distribution. After receipt of the TIRP review, the distribution must proceed as follows:

Step 1: It is suggested that DOE and/or DoD obtain verbal NDEP concurrence before the addenda or errata are finalized.

Step 2: The FFACO Support Group prepares the submittal letter for distribution of copies and forwards the letter to the originating contractor.

Step 3: The FFACO Support Group provides the submittal letter to the originating contractor for distribution with the document. Distribution will be made in accordance with the original NDEP approved document.

Step 4: The originating contractor distributes the letter to the PRFs and OSTI per Section 5.1.6.

5.1.6 Distribution of NDEP-Approved Documents to the PRFs and OSTI

Per Part XVII.3 of the FFACO, DOE supports two PRFs, one in northern Nevada and one in southern Nevada. After NDEP officially notifies DOE/DoD that a document is approved, the document is transmitted to the PRFs and OSTI. The FFACO Support Group prepares a submittal letter to the PRFs using the appropriate FFACO letter template located on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>). [Attachment C](#) provides the current Library Distribution List. The current Library Distribution List is also available on the FFACO website. The final, signed submittal letter is then given to the authoring contractor of the document for appropriate distribution.

All NDEP-approved FFACO documents must be submitted to OSTI. Each contractor has a specific point of contact who loads documents to OSTI. A final approved document that does not have closure in place as the closure strategy is submitted by the authoring contractor to OSTI and the PRFs at the same time via the aforementioned PRF letter. A closure document recommending closure in place as the closure strategy is sent by the authoring contractor to the PRFs when the final document is sent to NDEP for approval; this affords the public the required 30-day review period to comment on the document. If the closure document is approved by NDEP with no required changes, it is unnecessary for the authoring contractor to send the document again to the PRFs. Because the final approved document must still be uploaded to the OSTI database, once approval from NDEP is received, the following process will be followed to submit the document to OSTI:

Step 1. The FFACO Support Group notifies the authoring contractor by email (see [Attachment D](#)) that the document has been approved and should now be submitted to OSTI.

Step 2. The authoring contractor's OSTI point of contact posts the document on the OSTI website.

Step 3. Once the authoring contractor completes Step 2, the authoring contractor will notify the FFACO Support Group by email that the posting/distribution is complete.

Step 4. The FFACO Support Group posts the email from the authoring contractor to the FFACO database as record.

5.2 Milestones

A milestone, as defined in Part IV.30 of the FFACO, is “an important or critical event, goal, task, and/or activity that must occur in order to achieve the objective(s) for that corrective action unit.” Typically, the milestone is tied to the submittal of a document, such as a CAIP, CADD, CAP, SAFER Plan, or CR. However, it can also be tied to an activity such as the start of well drilling. Milestones have established deadline dates for when the milestones are due to be delivered to NDEP (Part IV.21 of the FFACO). Failure to meet a deadline may result in assessment of fines and penalties by NDEP against DOE or DoD (see Section 5.3). It is important to note that only milestones between NDEP and DOE/DoD are considered FFACO milestones.

5.2.1 Milestone Completion

Upon satisfactory completion of a milestone, NDEP will issue a Notice of Completion, per Part XXV.1 of the FFACO. If a document was submitted to fulfill a milestone, NDEP will determine whether the document is

- approved,
- approved with comments,
- disapproved with comments, or
- substantially deficient (see Section 5.2.1.1).

When a document also completes the corrective action for a given CAU (i.e., a CR or CADD/CR), NDEP will also issue a Notice of Completion for the CAU, thereby approving the CAU’s transfer to Appendix IV of the FFACO, Closed Corrective Action Units, in accordance with Part XXV.2 of the FFACO.

Please note that UGTA interim milestones are not “approved” by NDEP; these milestones will only receive a Notice of Completion stating that the milestone was satisfied.

5.2.1.1 Substantially Deficient

NDEP can find document submittals to be substantially deficient. The three criteria NDEP uses to identify substantially deficient milestone submittals are as follows:

- An element (i.e., a numbered section), or the content of an element required in the agreed-upon document outlines, is missing.

- The NDEP review comments on a final document that NDEP approved with comments were not incorporated in a subsequent version, and/or the document uses work products prepared for the scope of work that NDEP has previously determined to be so lacking that they are factually nonexistent.
- The document contains technical deficiencies that render the entire document severely flawed.

If a milestone is found substantially deficient, NDEP will issue a Notice of Deficiency, citing the deficiencies of the milestone submittal. The DOE or DoD will have 21 calendar days from receipt of the Notice of Deficiency to resubmit or complete the milestone submittal (the period may be extended past 21 days at the discretion of NDEP).

If the submittal is still found to be substantially deficient by NDEP, NDEP can assess penalties from the date the Notice of Deficiency was received by the affected agency (see Section 5.3).

5.2.2 Milestone Extensions

Per Part X of the FFACO, NDEP has the option of extending a milestone deadline upon the receipt of a timely, written request by DOE or DoD. A letter requesting a deadline extension must include the following:

- The milestone proposed for extension (Part X.1.a)
- The length of extension sought (Part X.1.b)
- The good cause(s) for the extension (Part X.1.c)
- All related schedule impacts (Part X.1.d)

NDEP is required to respond in writing to a request for an extension within 30 calendar days of the request. NDEP can approve the extension for the time requested, approve the extension with a different extension duration than requested, or deny the request. If NDEP chooses to approve the extension but with a different date than the one requested, or denies the extension, NDEP will include a statement justifying its decision in its response to the extension request.

5.2.2.1 Good Cause Defined

Part X.2 of the FFACO defines good cause for an extension as follows:

- An event listed under Force Majeure in Part XXII of the FFACO (e.g., natural disasters that impact the availability of materials or labor, restraint by a court order, or a strike or labor dispute out of the Agreement party's control).
- A delay caused by or that will most likely be caused by the extension of another, interrelated milestone.

- Any other event or series of events mutually agreed to by DOE and/or DoD and NDEP as constituting good cause.

5.3 Missed Milestones

If DOE or DoD misses an established milestone, NDEP may assess penalties.

If a milestone is allegedly missed, NDEP will provide written notice to the appropriate agency detailing the evidence supporting the case that a milestone was missed. The receiving agency then has 30 calendar days from receipt of the notice to respond to the allegations. If NDEP accepts the agency's defense, no penalty will be assessed. However, if NDEP rejects the defense, NDEP has the right to assess penalties starting from the date the milestone was missed. If the DOE or DoD defense is rejected, the agency may appeal per Section IX.2 of the FFACO.

5.3.1 Stipulated Penalties

The penalties for a missed or substantially deficient milestone are as follows:

- \$5,000 for the first week or part thereof
- \$10,000 for the second week or part thereof
- \$15,000 for each successive week or part thereof

6.0 Use Restrictions

Sites closed using the SAFER or complex process may require the establishment of URs to ensure the protection of human health, safety, and the environment. Two types of URs can be established: FFACO URs and Administrative URs. FFACO URs are established at CASs where the “Industrial Area” exposure scenario (continuous industrial use of a site) is used to calculate final action levels (FALs). FFACO URs require warning signs to be posted at the perimeter corners of the CAS. Additionally, URs may be instituted at sites where contamination is below regulatory limits, but other concerns related to human health, safety, and the environment still warrant their establishment. Other protective measures (fences, landfill boundary monuments, and polychlorinated biphenyl [PCB] or radiation postings) may also be implemented at FFACO URs. Specific guidance has been developed for documenting and posting FFACO URs. Administrative URs are established at sites where the “Remote Work Area” or “Occasional Use Area” exposure scenarios are used to calculate FALs. The above exposure scenarios assume non-continuous and occasional work activities at the site. Administrative URs prevent future, more intensive land use (e.g., change in land use scenario). Administrative URs do not require onsite postings or other physical barriers and do not require periodic inspections.

6.1 Administrative URs

Administrative URs differ from FFACO URs in that they do not require onsite postings (i.e., signs) or other physical barriers (e.g., fencing, monuments), and they do not require periodic inspections (see Section 6.2 of the [*Industrial Sites Project Establishment of Final Action Levels, Rev. 0, DOE/NV--1107*](#)).

Administrative URs are applicable to sites where the “Remote Work Area” or “Occasional Use Area” land use scenarios are used to calculate a FAL. An Administrative UR is used in these scenarios to protect workers from future work activities that could cause an exposure exceeding that used in the calculation of the FAL (e.g., in the event a building is later planned at the location, changing the land use to the “Industrial Area”). This Administrative UR establishes the exposure assumption used in the FAL calculation as the exposure limits for the UR. Any proposed activity within this use-restricted area that potentially causes an exposure exceeding the exposure limits requires NDEP approval.

All requirements in the remainder of Section 6.0 apply to both FFACO and Administrative URs except for Section 6.4, Posting Requirements.

6.2 Documenting a UR

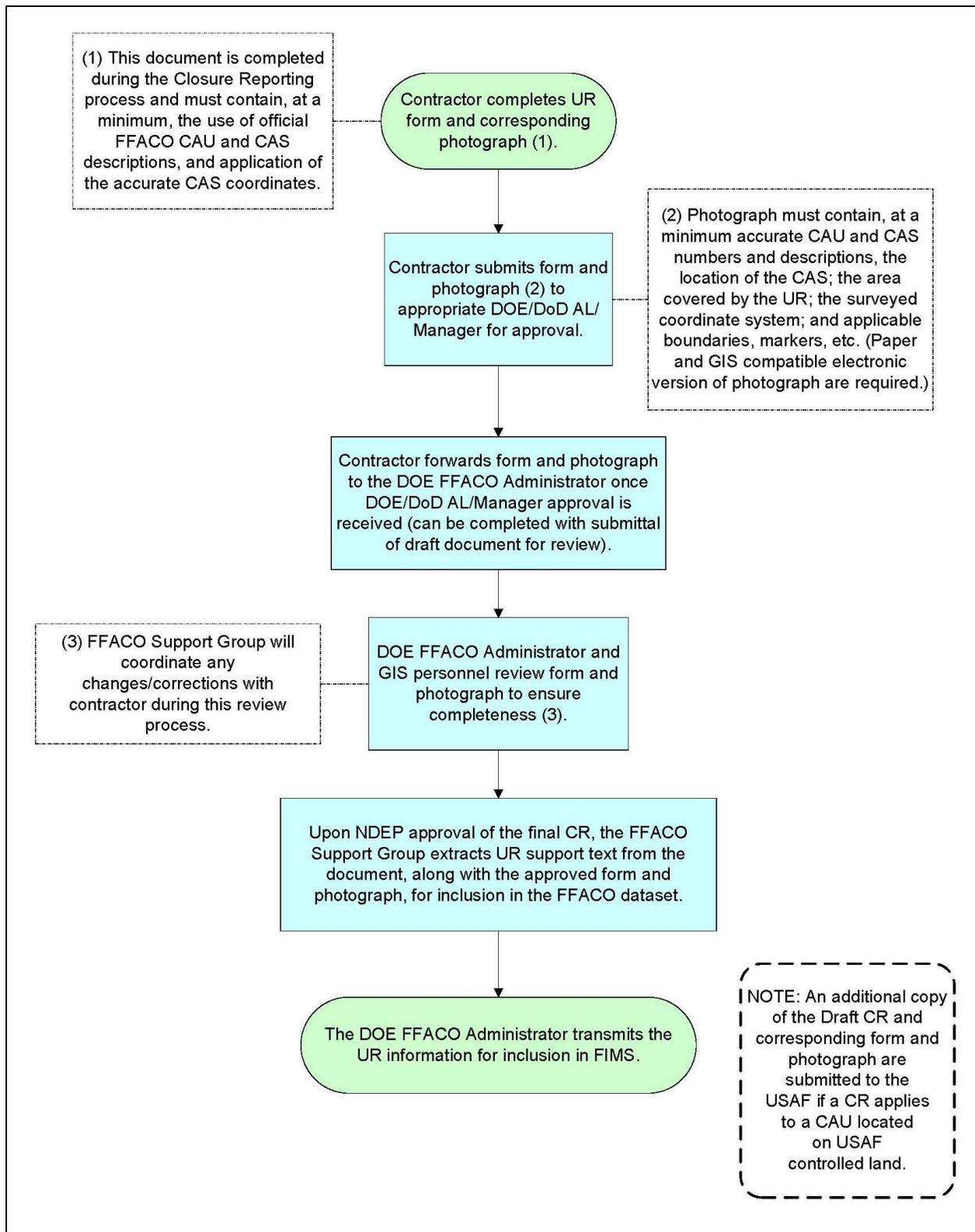
The closure of a CAU that includes a CAS or CASs where contamination above action levels has been left in place is required to include a UR form and an aerial photograph with coordinates of the UR. The form and the aerial photograph are the official records documenting sites where contamination remains in place after closure. The DOE, the Bureau of Land Management (BLM), and USAF will maintain UR records for as long as the land is under their jurisdiction. Consequently, the documentation must be complete, accurate, and self-explanatory. The form and photo are filed, as appropriate, in the management and operating contractor's Geographic Information Systems (M&O GIS), the FFACO database, the DOE CAU/CAS files, the BLM, and the USAF GIS files. Prior to March 2013, the Facility Information Management System (FIMS) was used to record all FFACO URs. In response to a request from NNSA/NFO, NDEP concurred with the transfer of UR information for all sites closed under the FFACO from FIMS into the M&O GIS which is maintained by the M&O contractor on [March 22, 2013](#).

6.3 Documentation Process

The UR documentation process begins with the preparation of a UR form and aerial photograph (see Sections 6.3.1 and 6.3.2) for each CAS (see [Attachment E](#)) by the appropriate contractor during the development of the draft CR.

The UR form and aerial photograph are then submitted to the DOE/DoD AL/Manager. Once the DOE/DoD AL/Manager approves the UR form and aerial photograph, they will be submitted by the relevant contractor to the DOE FFACO Administrator (this submittal can be made in the review copy of the draft CR). The DOE FFACO Administrator will review the form and aerial photograph with GIS personnel for completeness and accuracy, and will provide any comments to the DOE/DoD AL/Manager and the originating contractor.

Once NDEP approves the final CR, the FFACO Support Group extracts UR support text from the appropriate document, and the approved UR form and aerial photograph for inclusion in the FFACO dataset. The DOE FFACO Administrator transmits the UR information for inclusion in M&O GIS. If the given CAU/CAS is on USAF and/or BLM land, an additional copy is sent to the USAF Environmental Management (EM) Office or the BLM for inclusion in the USAF/BLM GIS. The M&O GIS and BLM/USAF GIS submittal processes are documented in Figures 6-1 and 6-2, respectively. The USAF recordation process was approved by NDEP via a [March 3, 1998, letter to NNSA/NSO](#).



**Figure 6-1
FFACO Use Restriction Process**

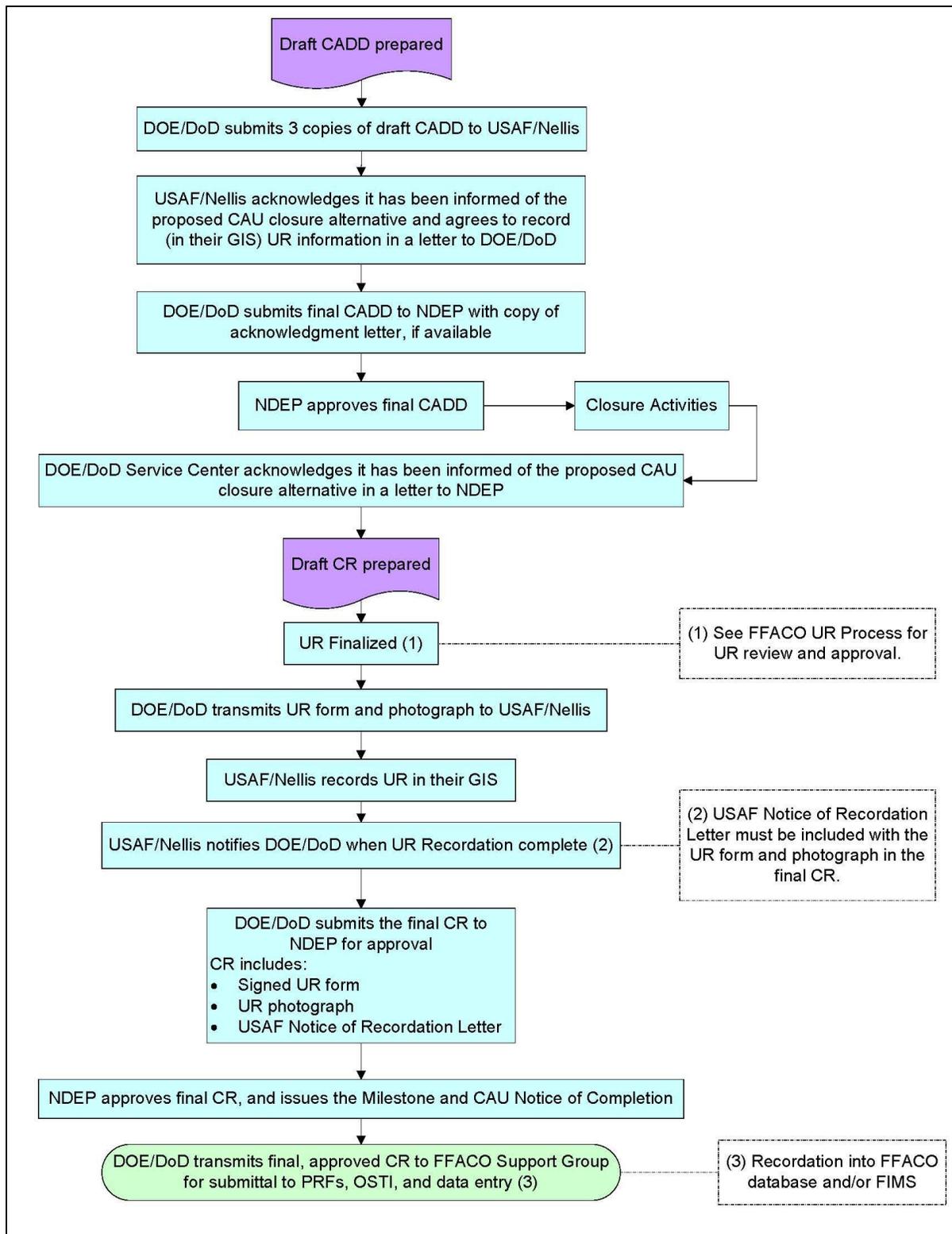


Figure 6-2
USAF Recordation Process

6.3.1 UR Form Requirements

The current approved UR form can be found in [Attachment E](#) and on the “FFACO, Modifications, Policies and Guidance” page under “Use Restrictions” on the FFACO website (<http://empcs.nv.doe.gov/FFACO/>). Information for completing the UR form can be found in the closure document. NDEP-approved changes to URs may require a new UR form to be developed (which will require an ROTC to the closure document). The appropriate DOE/DoD contractor will ensure complete and accurate information is provided on the UR form using the following instructions:

CAU Number/Description. Enter the CAU number and name as listed in the FFACO.

Applicable CAS Number/Description. Enter the CAS number and name as listed in the FFACO (a separate UR form must be completed for each CAS).

Contact (DOE AL or DoD Manager). Enter the name of the DOE/DoD AL/Manager, followed by the Activity name (i.e., Soils, Industrial Sites [EM or Defense Program (DP)], or UGTA).

Physical Description

– **Surveyed Area of UR (Universal Transverse Mercator [UTM], Zone 11, North American Datum of 1983 [NAD 83], meters).** Enter the coordinates for the area of the UR providing coordinates in a clockwise manner beginning at the most southeast coordinate. Six lines are provided on the form; if you need additional lines, you must contact the FFACO Support Group for assistance with the form.

– **Depth.** Enter the depths included in the UR. If only subsurface contamination is present, the UR may not include the surface but restrict excavation or drilling at some depth. If only surface contamination is present, the UR may be limited to the surface down to a specific depth.

– **Survey Source.** Enter the data source that the UR coordinates are stored in (e.g., Global Positioning System [GPS], GIS).

Basis for UR(s)

– **Summary Statement.** Write a summary statement that includes the reason for the UR; type of UR (i.e., FFACO or Administrative); and limitations imposed (e.g., exposures greater than 50 hours per year, surface activities are permitted but no penetrations greater than 2 feet [ft] are allowed).

– **Contaminants Table.** Complete the contaminants table, including CAU number and CAS number and title, ensuring that all the maximum detected concentrations of site contaminants are listed. Six lines are provided on the form; if you need additional lines, you must contact the FFACO Support Group for assistance with the form.

Site Controls. Enter site controls (e.g., fencing, signs, postings, monuments) that are required as part of the UR.

*****Duplicate Physical Description and Basis for UR sections are provided for both FFACO and Administrative URs, and should be populated accordingly.***

UR Maintenance Requirements

– **Description.** Describe requirements for establishing administrative controls and maintaining the UR including entering required information into M&O GIS, the USAF or BLM GIS system, and the FFACO database.

– **Inspection/Maintenance Frequency.** Describe the current frequency of inspection/maintenance requirements (quarterly, semiannual, annual, biennial). Provisional changes to the requirements such as changes in monitoring based on time or condition would require that a new UR form be submitted (which will require an ROTC to the closure document). Describe the type of inspection performed (e.g., visual inspections to ensure signs are in place and readable, no evidence of surface intrusion is visible, and/or fencing in good condition and requires no repairs).

When filling out the form, do not edit the approved UR language that reads as follows:

The future use of any land related to this Corrective Action Unit (CAU), as described by the above surveyed location, is restricted from any DOE or Air Force activity that may alter or modify the containment control as approved by the state and identified in the CAU CR or other CAU documentation unless appropriate concurrence is obtained in advance.

Comments. Enter pertinent comments that may be necessary to clarify information not accounted for above.

Submitted by. Leave space for the DOE/DoD AL/Manager to sign.

Date. Enter the date the form is completed.

*****All fields must be complete before the UR may be distributed for external draft review. Any exception must be approved by the appropriate DO/DoD AL/Manager.***

6.3.2 UR Aerial Photograph Requirements

An example of an UR aerial photograph can be found in [Attachment E](#). At a minimum, aerial photographs have the following requirements:

- Include applicable CAU and CAS numbers and descriptions.
- Identify each CAS location.
- Indicate areas covered by the UR and provide geographical coordinates for these areas.
- Identify boundary marker (e.g., fencing, monuments, posts/signs).
- Indicate the coordinate system used.
- Be verified by a GIS Engineer.

6.4 UR Posting Process

This section does not apply to Administrative URs (Section 6.1).

The purpose of the UR posting process is to establish a standardized method for posting FFACO CASs with established URs.

6.4.1 Introduction

This process is applicable to all FFACO CASs where a UR covering all or part of the CAS has been established as part of a corrective action. The final, approved posting requirements must be included with the formal UR in the CAU CR and in the appropriate databases.

Posting decisions must consider all applicable state and federal laws, and the FFACO.

6.4.2 Responsibilities

The following personnel are responsible for implementing all or part of the UR posting process:

- The contractor PM is responsible for proposing recommendations in regard to posting and other protective measures to the DOE/DoD AL/Manager.
- The DOE/DoD AL/Manager is responsible for reviewing the contractor PM's recommendations and approving.
- The DOE/DoD AL/Manager is responsible for reviewing the UR form and, if in agreement with the recommendations, the DOE/DoD AL/Manager signs and dates it. The DOE/DoD AL/Manager is also responsible for modifying the results of this guidance to accommodate special circumstances.

6.4.3 Process

Section 6.4.3.1 presents postings that are applicable to all FFACO URs. Section 6.4.3.2 presents additional protective measures that may be implemented in addition to those presented in Section 6.4.3.1. Figure 6-3 presents a decision flowchart for formulating posting recommendations.

- After the need for a UR has been established, the contractor will use this guidance to design UR posting requirements (Figure 6-4).

Note: The existence of more than one waste stream may require consideration of multiple paths from the flowchart.

- The contractor will recommend a posting scenario to the DOE/DoD AL/Manager.

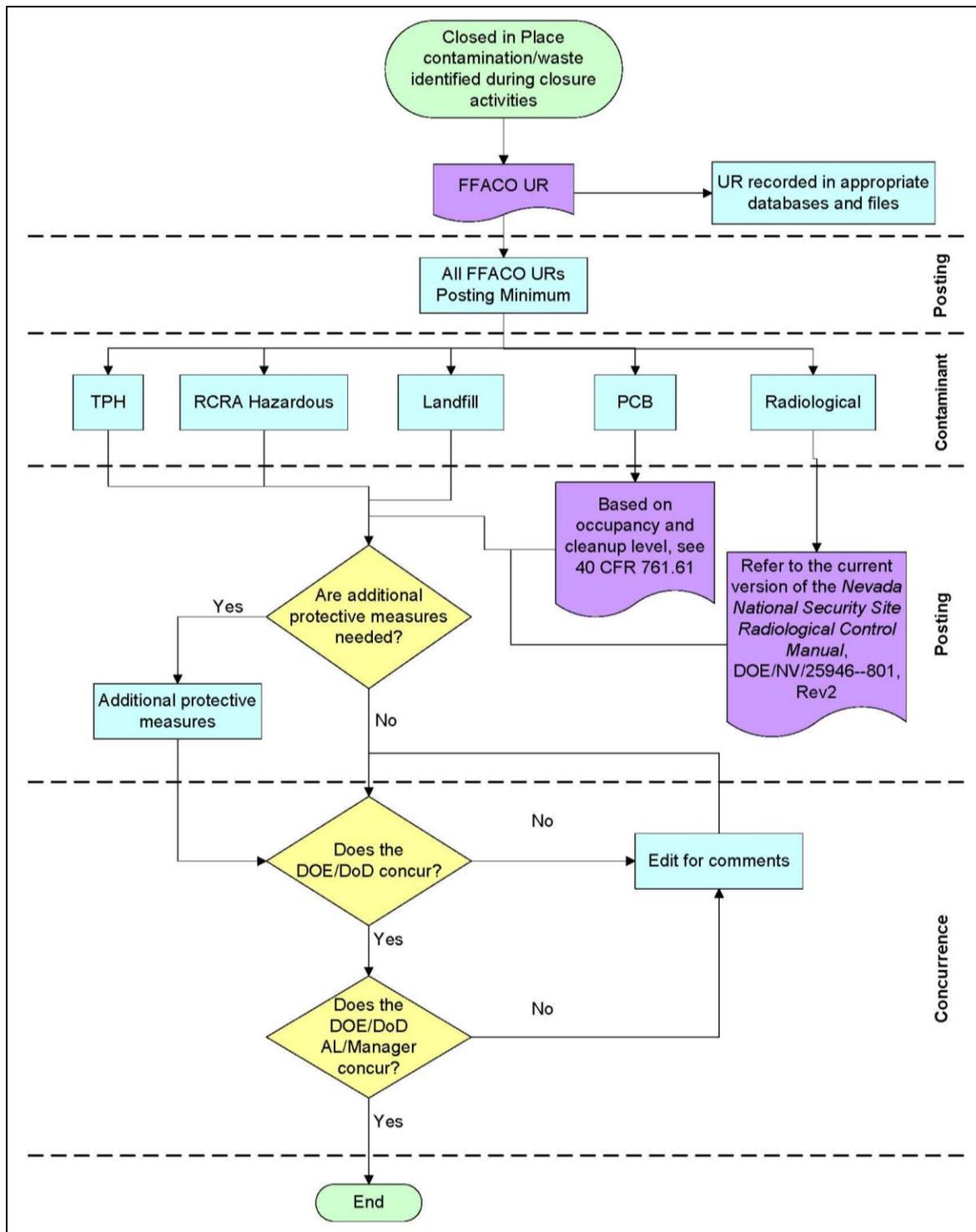


Figure 6-3
Flowchart of Use Restriction Posting Process

- The contractor will propose a PCM method and duration to the DOE/DoD AL/Manager. Post-closure monitoring is conducted to ensure the integrity of the signage and any other closure methods.
- The DOE/DoD AL/Manager will establish the final posting requirements based on the contractor recommendation, the type of contamination, and/or the contaminated media.
- If special circumstances apply to the UR, the DOE/DoD AL/Manager may make an exception per Section 6.3.4.
- Posting decisions will be documented in the final CR for the CAU.

Note: A UR or Post-closure Monitoring is not considered final until it is documented in the CAU CR, and NDEP has approved the CR's UR and Post-closure Monitoring Plan.

6.4.3.1 All FFACO URs - Posting Minimum

This section applies to all URs defined during the FFACO closure process. Although the closure considerations and remediation processes may be very different for the waste streams, the general guidance for posting, a closed-in-place site is the same. These are the minimum requirements:

- Warning signs will be posted at the perimeter corners or midpoint on the sides.
- Warning signs will be spaced no more than once every 200 ft around the perimeter of the UR.
- If the UR is in an active area or around buildings/structures, warning signs will be visibly posted within 10 ft of the most likely entrance/egress to the area as designated by the DOE/DoD AL/Manager.
- The design and content of the warning signs is as follows and as shown in Figure 6-4:
 - Sign dimensions are 2 ft high by 3 ft wide and background color white.
 - First word is "WARNING" in 3-inch (in.) red letters
 - Balance of text is 1.5-in. black letters
 - General status of the material/contamination closed in place (e.g., surface, subsurface)
 - Site identification and CAS description (e.g., FFACO Site CAU 342/CAS 23-56-01, Former Mercury Fire Training Pit)
 - Warning against unauthorized activities in the UR area
 - Point of contact and telephone number (i.e., Real Estate Services, 295-2528)

WARNING

UNDERGROUND CONTAMINATION
FFACO SITE CAU **XXX**/CAS **YY-YY-YY**
CAS **YY-YY-YY** description (name)

No activities that may alter or modify the containment control including excavation or disturbance of material, are permitted in this area without U.S. Government permission

Before working in this area
Contact Real Estate Services at 295-2528

Figure 6-4
Sample Warning Sign

- If the UR perimeter is less than 100 ft, posting requirements must be proposed by the DOE/DoD AL/Manager.
- Posting requirements may be modified by the DOE/DoD AL/Manager based on site-specific, local, and topographic conditions of the UR area.

6.4.3.2 Additional Protective Measures

This section may be implemented if the DOE/DoD AL/Manager determines the need for increased protection is warranted. Additional protective measures will be implemented in addition to the minimum posting requirements outlined in Section 6.4.3.1.

- Additional protective measures may include, but are not limited to, enclosing the UR area by a fence. The fence design may range from, but is not limited to, simple post-and-wire-strand fencing to chain-link fencing of variable height.
- Landfill boundaries may be marked with either monuments in low-traffic areas or pads at grade in high-traffic areas. Each monument will be a truncated square pyramid extending no less than 3 ft above grade. A typical precast monument is 6 ft high; the side length is 10 in. at the top and 2 ft at the base of the monument. The pads at grade will be

approximately 2 by 2 ft square and 1 ft deep. Brass markers will be affixed to the monuments and pads.

- The following text will be stamped on the brass markers (use acronyms to reduce verbiage):
 - Site identification (i.e., CAU/CAS numbers)
 - Coordinates of the marker (i.e., Northing, Easting, and Elevation in UTM, Zone 11, NAD 83, meters)
 - Responsible organization (i.e., DOE or DoD)

6.4.3.3 Polychlorinated Biphenyls

In addition to FFACO and any other applicable posting and closure requirements, the UR process for sites containing PCBs will include the following:

- Closure and post-closure requirements are dictated by *Title 40 of the Code of Federal Regulations* (CFR) , Part 761.61 and outlined in the [Guidance Booklet on Storage and Disposal of Polychlorinated Biphenyl \(PCB\) Waste, DOE/EH-413-9914, Attachment F](#) provides an example of this information as extracted from the November 1999 version of the guidance. The most current version of the CFR and DOE guidance must be referenced before application.
- The period for the PCM will be defined in the NDEP-approved CR. This monitoring will ensure the integrity of the signage and fencing and comply with any applicable state and federal laws and the approved CR.

6.4.3.4 Radiation

In addition to FFACO and any other applicable posting and closure requirements, the UR process for sites containing radioactive contamination will include the following:

- Posting requirements for radiation controlled areas as documented in the [Nevada National Security Site Radiological Control Manual, DOE/NV/25946--801, Rev. 2](#). See Chapter 2, Part 3, “Posting.” The most current version of the manual must be referenced before application.
- The period for the PCM will be defined in the NDEP-approved CR. This monitoring will ensure the integrity of the signage and fencing and comply with any applicable state and federal laws and the approved CR.

6.4.4 Exceptions to the UR Posting Process

The posting requirements may be modified by the DOE/DoD AL/Manager to accommodate any special circumstances. The modification will be recorded in the FFACO database and included in the final, approved CAU CR.

7.0 Modifications

Additions or changes to the FFACO (including the creation of new CAUs, CASs, or milestones) or FFACO data require a modification to be processed using the process detailed below. Any questions about modifications should be directed to the DOE FFACO Administrator or the FFACO Support Group.

7.1 The Modification Process

The following process is used to propose, review, approve, and enter modifications. Generally, the modifications will be to

- create or delete milestones, CAUs, and/or CASs;
- change the description or other key characteristics of a CAU or CAS;
- promote a CAU to Appendix III;
- change the remediation process; and/or
- move a CAS to a different CAU (if the CAU is in Appendix III).

7.1.1 Step One: Initiating the Modification

The modification process begins with the proposal of a modification by the DOE/DoD AL/Manager, or the M&O or Characterization contractors. The contractor prepares the modification on a Modification Form (see [Attachment G](#)). Any documentation needed to support the review of the proposed modification should be attached to the form.

The Modification Form and backup information are submitted to the FFACO Support Group for review. The FFACO Support Group ensures that the form and proposal conform to all of the requirements of the FFACO, especially the level of approval required (see Section 7.1.1.1).

Initiators of modifications should also ensure that their proposals conform to any specific guidance in Section 7.1.1.2.

7.1.1.1 Level of Approval

Modifications have two levels of approval based on the FFACO and official guidance agreed to by the signatories. A modification can be finalized through the approval of the relevant federal agency (i.e., DOE or DoD), or it needs to be formally proposed to NDEP for approval.

The following actions require NDEP approval:

- Establish, extend, or delete a milestone.
- Create, delete, or move a CAS in Appendix III.

- Create, delete, or move a CAU in Appendix III.
- Change a CAU or CAS description in Appendix III.
- Transfer a CAS into CAU 4000 or CAU 5000.
- Promote or move a CAU or CAS into Appendix III or IV.

The following actions do not require NDEP approval:

- Create, delete, or move a CAS in Appendix II.
- Create, delete, or move a CAU in Appendix II.
- Change a CAU or CAS description in Appendix II.

7.1.1.2 Other Considerations for Specific Types of Modifications

Specific guidance exists for certain types of modifications. Initiators need to conform with this guidance as appropriate.

7.1.1.2.1 CAU Promotions/Demotions

Per an agreement at the [FFACO meeting on May 14, 1997](#), DOE/DoD will review all CASs within a CAU being proposed for promotion to Appendix III. The CAUs should be reviewed to address any CAS grouping concerns NDEP may have.

Per an agreement at a meeting on February 6, 2002, a CAS can be demoted from Appendix III to Appendix II with proper justification ([NNSA/NSO letter to NDEP dated February 21, 2002](#)). See [Attachment H, Justification for CAS Demotion from Appendix III to Appendix II Form](#).

7.1.1.2.2 New CAS and Housekeeping Waste

Newly discovered sites that contain only litter, construction debris, and sanitary waste, and that contain no hazardous waste components will be addressed using DOE's zonal cleanup program. (Work will be performed per the agreement reached at the [FFACO meeting on February 11, 1998](#)).

7.1.1.2.3 Approval of a New CAS

The DOE/DoD does not need NDEP concurrence to create new CASs in Appendix II of the FFACO, per a [January 3, 2002, letter from NDEP to NNSA/NSO](#).

7.1.1.2.4 Transferring CASs to CAU 4000, CAU 5000, and Appendix III Sites Requiring No Further Action

CASs found to have no remaining contamination because of natural attenuation or historical corrective actions should be transferred to CAU 4000, No Further Action Sites. Sites that were or

are active, do not exist, or are duplicates of other existing CASs should be transferred to CAU 5000, Archived Corrective Action Sites.

Appendix III CASs that have been identified as requiring no further action may be detailed in the CADD (instead of being transferred to CAU 4000). This allows the CAS to remain in the original CAU and be tracked throughout the remaining documentation process. The CAS would then be transferred to Appendix IV as part of the original CAU following the CAU closure process.

7.1.1.2.5 Archived CAUs

CAUs that no longer contain CASs, because they have been transferred to other CAUs, should be proposed to NDEP for archiving. If approved, archived CAUs are moved to Appendix IV and have “Archived -” added at the start of the CAU description. For example, the description for CAU 488 before archiving was Davis Gun Site - Mellan (TTR); after archiving, the description became Archived - Davis Gun Site - Mellan (TTR).

7.1.1.2.6 UGTA Out-Year Milestones

Per Part XII.5 of the FFACO for the UGTA Activity, at all times there may be

- one milestone with an associated due date or deadline beyond FY+2 for the completion of the UGTA Activity, and
- one other milestone with an associated due date or deadline besides the completion milestone beyond the FY+2 window.

7.1.2 Step Two: DOE/DoD Review and Approval

The FFACO Support Group routes a proposed modification to the appropriate contractor PM for approval. If the PM concurs with the change, he/she signs the form. If the PM does not agree, he/she can choose not to sign the form. However, as long as the modification is supported by either of the contractor (M&O or Characterization) PMs, it will be presented to the DOE/DoD AL/Manager for review. If the DOE/DoD AL/Manager approves the change, one of two things happens:

- If the change *does not* require NDEP approval (Section 7.1.1.1), the modification is considered approved, and Step Five occurs (see Section 7.1.5).
- If the change *does* require NDEP approval (Section 7.1.1.1), the modification is considered ready for proposal to NDEP (see Section 7.1.3).

7.1.3 Step Three: Proposal to NDEP

Once a modification requiring NDEP approval (Section 7.1.1.1) is signed off by DOE/DoD, it is routed to TIRP for review. Once it is approved by TIRP, it is proposed to NDEP. Proposals can be transmitted to NDEP via any of the following:

- A letter from DOE/DoD to NDEP
- Presentation at the annual FFACO meeting
- As part of the FY+2 milestone submittal in April

7.1.3.1 Transmittal of Modifications from DOE/DoD to NDEP via Letter

After DOE/DoD approves a modification, the FFACO Support Group develops a letter requesting the modification. At a minimum, the letter will include the following:

- The CAU and relevant CAS numbers and descriptions in the subject
- A description and justification of the modification requested
- Any backup data, information, figures, and tables necessary for NDEP to make a decision on the proposed change

Once the DOE/DoD AL/Manager is satisfied with the letter, the letter will be forwarded to DOE EM administrative staff for issuance.

7.1.3.2 Transmittal of Modifications from DOE/DoD to NDEP via an Annual Meeting

Modifications that need NDEP approval but do not have urgency or are proposed around the time of an annual meeting can be included as part of the meeting per Part XII.3 of the FFACO. Modifications to be proposed at an annual meeting must be approved by the DOE/DoD AL/Manager, include all supporting documentation, and be submitted to the FFACO Support Group no later than 10 business days before the annual meeting. Contractors will receive an email reminding them of this deadline.

NDEP has the standard 30-day review time for modifications proposed during the annual meeting.

7.1.3.3 Transmittal of Modifications from DOE/DoD to NDEP via the FY+2 Milestone Submittal

Per Part XII.4.b of the FFACO, DOE/DoD is required to propose milestones for the FY+2 time frame at the annual meeting. The FY+2 milestones will be tied to target and planning funding

levels, as appropriate. If DOE/DoD chooses to include milestones above the target funding level, the milestones supported by the additional funding should be clearly designated. The final list of FY+2 milestones should be set by NDEP within 30 days of request.

7.1.4 Step Four: Approval or Rejection by NDEP

NDEP has 30 calendar days from the date it receives a request for modification via any of the methods described above to accept or reject the proposed modification. NDEP notifies the DOE/DoD of approval or rejection in writing.

7.1.5 Step Five: Update of the FFACO Dataset

When the FFACO Support Group receives a letter stating NDEP has approved a request for modification, the FFACO Support Group will update the FFACO dataset to reflect the change. Modifications that are approved by the DOE/DoD AL/Manager and do not require NDEP approval will be included in a handout that the FFACO Support Group prepares and distributes at the subsequent annual meeting. If a proposed modification fails to receive necessary approval, no change will be made to the FFACO dataset.

7.2 Data and Milestone Status

The changes listed below are made to the FFACO dataset outside the modification process detailed in Section 7.1. These changes are entered into the FFACO dataset when received by the FFACO Support Group.

- Electronic copies and data associated with FFACO-related correspondence
- Status of established milestones (i.e., the submittal, approval, and Notices of Completion associated with milestones)
- Approved UR photos, forms, and coordinates
- New CAS coordinates
- Final documents linked to milestones

8.0 Public Involvement

Appendix V of the FFACO identifies the Public Involvement Plan, which provides information about how the public can learn about, and become involved in, the DOE EM Operations Activity.

8.1 Nevada Site Specific Advisory Board (NSSAB)

One of the elements defined in the Public Involvement Plan is the establishment of the NSSAB, which consists of Nevada residents and liaisons who are responsible for representing specific organizations such as county and state governments. The NSSAB provides a mechanism for individuals or organizations to explore public participation opportunities that focus on topics such as environmental restoration, transportation, waste disposal, and budget. Those wishing to become aware or informed of these topics may attend NSSAB meetings without actively participating in discussions or question-and-answer sessions. Anyone with a keen interest in specific activities or projects may take a more active role. The NSSAB holds meetings every other month. For more information, interested parties should visit <http://nv.energy.gov/nssab/>.

8.1.1 FFACO Public Notification of Corrective Actions

Any decision document that recommends closure in place for a specific EM CAU is sent to the PRFs 30 days in advance of final publication. In addition, a notice is included in NSSAB full board meeting agendas. The 30-day advance notice allows members of the public to request a copy of—and comment on—the specific EM document recommending closure in place before NDEP approval of the document.

Attachment A

Functional Categories and Associated Numbers

Functional Categories and Associated Numbers
(Page 1 of 2)

Description	Number
Aboveground Storage Tank	1
Underground Storage Tank	2
Sewage Lagoon	3
Septic Tank	4
Leachfield	5
Muckpile	6
Decon Pad	7
Waste Dump	8
Mud Pit	9
Shaker Plant	10
Steam Cleaning Facility	11
Boiler	12
Generator	13
Transformer	14
Sanitary Landfill	15
Construction Waste Landfill	16
Hazardous Waste Site	17
Chemical Storage	18
Waste Disposal Site	19
Injection Well	20
Waste Disposal Trench	21
Barrels/Drums/Buckets/Cans	22
Rad Contamination Area	23
Batteries	24
Oil/Fuel Spills	25
Lead	26
PCB	27
Tunnel Portal Area	28
Abandoned Chemicals	29
Drillhole	30
Vent Hole	31
Cable Hole	32
Building	33
Magazine/Bunker	34
Burn Cage/Pit	35
GCP Well	36
Sump (Cellar)	37
Tunnel Pond	38
Pu Contaminated Soils	39

Functional Categories and Associated Numbers
(Page 2 of 2)

Description	Number
Radioactive Waste Management Site	40
D&D Facility	41
Conditional Release Storage	42
Epoxy Tar Site	43
Other Spill Site	44
Craters	45
Compressed Gas Cylinders	46
Other Ponds/Lagoons	47
Tunnel	48
Shaft	49
Miscellaneous Trash and Debris	50
Underground Discharge Point	51
DU Surface Debris	52
Sludge Burial Pit	53
Solid Propellant Burn Site	54
Buried Ordnance Site	55
Fire Training Area	56
Underground Test/Detonation Cavity	57
Drill Cuttings Debris	58
Septic System	59
Surface Release Point	60
Ordnance Site	61
Contaminated Soil Site	62
Decon Pad Discharge Piping	63
Decon Area	64
Housekeeping Waste	98
Other	99
Facility	00

Attachment B

Alphanumeric TTR CAS Abbreviations

Alphanumeric TTR CAS Abbreviations

General Area Abbreviations

TA	Target Area
RG	Range
03	Area 3
09	Area 9
NAFR	Nevada Test and Training Range (formerly Nellis Air Force Range)
71	Range 71

Specific Area Abbreviations

01CS	Clean Slate I
02CS	Clean Slate II
03CS	Clean Slate III
0356	Building number in Area 3
05PT	Five Points Intersection
0952	Possible Building number in Area 9
36	Gate 36E
A301	Landfill Cell A3-1: Area 3, Sequential number
AL	Antelope Lake
B2	Bunker 2
BA	Burn Area
CR	Cactus Repeater
CS	Cactus Spring Ranch
DT	Double Tracks
FN	Abbreviation is unknown
GR	Unknown, presumed to be grazing because it was used for an area at Cactus Springs Ranch that housed animals that had grazed in a radioactive field
HS	H-Site Road
L2	Launcher 2
MG	Magazine
ML	Main Lake
MN	Mellan
NL	NEDS Lake
PL	Pedro Lake Target
RC	Roller Coaster
RD24	Radar 24 Site
RV	Ralston Valley Road
SE	Southeast (e.g., 09SE = Southeast of Area 9)
SWXX	Septic Waste System, Sequential number

Attachment C

Library Distribution List

The following distribution list should appear as an appendix in every FFACO document:

Library Distribution List

	<u>Copies</u>
U.S. Department of Energy Office of Scientific and Technical Information P.O. Box 62 Oak Ridge, TN 37831-0062	1 (Uncontrolled, electronic copy)
Southern Nevada Public Reading Facility c/o Nuclear Testing Archive P.O. Box 98521, M/S 400 Las Vegas, NV 89193-8521	2 (Uncontrolled, electronic copies)
Manager, Northern Nevada FFACO Public Reading Facility c/o Nevada State Library & Archives 100 N. Stewart St. Carson City, NV 89701-4285	1 (Uncontrolled, electronic copy)

Attachment D

Example OSTI Notification Email

To: Contractor OSTI Point of Contact/Document Production/Central Files

From: FFACO

Subject: Notification of Approved Document to be Posted to OSTI

The *Federal Facility Agreement and Consent Order* (FFACO) requires that the *Enter Document Name* be available to the public through the FFACO Public Reading Facilities. The electronic copies were previously transmitted to the Public Reading Facility in accordance with the FFACO Agreement on *Enter date document sent to the PRF*. The final document was approved by NDEP without comments on *Enter date document was approved by NDEP*.

Electronic copies should be distributed as follows:

1. Office of Scientific and Technical Information (OSTI): one electronic copy for posting to OSTI

Please respond to this email as verification to the FFACO Group that posting/distribution is complete.

Attachment E
Use Restriction Form

Use Restriction Information

CAU Number/Description: _____

Applicable CAS Number/Description: _____

Contact (DOE/DoD AL/Manager): _____

FFACO Use Restriction Physical Description:

Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Points	Northing	Easting
Southeast		

Depth: _____

Survey Source (GPS, GIS, etc.): _____

Basis for FFACO UR(s):

Summary Statement: _____

Contaminants Table:

Maximum Concentration of Contaminants for CAU XXX CAS XX-XX-XX, Title			
Constituent	Maximum Concentration	Action Level	Units

Site Controls: _____

Administrative Use Restriction Physical Description*:

Surveyed Area (UTM, Zone 11, NAD 83, meters):

UR Points	Northing	Easting
Southeast		

Depth: _____

Survey Source (GPS, GIS, etc.): _____

*Coordinates for the Administrative Use Restriction exclude the area defined by the FFACO Use Restriction coordinates.

Basis for Administrative UR(s):

Summary Statement: _____

Contaminants Table:

Maximum Concentration of Contaminants for CAU XXX CAS XX-XX-XX, Title			
Constituent	Maximum Concentration	Action Level	Units

Site Controls: _____

UR Maintenance Requirements (applies to both FFACO and Administrative UR(s) if Administrative UR exists):

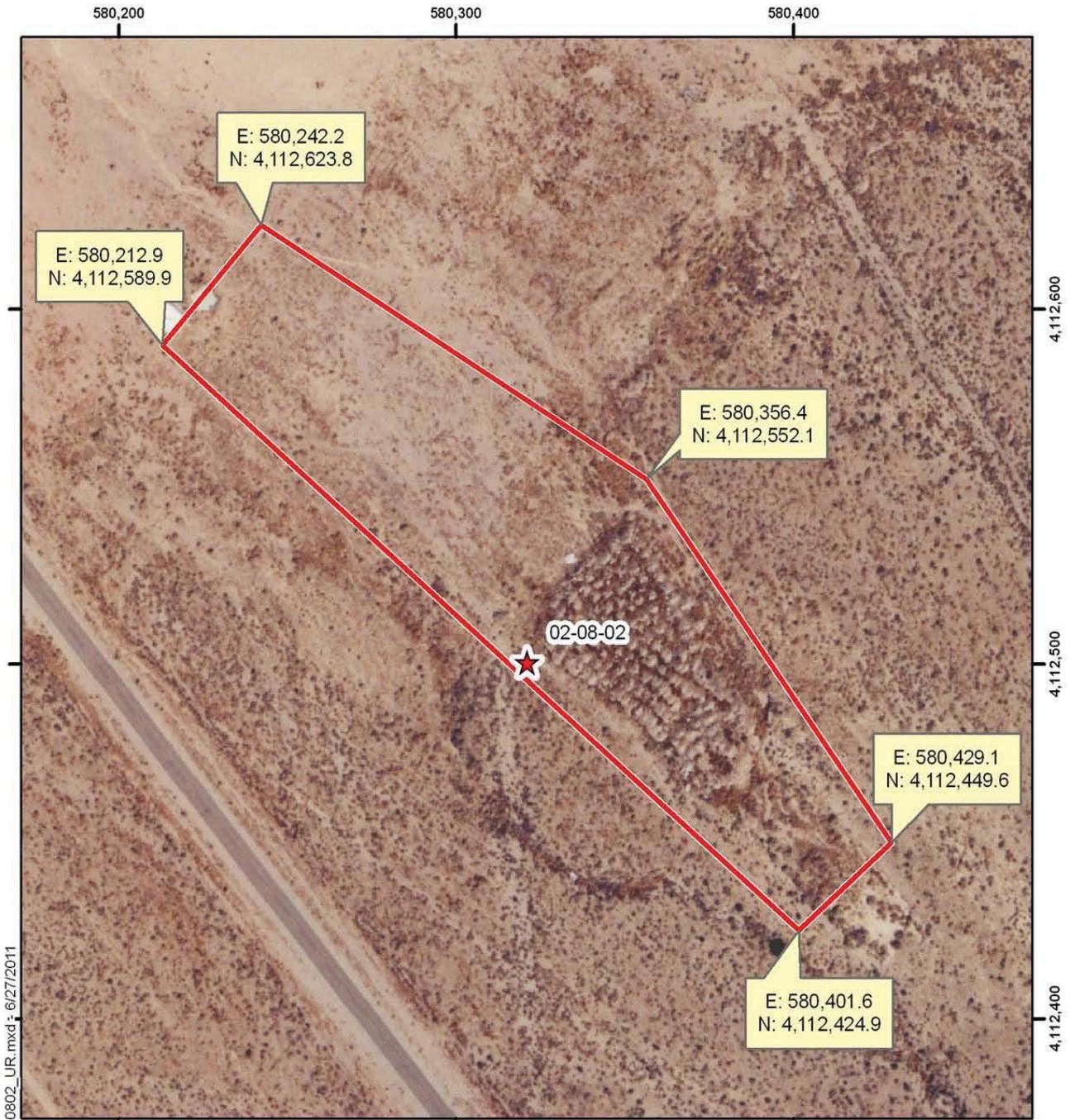
Description: _____

Inspection/Maintenance Frequency: _____

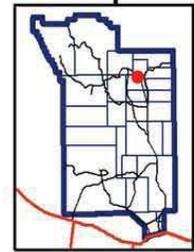
The future use of any land related to this Corrective Action Unit (CAU), as described by the above surveyed location, is restricted from any DOE or Air Force activity that may alter or modify the containment control as approved by the state and identified in the CAU CR or other CAU documentation unless appropriate concurrence is obtained in advance.

Comments: _____

Submitted By: _____ Date: _____

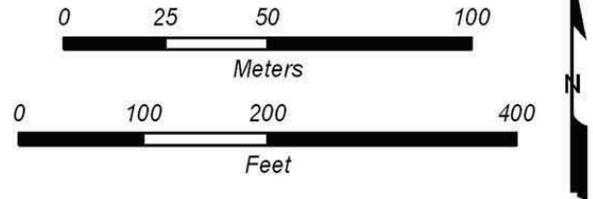


H:\561\CADD_CR\561_CADD\CR_020802_UR.mxd; 6/27/2011



Source: N-I GIS, 2011; RSL, 1999

- Explanation**
-  CAS Marker
 -  UR Boundary



Coordinate System: NAD 1927 UTM Zone 11N, Meters

UNCONTROLLED When Printed

Attachment F
PCB Posting Example

PCB Posting Example

The following table was extracted from the *Guidance Booklet on Storage and Disposal of Polychlorinated Biphenyl (PCB) Waste*, DOE/EH-413-9914, November 1999, and is consistent with 40 CFR 761.61. See 40 CFR 761.3 for complete definitions of the “Types of PCB Remediation Wastes.”

The most recent version of the CFR and Guidance must be referenced before application.

Table of Cleanup Requirements for Non-liquid PCB Remediation Waste

Type of PCB Remediation Waste	Occupancy	Cleanup Level for PCBs	Condition
Bulk PCB Remediation Waste (soil, sediment, dredged materials, debris, muds, PCB sewage sludge, and industrial sludge)	High	#1 ppm	No further conditions
	High	>1 ppm and #10 ppm	Cap the site; deed restriction**
	Low	#25 ppm	Deed restriction**
	Low	>25 ppm and #50 ppm*	Fence the site with signs bearing M _L mark; deed restriction**
	Low	>25 ppm and #100 ppm*	Cap the site; deed restriction**
Non-porous Surface (smooth, unpainted solid surface that limits penetration of liquid with PCBs)	High	#10 µg/100 cm ²	No further conditions
	Low	<100 µg/100 cm ²	Deed restriction**
Porous Surfaces (a surface that allows PCBs to penetrate or pass into itself)	High	#1 ppm	No further conditions
	High	>1 ppm and #10 ppm	Cap the site; deed restriction**
	Low	#25 ppm	Deed restriction**
	Low	>25 ppm and #50 ppm*	Fence the site with signs bearing M _L mark; deed restriction**
	Low	>25 ppm and #100 ppm*	Cap the site; deed restriction**

Note: High-occupancy areas are areas occupied ≥840 hours/year (≥ average of 16.8 hours/week) for nonporous surfaces, and ≥335 hours/year (≥ average of 6.7 hours/week) for bulk PCB remediation waste and porous surfaces. All other areas are low-occupancy areas.

* Please note these options are exclusive of each other. That is, for a low-occupancy site with concentrations between >25 ppm and ≤100 ppm, the site can be either fenced with signs and a use restriction, or capped and a use restriction.

** Please note for FFAO, a use restriction is used instead of a deed restriction.

Attachment G
Modification Form

Modification Form FFACO Database Modification Request

Modification Initiated By: _____ Modification Date: _____

Activity:

Industrial Sites: EM DP DoD Soils UGTA Offsites

CAU Owner: DOE DoD DOE/DoD LM

FFACO Appendix: II III IV

CAU Number(s): Description(s)

CAS Number(s): Description(s)

Description of Modifications:

Justification:

Contractor Approval (Characterization): _____ Date: _____

Contractor Approval (M&O): _____ Date: _____

DOE Approval: _____ Date: _____

Classification Officer Approval _____ Date: _____

NDEP Approval Required: Yes No If Yes: Immediate Letter Next FFACO Meeting

Compliance with FFACO: Reviewed by _____ Date: _____

Change Control No.: _____

Attachment H

**Justification for CAU Demotion
from Appendix III to Appendix II Form**

JUSTIFICATION FOR CAU DEMOTION FROM APPENDIX III TO APPENDIX II

CAU
CAS

SECTION I: RATIONALE FOR DEMOTION

This CAU requires changes to cost and / or schedule based on the following determinations:

- Technology is not currently available to characterize the site.
- Conceptual model has changed significantly.
- Contaminants defined for the CAS have changed significantly.
- Site cannot be concurrently characterized with other CASs in the CAU.
- Technical attributes of the site differ from the original CAS description.
- Volume of contaminated media to be characterized is considerably larger than original estimates.
- Site should be transferred
- Other: Provide a description of "other."

SECTION II: BACKGROUND INFORMATION

Provide background information, and specifically discuss the new information that justifies the rationale presented in Section I.

SECTION III: TECHNICAL JUSTIFICATION

Provide concise statements that justify the rationale that should be directly tied to the background information provided in Section II.

SECTION IV: FUNDING IMPACTS, OPPORTUNITIES

This section should include data on the relationship between the technical justification and the final funding output that resulted in the necessity to transfer the CAU from Appendix III to Appendix II.

SECTION V: RECOMMENDATIONS

Provide relevant FFACO recommendations and CAU disposition information. Also include the life-cycle baseline and schedule implications for the transfer.