

# Cross-Cut Guidance on Environmental Requirements for DOE Real Property Transfers



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# 1. INTRODUCTION

## 1.1 Purpose

The purpose of this guidance document is to provide direction for U.S. Department of Energy (DOE) field elements in complying with environmental requirements associated with the transfer of real property.

## 1.2 Scope

This guidance covers all types of real property, real property transfers, and environmental requirements associated with those transfers. Sites not owned by DOE but for which DOE has responsibilities are not covered.

### 1.2.1 Real versus Personal Property

Real property includes land and improvements on the land (such as access roads, buildings, and other structures). Equipment or fixtures (such as plumbing, electrical work, and elevators) installed in an improvement in a permanent manner or essential for the purpose of the improvement are part of the real property. Personal property covers movable items (i.e., neither fixed nor installed) that do not form an integral part of real property. Examples of personal property include furniture, free-standing cabinets, computers, and portable lamps. Personal property is beyond the scope of this guidance document. The distinction between real versus personal property becomes important in the chapters on cultural resources and polychlorinated biphenyls (PCBs).

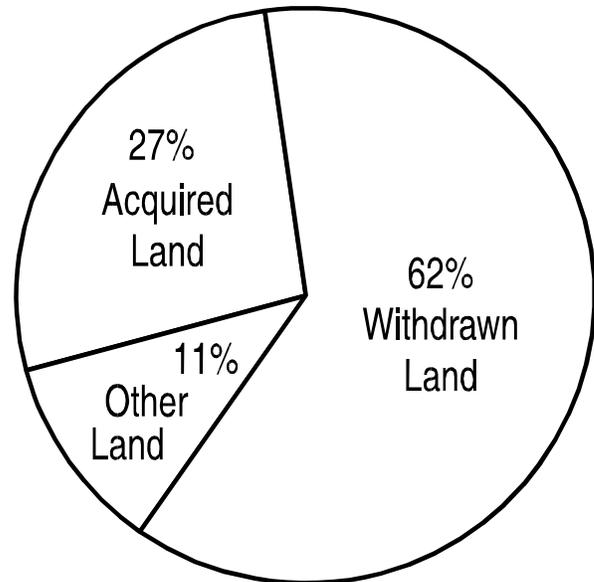
### 1.2.2 Types of Real Property

This guidance covers three types of real property:

- Acquired land,
- Withdrawn land, and
- "Other" land.

Both acquired land and withdrawn land are Federal government-owned lands. Acquired land is real property that DOE (or its predecessors) originally purchased. Withdrawn land is land that has been withdrawn from the public domain and reserved by the Department of the Interior for use by DOE.

"Other" land is land in which DOE obtained an interest by means such as an easement, permit, or license. The distribution of DOE real property among these three types of land is shown in Exhibit 1-1. It is important to distinguish between the three different types of real property being



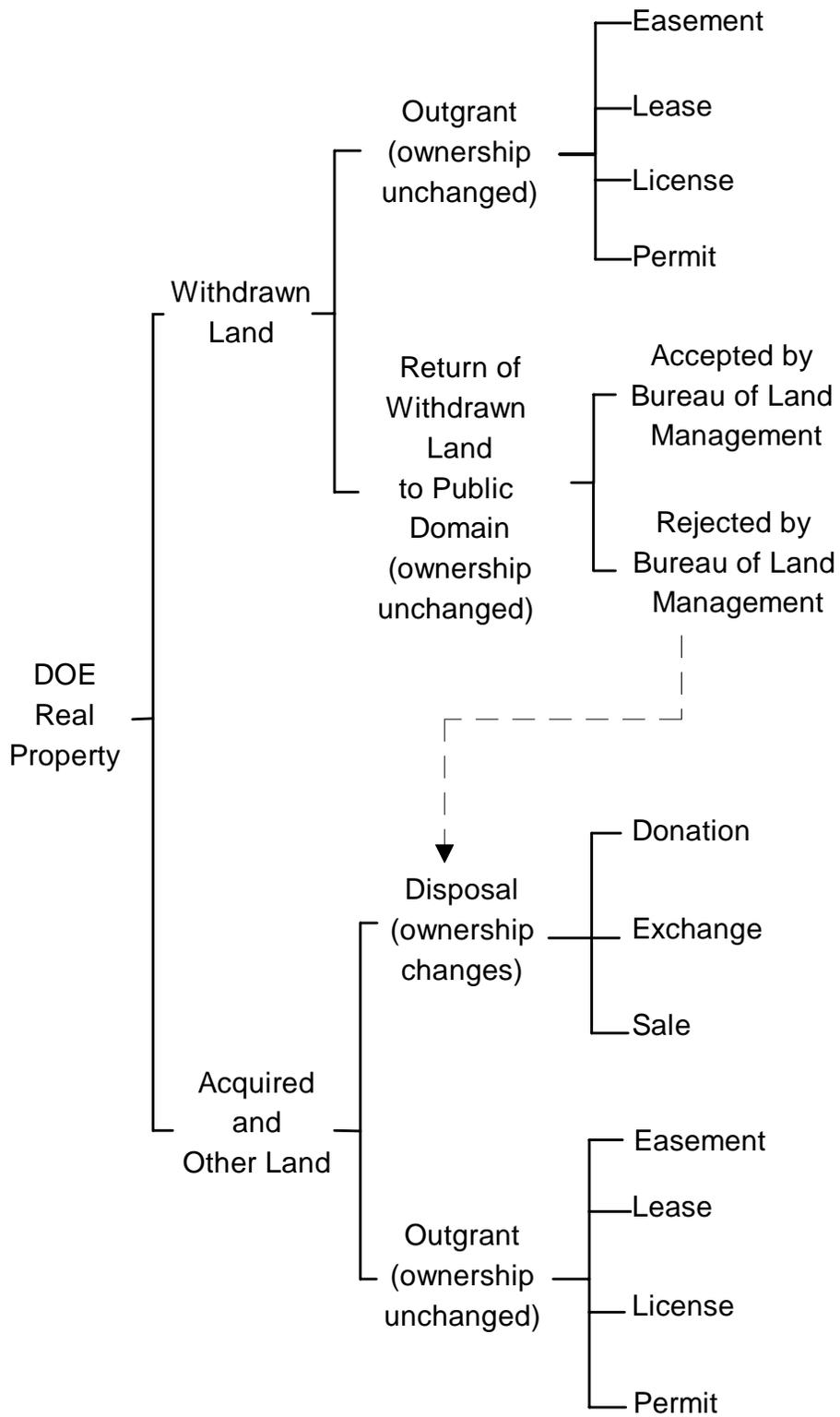
**Exhibit 1-1. Distribution of the Types of DOE Real Property**

transferred or disposed of because different general requirements apply depending on the type of real property involved. Transfers of withdrawn land fall under the jurisdiction of the Bureau of Land Management (BLM) of the Department of the Interior with potential involvement of the General Services Administration (GSA) (see § 1.4.1 below). Real property transfers of acquired land and "other land" fall under the jurisdiction of the General Services Administration (see § 1.4.2 below) with some exceptions (see § 1.4.3 below).

### 1.2.3 Types of Real Property Transfers

This guidance covers all real property transfers, whether or not the ownership changes (see Exhibit 1-2). Real property transfers in which ownership changes include donations, exchanges, and disposals (e.g., sales). There are many environmental requirements that apply to

## Exhibit 1-2 Types of Real Property Transfers



such real property transfers. For example, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(h) requirements apply to real property transfers between Federal agencies (see text box). On the other hand, ownership does not change when withdrawn land is returned to the public domain. There are also outgrants, which provide to another the right to use the property. Outgrants include easements, leases, licenses, or permits (see glossary for definitions of these terms). It is important to note that environmental requirements apply to real property transfers even when ownership does not change. For example, as will be seen later in Chapter 13, National Environmental Policy Act (NEPA) reviews must be conducted for leases when the use of the property changes. In addition, States must be notified of leases of Federal property on which hazardous substances have been stored.

### 1.2.4 Environmental Requirements

This guidance covers environmental requirements only; occupational safety and health requirements are beyond the scope of this document. However, where appropriate, the text will suggest to the reader that information gathered on certain topics (namely, underground storage tanks, radioactive sources, polychlorinated biphenyls, and asbestos) should also be included in an occupational safety and health baseline survey (see Exhibit 1-3). The environmental requirements that are covered in this guidance are, for the most part, either inspection, reporting, or evaluation requirements. Cleanup, corrective action, or remediation requirements are beyond the scope of this guidance (except for DOE Order 5400.5 addressing radioactive decontamination). Cleanup requirements often depend on the future land use (as expressed in comprehensive land use plans), community expression of preferences, the type of contaminants involved, and Records of Decisions under NEPA or CERCLA. It is prudent to engage in cleanup of contamination prior to a real property transfer in order to improve marketability of the property, even when cleanup may not be required. BLM or GSA have the right to reject acceptance of any real property for disposition based on requirements in 43 CFR Part 2374 and 41 CFR Part 101-47, respectively. Also, this guidance covers only

#### Defining "transfer"

The term "transfer" of property used in CERCLA differs from the term used throughout this document. EPA (in 55 FR 14208 (1990)) interpreted the use of the term "transfer" as that used by GSA in the Federal Property Management Regulations (FPMR) at 41 CFR 101-47.203-2, "Transfer and Utilization," which in turn alludes to 41 CFR 101-47.203-7, "Transfers." In the FPMR, GSA uses the term "transfer" to signify the transfer of the ownership of a property from one Federal agency to any of the following: another Federal agency, a mixed-ownership Government corporation, or the municipal government of the District of Columbia. Thus, it is clear that "transfers" of property ownership between Federal agencies are covered by CERCLA. Also, while it seems clear that GSA does not use "transfer" to include leases, leases can be "transferred" from one Federal agency to any of the aforementioned entities in the sense that the ownership of the lease is being transferred. Because of the complexity of real estate law, EPA (at 55 FR 14209) simply states that it has not addressed the issue of whether easements and leases are covered by CERCLA.

Notwithstanding, this guidance document uses transfer to include leases (and other outgrants in which ownership does not change).

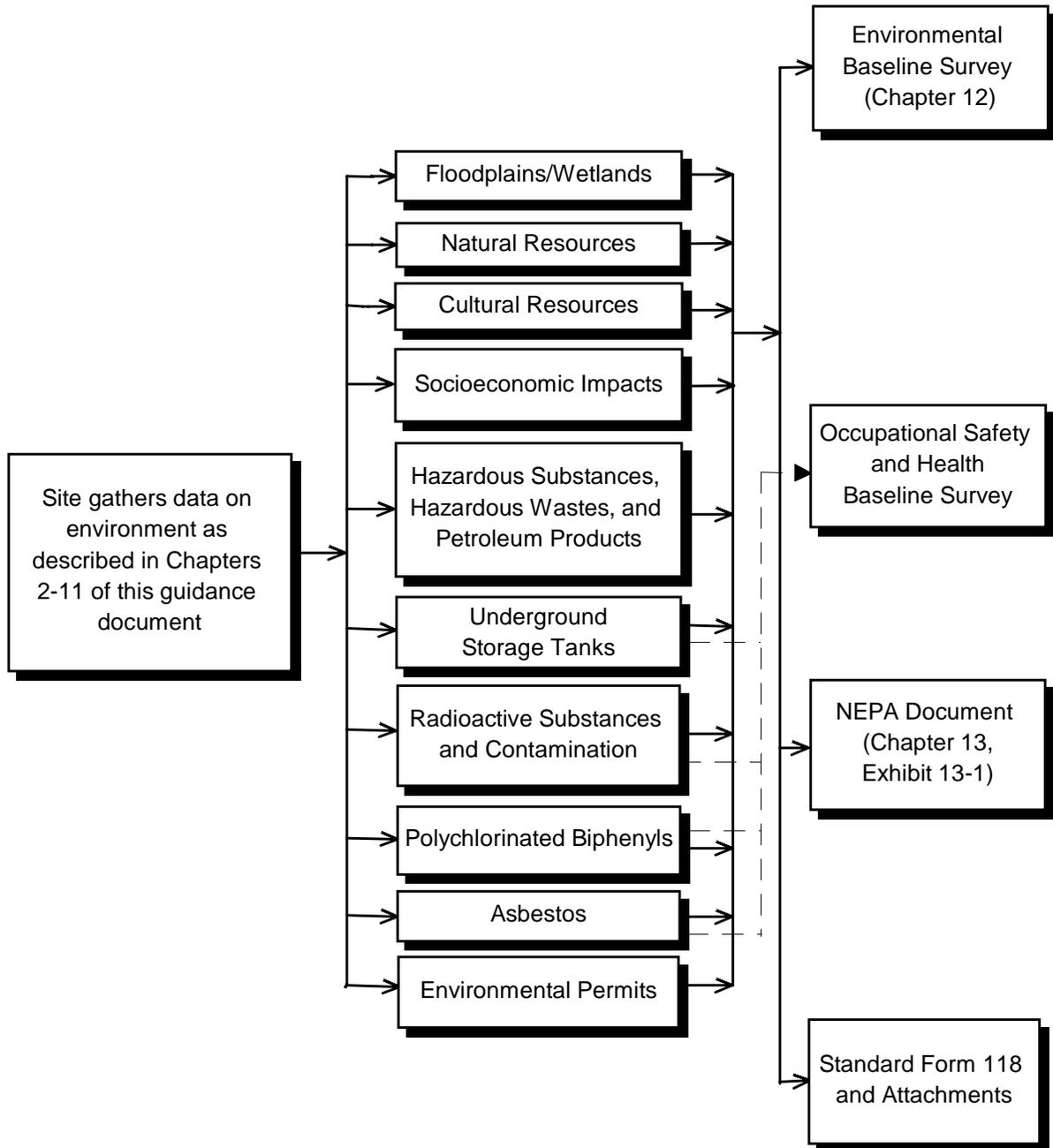
environmental requirements imposed by Federal statute or regulation.

### 1.3 Organization of the Guidance

This guidance document is divided into fourteen chapters:

1. Introduction
2. Floodplains and Wetlands
3. Natural Resources
4. Cultural Resources
5. Socioeconomic Impacts
6. Hazardous Substances, Hazardous Wastes, and Petroleum Products
7. Underground Storage Tanks (USTs)
8. Radioactive Substances and Contamination
9. Polychlorinated Biphenyls (PCBs)
10. Asbestos
11. Environmental Permits
12. Environmental Baseline Surveys (EBSs)

**Exhibit 1-3**  
**Relationship among Environmental Baseline Survey,**  
**Occupational Safety & Health Baseline Survey,**  
**NEPA Document, and SF 118**



- 13. NEPA Review
- 14. Conclusion

The remainder of Chapter 1 provides an overview of the general requirements for real property transfers at DOE, including BLM and GSA involvement and DOE Order 430.1. The situations authorized by statute where DOE may directly engage in real property transfers without BLM or GSA involvement are also discussed.

Each subsequent chapter (except Chapters 12, 13, and 14) is structured generally as follows:

- Introduction
- Drivers of the Requirements (e.g., drivers of the floodplain/wetland requirements for real property transfers)
- Requirements for Real Property Transfers
- Implementation of the Requirements (Chapter 2-5 and 11) or Data Gathering (Chapters 6-10)
- Relationship to Environmental Baseline Surveys
- Relationship to NEPA Documents
- Leases and Other Outgrants (if applicable)
- Notice of Intention to Relinquish
- GSA-Specific Requirements (if applicable)
- Requirements for the Deed (if applicable)
- Notification of Change in Ownership (if applicable)
- Checklist
- References

After the introductory chapter, the next four chapters (i.e., Chapters 2, 3, 4, and 5) are devoted to environmentally sensitive resources. The Secretary of Energy's Land and Facility Use Policy, issued December 21, 1994 and DOE Policy 430.1, also

called "Land and Facility Use Planning Policy," issued July 9, 1996, emphasize DOE's commitment to act as a steward of the national resources discussed in these four chapters. The two policies state that DOE sites must consider how best to use DOE land and facilities to support critical missions and to stimulate the economy while preserving natural resources, diverse ecosystems, and cultural resources. *Charting the Course: The Future Use Report* points out that many sites and communities participating in planning the reuse of DOE facilities

"took greater note of the wealth of the resources that exist as part of the DOE complex, including valuable ecosystems and habitats; varied geologic settings; cultural and historical resources . . . Consequently, at many sites, recommendations promoted the preservation of ecological, cultural, and historical resources, in particular."

Chapter 2 covers floodplains and wetlands. Chapter 3 addresses natural resources (including endangered and threatened species, migratory birds, and wild and scenic rivers).

Cultural resources and socioeconomic impacts are covered in Chapters 4 and 5, respectively. Cultural resources are also environmentally sensitive resources. Cultural resources include historic properties; archeological resources; and Native American (including American Indian, Alaskan Native, and Native Hawaiian) human and funerary remains, and sacred sites. Native American traditional subsistence use areas are generally separated from cultural resources and treated under the topic of socioeconomic impacts. The chapter on socioeconomic impacts also deals with environmental justice, Human Resource Plan, and cost-benefit analyses.

Chapter 6 covers Resource Conservation and Recovery Act (RCRA) and CERCLA notification requirements regarding transfers of real property containing hazardous substances or waste and petroleum products. Although underground storage tanks, radioactive substances and contamination, polychlorinated biphenyls, and asbestos all involve hazardous substances or petroleum products, there are special requirements imposed either by GSA, DOE, or both GSA and DOE that call for additional

## 1. Introduction

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treatment of these topics, which are addressed in Chapters 7, 8, 9, and 10 (approvals and waste activity notifications under the Toxic Substances Control Act also are covered in Chapter 9).

Chapter 11 discusses real property transfer requirements with respect to Clean Air Act, Clean Water Act, and RCRA permits.

Once all of the environmental data gathered about a real property, including its compliance status, are in hand, they can be organized, compiled, and presented in the form of an environmental site assessment or environmental baseline survey (EBS), as discussed in Chapter 12 (see Exhibit 1-3). The Community Environmental Response Facilitation Act of 1992 (CERFA) (Public Law 102-426) establishes requirements that laid the framework for an EBS in terms of identifying uncontaminated land on which Federal agencies plan to terminate operations. These requirements, such as for detailed title searches and photographs, will be discussed along with EBSs in Chapter 12.

The NEPA review process is described in Chapter 13. Although in many cases, the information in an EBS may overlap with a NEPA document (see Exhibit 1-3), the EBS and the NEPA document serve somewhat different purposes. The environmental site assessment or EBS is a document that provides information about the status of a property with respect to sensitive resources, contamination, and compliance; it was originally intended to benefit the buyer in deciding on a property purchase. A NEPA document is intended to assist both the public and DOE managers, who are disposing of real property, in making a decision regarding a particular real property transfer and the alternatives to the transfer based on the environmental consequences.

### 1.4 General Requirements

The general requirements for real property transfer depend on whether the real property is withdrawn, acquired, or "other" land. The Department of the Interior, in particular BLM, oversees transfers of withdrawn land (§1.4.1). GSA oversees transfers of withdrawn land that is rejected by BLM, acquired land, and "other" land (§ 1.4.2). In several situations, DOE may engage in real property

transfers without either BLM or GSA oversight (see § 1.4.3).

#### 1.4.1 Department of the Interior Oversight

Lands withdrawn from the public domain are under the jurisdiction of the Department of the Interior. Real property transfers of withdrawn land must be made in accordance with the Federal Land Policy and Management Act of 1976. Within the Department of the Interior, the BLM issued regulations on the restoration and revocation of withdrawn land to implement the Act (43 CFR Part 2370).

DOE may temporarily outgrant withdrawn lands to other parties with the consent of BLM. An exception is that withdrawn lands under the purview of the Atomic Energy Act of 1954 (see § 1.4.3), which are temporarily not needed, may be outgranted by DOE without BLM consent. In a few situations, DOE has been permitted by other

#### Strategic Alignment

The DOE complex consists of over 2.4 million acres of land with more than 20,000 facilities. With the end of the Cold War, the need for activities associated with the Nation's nuclear weapons production activities has been reduced. In response, the DOE has been preparing retrenchments in the production of nuclear weapons by reconfiguring, downsizing, and closing many facilities. In addition, former DOE Secretary Hazel O'Leary on May 3, 1995 announced the Strategic Alignment Initiative to reduce the size and cost of the department. The target is a reduction in budget by \$14.1 billion and personnel by 3,788 employees over five years. Prepared with employee participation over a period of two years, this Initiative proposed the closing of 24 facilities, half of which are field offices. Closures involve the transfer of real property, whether it be to another Federal agency, State or local government entity, or a private organization. The Initiative also includes proposals for the privatization of certain facilities, such as the Naval Petroleum and Oil Shale Reserves as well as some of the power marketing administrations. Privatization signifies the sale of the assets of a particular operation, including all associated real and personal property, to a private enterprise.

Federal agencies to build facilities on land withdrawn for use by those other Federal agencies. In such cases, DOE may outgrant DOE facilities as long as (1) the terms of the lease are consistent with the original withdrawal and original use permitted by BLM and (2) the other Federal agency agrees.

Some of the withdrawn lands reserved for and used by DOE contain improvements, such as buildings, structures, and other facilities, or have substantially changed in character. Such withdrawn lands are generally not suitable for return to the public domain for disposition other than leasing and are generally turned over to GSA for disposition, when both BLM and GSA concur.

#### **1.4.2 General Services Administration Oversight**

GSA generally has disposition oversight over all acquired land and withdrawn lands not suitable for return to the public domain. Disposition of acquired land and withdrawn lands not suitable for return to the public domain are governed by the requirements of the Federal Property and Administrative Services Act of 1949 unless otherwise provided for in a specific statute (see § 1.4.3). GSA issues the Federal Property Management Regulations (FPMR) to implement the Act (41 CFR Parts 101-47 and 109).

#### **1.4.3 Exceptions to Oversight**

DOE has limited authority to engage directly in real property transfers without BLM or GSA authorization. There are ten specific statutes that grant DOE such authority:

- Bonneville Project Act of 1937
- Atomic Energy Act of 1954
- Atomic Energy Community Act of 1955
- Naval Oil Shale Reserves Possession Act of 1962
- Energy Reorganization Act of 1974
- Energy Policy and Conservation Act of 1975
- Federal Non-Nuclear Energy Research and Development Act of 1974
- Department of Energy Organization Act of 1977
- National Defense Authorization Act of 1993 (Hall Amendment)

- Defense Authorization Act for Fiscal Year 1996

The Bonneville Project Act gives limited authority to the Bonneville Power Administrator to transfer real property.

The Atomic Energy Act of 1954 authorizes DOE under certain circumstances to sell, lease, or transfer excess acquired real property (see glossary), and to lease acquired or withdrawn land (temporarily not needed). A recent DOE real property transferred under §161(g) of the Atomic Energy Act was the Pinellas site which was sold to the Pinellas County Industry Council. The site will be used for research and development of technologies related to neutron generators and nuclear material.

The Atomic Energy Community Act of 1955 authorizes DOE under certain terms and conditions to transfer real property directly to private owners within the atomic energy communities of Oak Ridge, TN; Richland, WA; and Los Alamos, NM that were originally owned and managed by the Atomic Energy Commission. (It is interesting to note that by 1958, all homes in Oak Ridge became privately owned, and the townsite of Oak Ridge was incorporated into the City of Oak Ridge.)

The Naval Oil Shale Reserves Possession Act of 1962 (Public Law 87-796) authorizes DOE to transfer the Naval Petroleum Reserves only in consultation with Congress and upon approval of the President.

The Energy Reorganization Act of 1974 provides that transfers of facilities constructed from funds provided under this Act are subject to pre-approval by Congress.

The Federal Non-Nuclear Energy Research and Development Act of 1974 authorizes DOE to transfer real property associated with the conversion of oil shale into alternative fuels.

Section 159(f) of the Energy Policy and Conservation Act of 1975 authorizes DOE to lease, sell, or otherwise dispose of facilities related to the Strategic Petroleum Reserve (SPR). DOE exercised

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## 1. Introduction

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its authority under this act to dispose of Sulphur Mines, an unneeded SPR site in Louisiana, during the early 1990s. (The site is not associated with the mineral.)

Section 649 of the Department of Energy Organization Act of 1977 authorizes DOE to lease its temporarily not needed facilities for up to five years when in the public interest. Leasing under this particular Act provides more flexibility than the Atomic Energy Act because leasing requirements are less exacting, although the five-year limit may be unacceptable to a number of potential lessees. The facilities need only be under DOE's custody. For example, DOE has leased Building 313 in the North 300 Area of the Hanford Site to Kaiser Aluminum and Chemical Corporation for three years.

Section 3154 of the National Defense Authorization Act of 1993 (also known as the Hall Amendment to the Department of Energy Organization Act of 1977) authorizes DOE to lease acquired land in the public interest. The land must also be temporarily not needed at closing or reconfigured weapons production facilities. Although the limit on a lease is ten years, the lease may include an option to renew for a term of more than 10 years. Exercising the option for the extended term requires that the lease be subject to consultation with and concurrence of:

- The U.S. Environmental Protection Agency (EPA) for sites listed on the National Priorities List or
- The appropriate State official(s) for sites not listed on the National Priorities List.

An example invoking Section 3154 of the National Defense Authorization Act of 1993 is DOE's proposal to lease the Mound Plant to the Miamisburg Mound Community Improvement Corporation for use as an advanced manufacturing center with a main focus on commercializing products and process development.

Title XXXIV, Subtitle B, Section 3412(h) of the Defense Authorization Act for Fiscal Year 1996 (Public Law 104-106) directs the Secretary of

Energy to sell the Federal government's interests in Naval Petroleum Reserve Number 1 (NPR-1, also known as Elk Hills). It comprises 47,985 acres located about 35 miles west of Bakersfield, California; NPR-1 was created in 1912 to provide an emergency source of military fuel but was not fully developed until the oil embargo of 1976. DOE is in the process of preparing a supplemental environmental impact statement to analyze the divestiture of Federal ownership and operation.

## 1.5 DOE Requirements

### 1.5.1 DOE Order 430.1

DOE has its own complex-wide requirements in DOE Order 430.1, "Life Cycle Asset Management." This Order supersedes DOE Order 4300.1C, "Real Property Management" in accordance with the schedule in §2 of DOE Order 430.1.

### 1.5.2 DOE Program Office Requirements

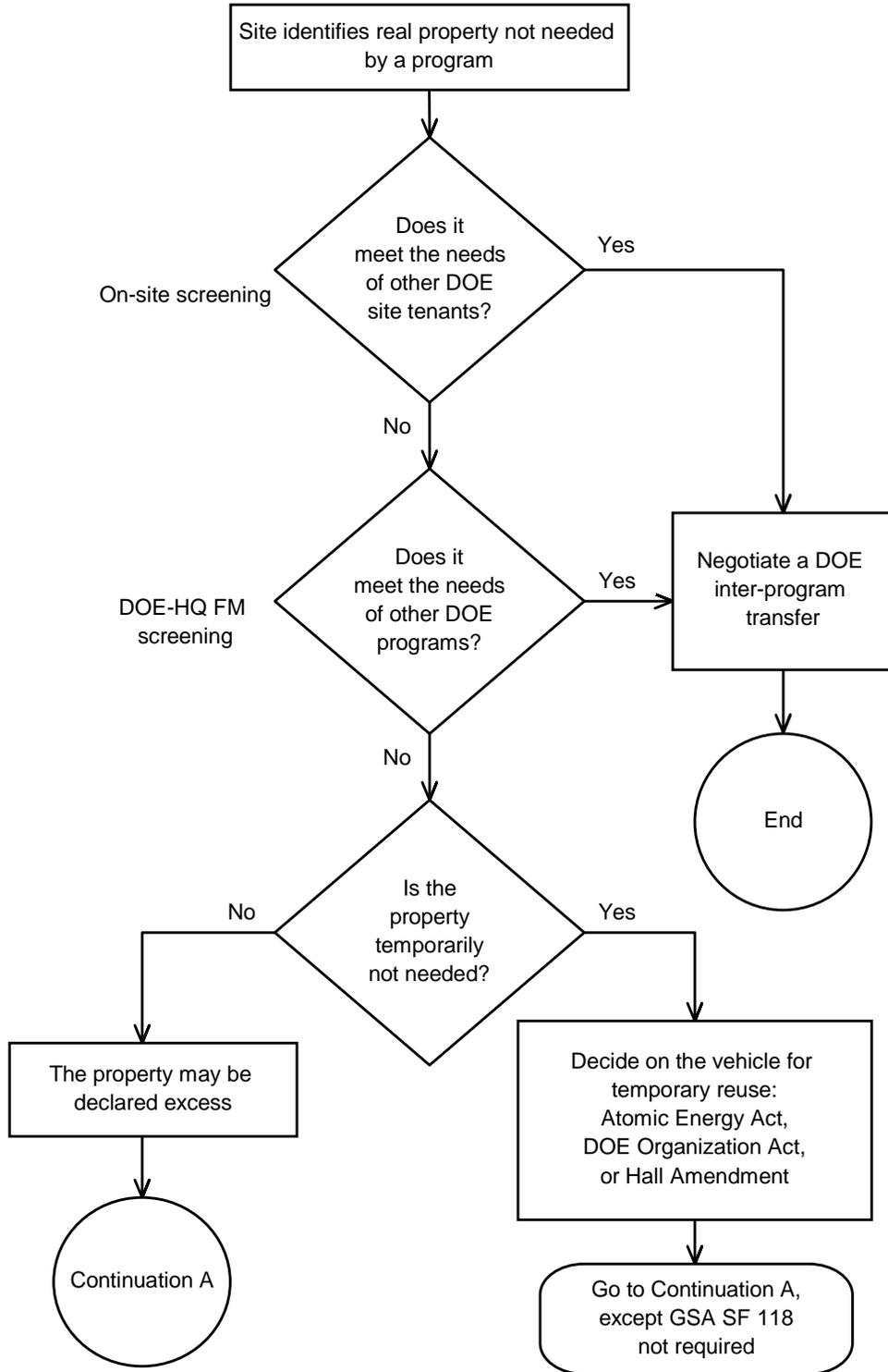
Within DOE, certain program offices adopt their own guidance or impose their own requirements in addition to the complex-wide requirements of DOE Order 430.1. For example, the Assistant Secretary for Environmental Management has adopted *Policy on Decommissioning of Department of Energy Facilities under the Comprehensive Environmental Response, Compensation, and Liability Act; Decommissioning Resource Manual; Decommissioning Implementation Guide; Charting the Course: The Future Use Report; and Resourceful Reuse: A Guide to Planning Future Uses of Department of Energy Sites*. Also, the Office of Worker and Community Transition provides *Guidance for Support of Economic Development Activities* that should be followed. The Office of Field Management has published *DOE Real Estate Process: A Desk Guide for Real Estate Personnel*.

## 1.6 Overview of Procedures for Real Property Transfers

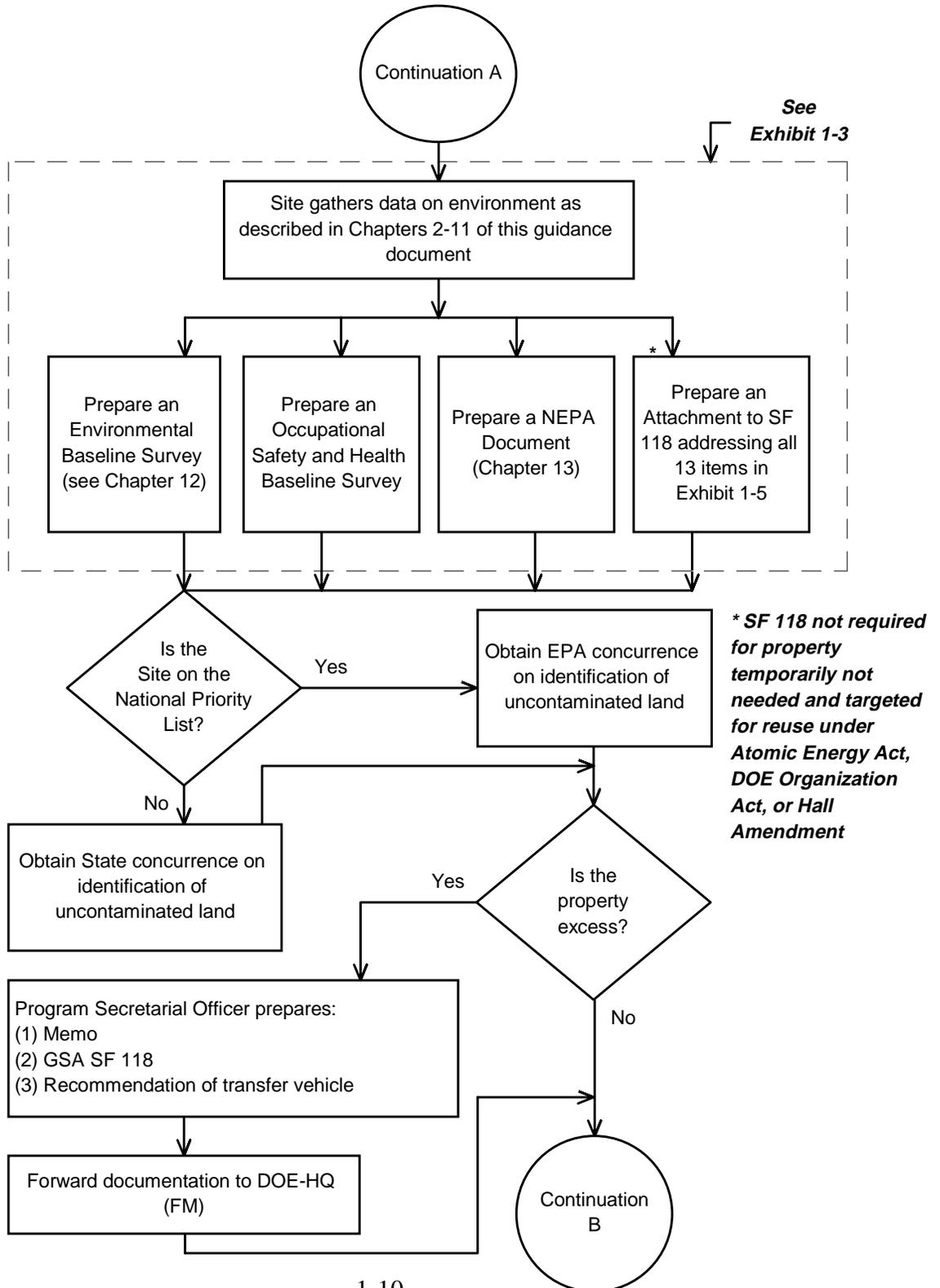
### 1.6.1 Determining Excess Real Property

A site manager of a field element identifies a real property not needed by a program (see Exhibit 1-4) as directed by Executive Order 12512, "Federal Real Property Management," through analysis

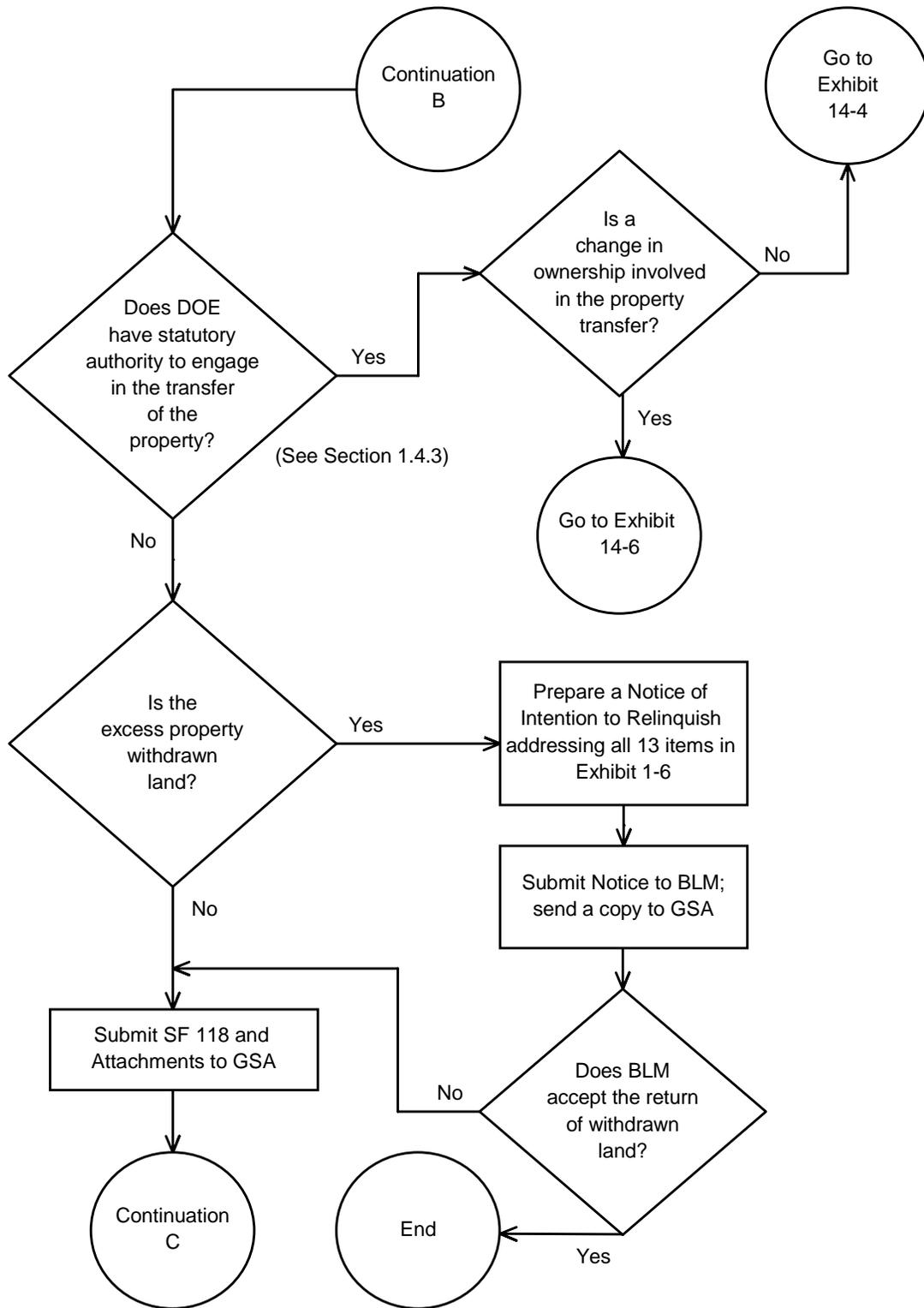
# Exhibit 1-4 Initial Procedures for DOE Real Property Transfers



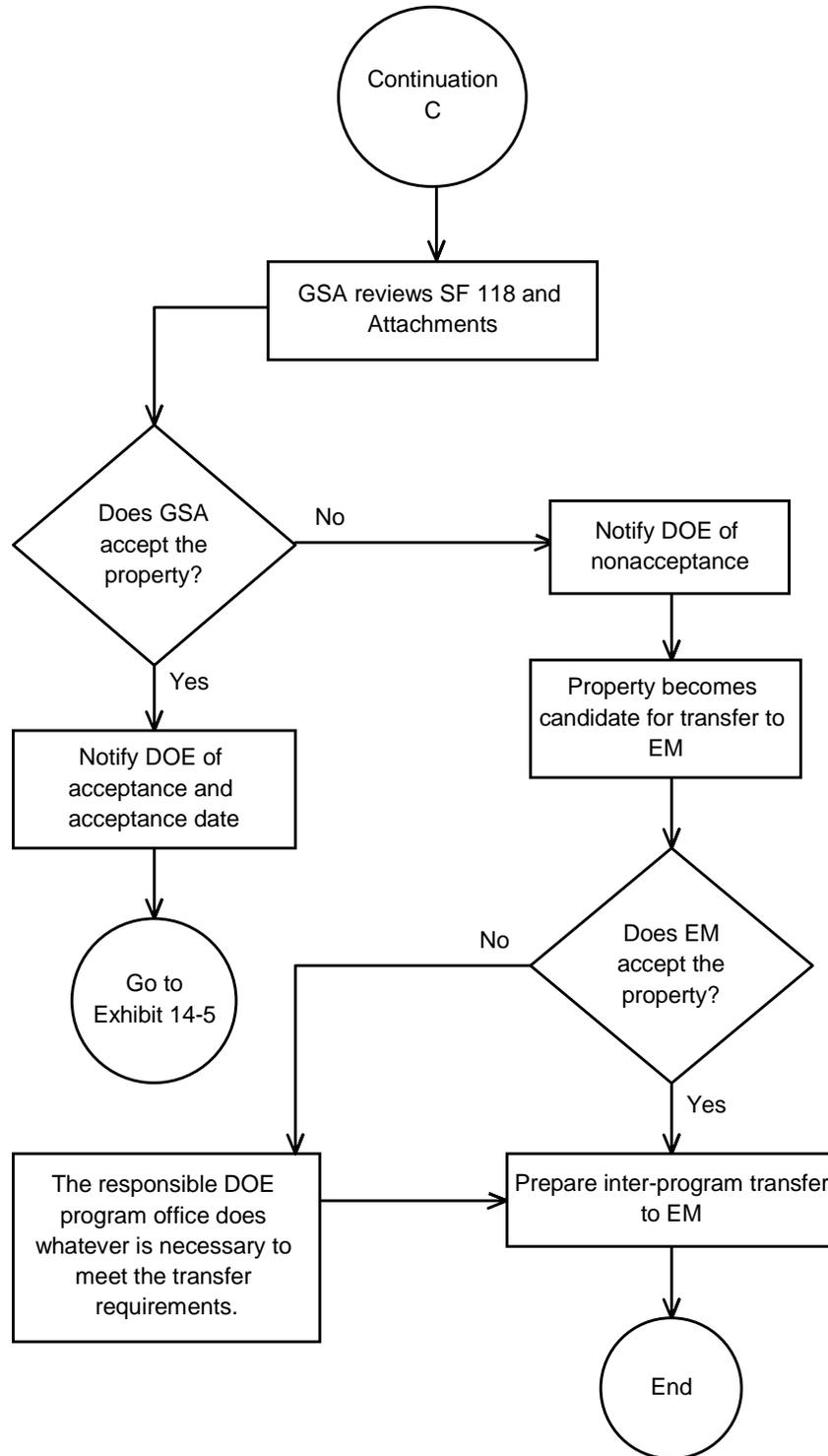
# Exhibit 1-4 Initial Procedures for DOE Real Property Transfers (Continuation A)



## Exhibit 1-4 Initial Procedures for DOE Real Property Transfers (Continuation B)



**Exhibit 1-4**  
**Initial Procedures for DOE Real Property Transfers**  
**(Continuation C)**



required under DOE Order 4320.1B, "Site Development Planning," and DOE Order 430.1, "Life-Cycle Asset Management." The site manager determines whether the real property is temporarily not needed. The property is then screened to see if it might meet the needs of other DOE site tenants. If another DOE site program can use the property, the programs negotiate an inter-program transfer under DOE Orders 430.1 and 4330.5 (to be subsumed by DOE Order 430.1 in accordance with the schedule in §2 of DOE Order 430.1).

DOE Order 4330.5 provides the protocol for the inter-program transfer of real property to the Office of Environmental Management (EM) or other programs. Candidates for transfers to EM are primarily contaminated facilities or contaminated portions of facilities.

If there are no DOE site programs that can use the property, the site manager reports the property to the Office of Field Management (FM) at DOE Headquarters. The appropriate Program Secretarial Officer or designee makes a determination that a real property is excess by preparing the following for FM:

- (1) Memorandum stating that the real property is excess,
- (2) GSA Standard Form (SF) 118, "Report of Excess Real Property," (see 41 CFR 101-47.202) (see Appendix A) and any appropriate supplementary forms (118a, "Buildings, Structures, Utilities, and Miscellaneous Facilities;" 118b, "Land;" and 118c, "Related Personal Property"), and
- (3) Recommendation for disposal (see glossary) of the property from DOE accountability.

The memorandum must receive all appropriate field concurrences (such as counsel and environmental) and be approved in writing. The Attachment to SF 118 must address 13 items required by the Federal Property Management Regulations at 41 CFR 101-47.202-2 (see Exhibit 1-5). The environmental requirements included in the list of

13 items will be covered in Chapters 2-13 of this guidance document.

FM screens the needs of other field elements, program offices and operations offices for the property. If there is no permanent need within DOE for the property, it can be declared excess to the Department. (See *Resourceful Reuse: A Guide to Planning Future Uses of Department of Energy Sites* for further information.)

At the same time these 13 items are addressed, the field element must identify that portion of the real property on which no hazardous substances or petroleum products were stored for one year or more, released, or disposed in order to meet the requirements of the Community Environmental Response Facilitation Act of 1992 (CERFA) (discussed in Chapter 6). The results of this identification must be submitted for concurrence by EPA if the real property is a site on the National Priorities List or by a State official if not on the National Priorities List (see Exhibit 1-4, Continuation A). Section 3 of CERFA states that the concurrence is deemed to be obtained if, within 90 days of receiving a request for the concurrence, the State official has not acted.

The Real Property Team in FM then verifies that the real property is excess to the needs of all programs in the Department. Upon approving the property disposal action, the Team Leader transmits the completed GSA Standard Form 118 to the appropriate GSA regional office and a copy to the field element (see Exhibit 1-4, Continuation B).

DOE Headquarters' approval for reporting of excess real property is generally required for large properties or for field elements lacking a certified realty specialist (see *DOE Real Estate Process: A Desk Guide for Real Estate Personnel*).

If DOE Headquarters approval is not required, the field element then reports the real property to GSA for disposal, and submits the required GSA Standard Form 118 and any appropriate supplementary forms (118a, "Buildings, Structures, Utilities, and Miscellaneous Facilities;" 118b, "Land;" and 118c, "Related Personal Property").

## 1. Introduction

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### Exhibit 1-5. List of 13 Items that Must be Addressed in an Attachment to SF 118

(environmental\* requirements are in bold;  
chapter in which the requirement is covered is in *italic*)

1. The description of the real property.
2. The date title was vested in the United States.
3. All exceptions, reservations, conditions, and restrictions relating to the title acquired.
4. Details concerning any circumstance (occurring between the date of acquisition of the real property and the present) which may have affected the right, title, and interest of the United States in the real property.
5. **The status of civil and criminal jurisdiction over the land** (*Chapter 4*).
6. **Detailed information regarding flood hazards, floodplains, or wetlands and restricted uses** (*Chapter 2*).
7. Description of fixtures and related personal property with historic or artistic value.
8. **The historic significance of the real property and whether the property or any part is listed or eligible for the National Register of Historic Places** (*Chapter 4*).
9. **Description of:**
  - (a) **the type, location, and condition of asbestos in buildings or improvements on the land** (*Chapter 10*);
  - (b) **any asbestos control measures taken** (*Chapter 10*); and
  - (c) **any estimated costs (and time) to remove all or part of the asbestos** (*Chapter 10*).
10. **Information on:**
  - (a) **the type and quantity of each hazardous substance known to have been stored (for one year or more), released, or disposed on the real property, as defined in 40 CFR Part 373** (*Chapters 6 through 10*);
  - (b) **whether all remedial action necessary to protect human health and the environment with respect to hazardous substances on the real property has been taken** (*Chapters 6 through 10*); and
  - (c) **if such remedial action has not been taken, when such action will be completed** (*Chapters 6 through 10*).

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\* Includes the human environment (e.g., cultural resources).

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**Exhibit 1-5. List of 13 Items that Must be Addressed in an Attachment to SF 118**

(environmental\* requirements are in bold;  
chapter in which the requirement is covered is in *italic*) (continued)

11. A legible, reproducible copy of all instruments (agreements, licenses, etc.) affecting the right, title, or interest of the United States in the real property.
12. Any appraisal reports of the fair market value or the fair annual rental of the real property.
13. **Certification by a responsible person that each item of equipment subject to 40 CFR Part 761 on the real property is in a state of compliance** (*Chapter 9*).

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\* Includes the human environment (e.g., cultural resources).

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## 1. Introduction

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### 1.6.2 Department of the Interior Involvement

If the excess real property is withdrawn land, DOE must notify the appropriate BLM office that it intends to relinquish the property for return to the public domain (see Exhibit 1-4, Continuation B). DOE must also send a copy of the Notice of Intention to Relinquish to the appropriate regional office of GSA. There is no specific standard form for the Notice of Intention to Relinquish. However, it must be in duplicate and contain the 13 items of information listed in Exhibit 1-6.

BLM reviews the Notice of Intention to Relinquish to determine suitability for return to the public domain. The five conditions (43 CFR 2374.2) for BLM acceptance of withdrawn land for return to the public domain are as follows:

- (a) The lands have been decontaminated and restored to suitable conditions. If decontamination and restoration are uneconomical, DOE must install and maintain protective notices and barriers.
- (b) DOE agrees to undertake treatment measures and measures deemed necessary by BLM to prevent deterioration of the land and resources.
- (c) DOE has exhausted GSA procedures for disposition of improvements to the land and certifies they are of no value.
- (d) DOE has resolved, through a final grant or denial, all commitments to third parties relative to rights and privileges related to the land.
- (e) DOE has submitted to the appropriate BLM office a copy of the easements, leases, or other encumbrances (see glossary).

Upon a favorable review, BLM will notify DOE and GSA that it accepts accountability and responsibility for excess withdrawn land. BLM then manages the land. If BLM determines that the excess withdrawn land has been so substantially changed in character that it is not suitable for return to the public domain, it will notify GSA and request GSA to concur in the determination. BLM tends to

reject excess withdrawn land on which improvements have been built.

### 1.6.3 GSA Involvement

GSA reviews the submission from DOE to ensure that the documentation is complete and that the real property has no encumbrances and has a marketable title. GSA advises the field element of the acceptance date of the report of excess property (see Exhibit 1-4, Continuation C). If GSA rejects the property being reported as excess, it becomes a candidate for transfer to EM. GSA generally rejects a property if it is contaminated. Until the property is disposed, the field element has environmental, safety, and health responsibility for the property for five fiscal quarters from GSA's acceptance of the report of excess property or until the excess property is disposed, whichever is earlier.

Subject to GSA approval, reports of excess real property may be withdrawn or corrected at any time prior to real property transfer by submission of a modified SF 118 (and SF 118 supplementary forms) to the appropriate GSA regional office. For example, new significant environmental findings may require the form to be revised. The DOE official originally signing the report of excess property must approve any withdrawal or significant correction.

The Federal Property and Administrative Services Act allows interim use of excess property. Interim use includes lease, license, or permit (see glossary). However, GSA has general supervision and approval authority over interim use of such properties pending final transfer. In general, GSA limits interim use to one year with the right to cancel on 30-day notice.

The final procedures for disposing of DOE real property and associated environmental requirements are summarized in Chapter 14.

## Exhibit 1-6. List of 13 Items that Must be Addressed in a Notice of Intention to Relinquish

(environmental\* requirements in bold;  
chapter in which requirement is covered is in *italic*)

1. Name and address of DOE field element responsible for the subject real property.
2. Citation of the order which withdrew or reserved the subject land for DOE use.
3. Legal description and acreage of the land, unless referred to in the order of withdrawal or reservation.
4. Description of the improvement existing on the land.
5. **The extent to which the land is contaminated and the nature of the contamination** (*Chapters 6-10*).  
(The identification of uncontaminated land should also be included to meet the requirements of the Community Environmental Response Facilitation Act of 1992.)
6. **The extent to which the land has been decontaminated or the measures being taken to protect the public from the contamination** (*Chapters 6-10*).
7. The extent to which the land has been changed in character other than by construction of improvements.
8. **The extent to which the land and resources have been disturbed and the measures being taken to recondition the property** (*Chapters 2-4*).
9. If improvements have been abandoned on the land, a certification that DOE has exhausted GSA procedures for their disposal and that the improvements are without value.
10. A description of easements or other rights and privileges (leases, encumbrances) burdened on the land.
11. A list of the terms and conditions, if any, DOE deems necessary to be incorporated in any further disposition of the land in order to protect the public interest (*Chapters 2-4*).
12. Any information relating to the interest of other agencies or individuals in acquiring use of the land.
13. Any recommendations (e.g., disposition of the land by GSA).

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\* Includes the human environment (e.g., cultural resources).

## 1. Introduction

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### 1.7 References

- DOE, 1997. *DOE Real Estate Process: A Desk Guide for Real Estate Personnel*, U.S. Department of Energy, DOE/FM, 1997.
- DOE, 1996. *Resourceful Reuse: A Guide to Planning Future Uses of Department of Energy Sites. Prospective Real Property Users*, U.S. Department of Energy, DOE/EM-0284, May 1996.
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- DOE, 1995. *Decommissioning Resource Manual*, DOE/EM-0246, U.S. Department of Energy, Office of Environmental Management, August 1995.
- DOE and EPA, 1995. *Policy on Decommissioning of Department of Energy Facilities under the Comprehensive Environmental Response, Compensation, and Liability Act*, U.S. Department of Energy and U.S. Environmental Protection Agency, May 1995.
- DOE, 1995. *Decommissioning Implementation Guide*, U.S. Department of Energy, Office of Environmental Management, May 1995.

## 2. FLOODPLAINS AND WETLANDS

### 2.1 Introduction

Floodplains are lowland and relatively flat areas adjoining inland and coastal waters, including, at a minimum, those areas subject to floods which have a one percent or greater chance of being exceeded in any given year (also known as 100-year floods). Floodplains fell under Federal protection (see *Unified National Program for Floodplain Management*) through Public Law 90-448 in 1968. This law was enacted in response to the magnitude of and continued increase in the nation's losses and property damage due to flooding despite widespread investment in Federal flood control projects. President Jimmy Carter issued Executive Order 11988 to Federal agencies in 1977 to reinforce the need to (1) strengthen Federal policies to reduce the risk of flood losses; (2) minimize the impact of floods on human safety, health, and welfare; and (3) restore and preserve natural floodplain values. Floodplains have important ecological values that need to be maintained. The fertile nature of floodplains makes them important wildlife habitats. In coastal areas, floodplains are often particularly fragile dune environments, which form an essential part of the shoreline's natural buffer zone. If disturbed, their effectiveness as storm barriers can be reduced significantly.

**A wetland is an area meeting the three following conditions (U.S. Army Corps of Engineers, 1987):**

- (1) Inundated or saturated soil conditions resulting from permanent or periodic inundation by groundwater or surface water (hydric soil).
- (2) A prevalence of vegetation typically adapted for life in inundated or saturated soil conditions (hydrophytic vegetation).
- (3) The indication of a wetland hydrology (e.g., by drainage pattern, drift lines, sediment deposition, watermarks, stream gauge data, historic records, visual observation of inundation).

Floodplains may also serve as groundwater recharge areas.

Wetlands are (also see text box) those areas that are inundated by surface or groundwater with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

Wetlands fell under Federal protection through Executive Order 11990 issued by President Jimmy Carter and § 404 of the Clean Water Act. Since the inventories of the 1950s, over 40 percent of the 120 million acres of wetlands then inventoried have been lost. Loss of wetlands is due primarily to development and human land-use practices. Wetlands need to be protected because they serve a variety of important environmental functions like those of floodplains.

Floodplains and wetlands are commonly treated together for a number of reasons. Floodplains and wetlands may physically overlap. The losses associated with both floodplains and wetlands may be the result of the same general causes. The controls for the protection of floodplains and wetlands are similar -- restrictions on land use, development, and improvement.

### 2.2 Drivers for the Requirements

The two primary mandates that drive the floodplain/wetland requirements for real property transfers are Executive Order (E.O.) 11988, "Floodplain Management," and E.O. 11990, "Protection of Wetlands." In both E.O.s, § 1 dictates that each Federal agency shall take action to minimize loss and to preserve the natural and beneficial values of floodplains or wetlands in carrying out its responsibility for acquiring, managing, and disposing of Federal lands and facilities.

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## 2. Floodplains and Wetlands

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Section 3(d) of E.O. 11988 and § 4 of E.O. 11990 direct that when Federal property in a floodplain or wetland is proposed for lease, easement, right-of-way, or disposal to a non-Federal party, the Federal agency shall:

- (1) Reference in the conveyance (e.g., lease or property deed) those uses that are restricted,
- (2) Attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law, or
- (3) Withhold such properties from conveyance.

These two Executive Orders provide the authority for GSA and DOE to issue their own regulations implementing requirements regarding floodplains and wetlands in real property transfers. The GSA regulation is at 41 CFR 101-47.202-2(b)(6) and DOE regulations are at 10 CFR Part 1022.

### 2.3 Requirements in Real Property Transfers

The GSA regulation at 41 CFR 101-47.202-2(b)(6) requires that detailed information regarding flood hazards or flooding, location on a floodplain or wetland, and restricted uses be listed in an attachment to Standard Form 118 (see Appendix A) filed for the real property proposed for transfer.

The DOE regulations at 10 CFR Part 1022 are much more rigorous. First, you must make a determination of whether floodplains or wetlands are present on the property (see § 2.4.1 below). If floodplains or wetlands are present, then assess the effects of the real property transfer on floodplains and wetlands (see § 2.4.2 below). Prepare the assessment and include it in the environmental assessment (EA) or environmental impact statement (EIS), if either document is required in compliance with NEPA (see Chapter 13). In those instances where a real property transfer does not require an EA or EIS, DOE has established alternative floodplain/wetlands evaluation procedures involving analogous public notice and public comment/review (see § 2.4.3 below). Note that EH-

42 is reviewing 10 CFR Part 1022 at this time to determine if an update of the 1979 regulations is needed.

### 2.4 Implementation of the Requirements

Exhibit 2-1 is a flow chart depicting the general procedures for implementing the floodplain/wetland requirements for real property transfers.

#### 2.4.1 Floodplain/Wetland Determinations

Information about whether a property contains a floodplain or wetland may already appear in the *Technical Site Information* or the *Site Comprehensive Land Use Plan*. Otherwise, there are several ways to determine whether a property contains or lies within any floodplain or wetland. Make a floodplain determination by ascertaining whether the property is located in the 100-year floodplain or critical action floodplain [an area for which even a slight chance of flooding would be too great (e.g., an area used for storing hazardous materials)] using a:

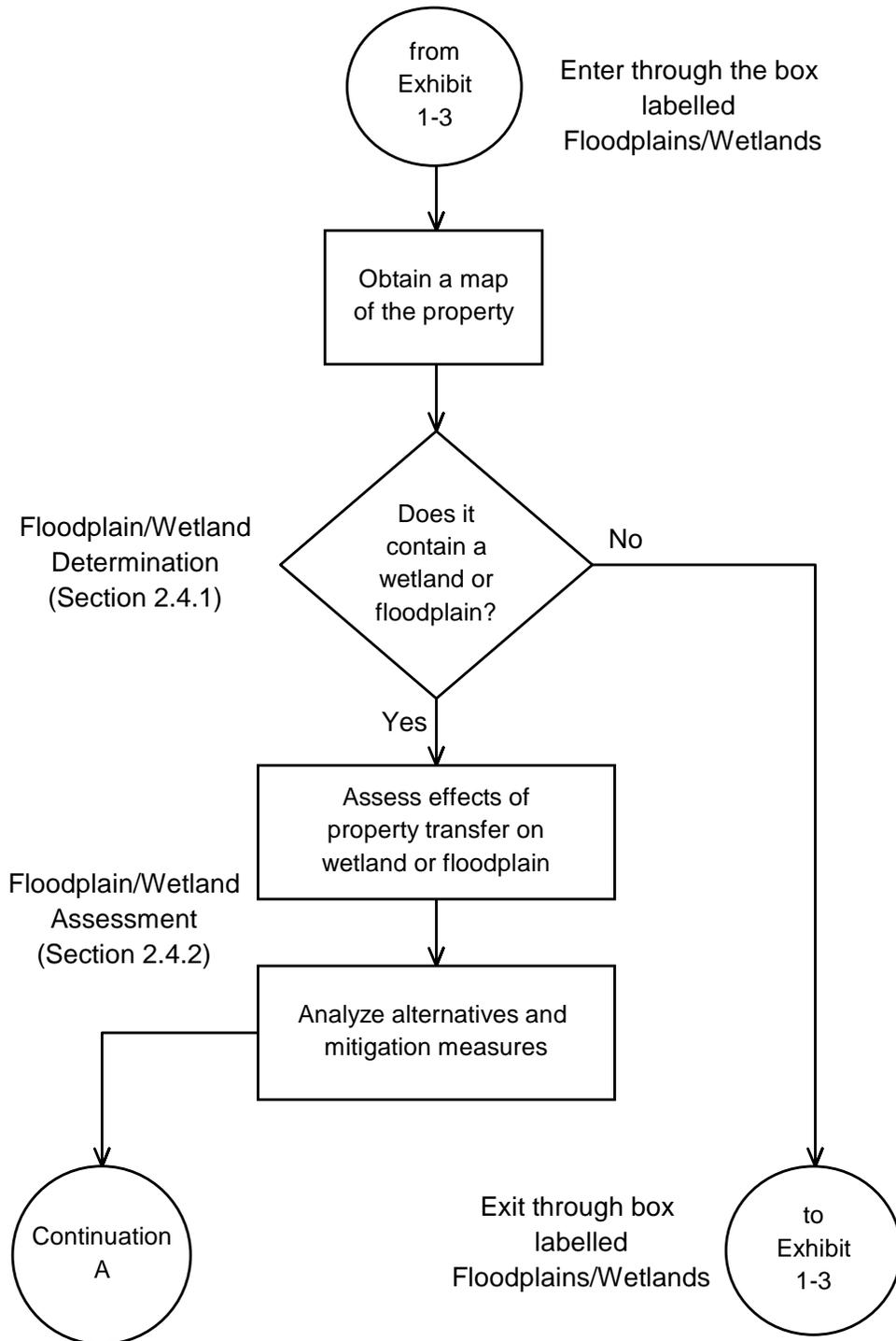
- Flood Insurance Rate Map (FIRM) or
- Flood Hazard Boundary Map (FHBM).

FIRMs and FHBMs are prepared by and available from the Federal Insurance Administration of the Federal Emergency Management Agency. In the event FIRMs or FHBMs are not available, seek assistance from the aforementioned agency or the Corps of Engineers.

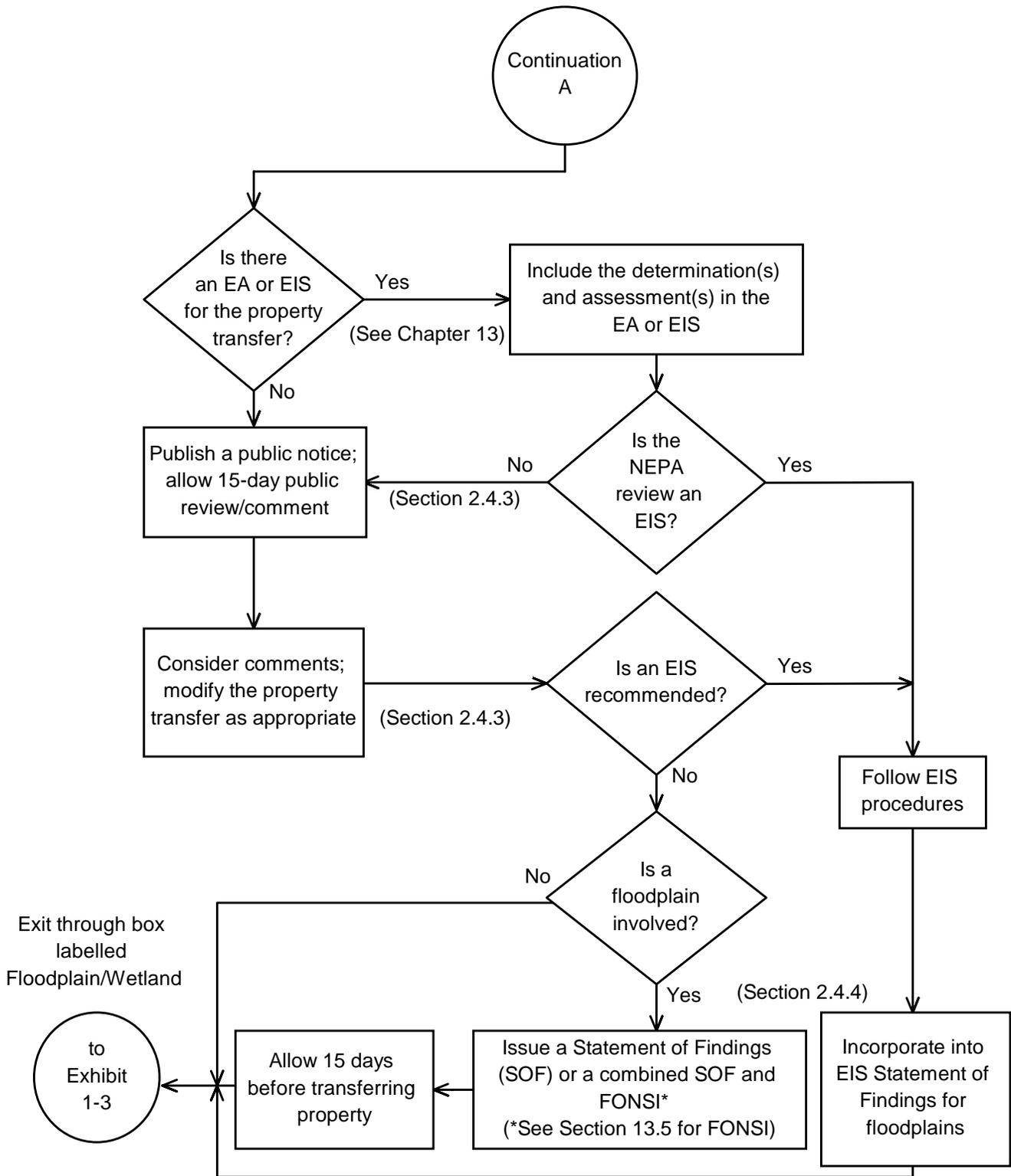
Make a wetland determination by ascertaining whether the property contains a wetland by using the following:

- U.S. Fish and Wildlife Service National Wetlands Inventory Map,
- U.S. Department of Agriculture Natural Resources Conservation Service Local Identification Map,
- U.S. Geological Survey Topographic Map,

## Exhibit 2-1 Procedures for Floodplain/Wetland Review



**Exhibit 2-1  
Procedures for Floodplain/Wetland Review  
(Continuation A)**



- U.S. Army Corps of Engineers Wetland Delineation, Manual (see *U.S. Army Corps of Engineers*, 1987),
- State wetlands inventory, or
- Regional or local government-sponsored wetland or land use inventory.

**2.4.2 Floodplain/Wetland Assessments**

Pursuant to 10 CFR 1022.12, include in floodplain/wetland assessments (see Exhibit 2-1) the following information:

- (1) Description of the real property transfer -- discuss the nature and purpose of the real property transfer. Include in the description a map showing the location of the property with respect to the floodplain/wetland. For properties in a floodplain, delineate the high hazard areas and describe the nature and extent of the hazard.
- (2) Floodplain/wetland effects -- discuss the positive and negative, direct and indirect, and long-term and short-term effects of the real property transfer on floodplains/wetlands.
- (3) Alternatives -- consider and analyze alternatives, such as not transferring the property or transferring only parts of the property, to avoid adverse effects on floodplains/wetlands. Address measures that mitigate an adverse effect, such as restrictions on developments and improvements.

**2.4.3 Public Notice and Public Involvement**

The DOE regulations (10 CFR 1022.14) require a public notice (see Exhibit 2-1, Continuation A) and a public comment/review period for the effect of the real property transfer on floodplains/wetlands (when an EIS is required, a Notice of Intent to prepare an EIS may be used to satisfy the public notice requirement, provided that it also includes a Notice of Floodplain or Wetland action.) Publish the public notice in the Federal Register and

disseminate the notice to other Federal, State, and local agencies as well as persons or groups interested or affected by the real property transfer. Describe in the public notice the proposed action (i.e., the real property transfer, and the location). Allow a public comment/review period of 15 days following the public notice. At the close of the public comment/review period, re-evaluate all alternatives and mitigating measures, and take into account all substantive comments received. Prior to taking any action, evaluate mitigation measures to minimize potential harm to the floodplain/wetland. For real property transfers involving wetlands only, allow 15 days after publishing the public notice before implementing the real property transfer if wetlands constitute the only requirement to be satisfied [see 10 CFR 1022.18(b)].

**2.4.4 Statement of Findings (floodplains only)**

After the public comment/review period, publish a Statement of Findings for real property transfers involving a floodplain (see Exhibit 2-1, Continuation A). (No such Statement of Findings is required for real property transfers involving wetlands.) For floodplain actions which require preparation of an EA or EIS, the Statement of Findings should be incorporated into the NEPA document. Where no EA or EIS is required, publish the Statement of Findings in the Federal Register and allow at least 15 days before implementing the real property transfer (see 10 CFR 1022.18). The Statement of Findings (three-page maximum) must contain all of the following (10 CFR 1022.15):

- (1) A description of the real property transfer and a location map,
- (2) An explanation of why the floodplain must be included in the real property transfer,
- (3) A list of alternatives considered,
- (4) A statement indicating whether the real property transfer conforms to applicable State and local floodplain protection standards, and

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## 2. Floodplains and Wetlands

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- (5) A brief description of the steps to be taken to minimize harm to or within the floodplain.

### 2.4.5 Approvals

The *Secretarial Policy on NEPA* of June 1994 provides for the delegation of authority within DOE for the approval of floodplain/wetland determinations and assessments, public notices of floodplain/wetland involvement, and Statement of Findings (floodplains only). Attachment I to the *Secretarial Policy* lists the Heads of Field Organizations who are fully authorized to grant such approvals. Under certain conditions, these persons may redelegate these approval authorities to Heads of subsidiary Field Organizations. For proposed actions that are categorically excluded from NEPA documentation requirements, NEPA Compliance Officers are authorized to approve and issue any required associated floodplain and wetland documents (DOE Order 451.1, §5 (d)(2))

### 2.4.6 Model Documents

The Office of NEPA Policy and Assistance developed model documents for the public notice of the following: (1) involvement of either a floodplain, a wetland, or a floodplain and a wetland; and (2) a Floodplain Statement of Findings. These model documents are contained in Appendix B.

## 2.5 Relationship to Environmental Baseline Survey

Make sure that information gathered about floodplains or wetlands on a facility also appears in an environmental baseline survey (see Chapter 12). Be aware that the American Standard for Testing and Materials (ASTM) E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process" and ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process," treat floodplains and wetlands as "non-scope" considerations. Floodplains and wetlands are non-scope considerations because the focus of the ASTM Standards is on commercial real estate. The Executive Orders on floodplains and wetlands apply only to Federal agencies and do not apply to private parties.

## 2.6 Relationship to NEPA Documents

It is the intent of both E.O. 11988 and E.O. 11990 that Federal agencies implement the floodplain/wetlands requirements through existing procedures such as those established to implement NEPA. As previously noted, the floodplains/wetlands assessment required under DOE regulations at 10 CFR 1022.12 should be prepared with and included in an EA or EIS if either document is required (see Chapter 13). The Statement of Findings for a real property transfer involving a floodplain should be combined with the appropriate NEPA document.

## 2.7 Leases, Other Outgrants, and Disposals

Executive Orders 11988 § 3(d) and 11990 § 4 contain explicit provisions protecting floodplains and wetlands, respectively, in real property transfers. These provisions mandate that Federal agencies shall:

- (1) Reference in the conveyance (lease, deed, etc.) those uses that are restricted under identified Federal, State, or local floodplain/wetland regulations; and
- (2) Attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or
- (3) Withhold such properties from conveyance.

The restrictions in (1) and (2) above should also be included in an attachment to Standard Form 118.

## 2.8 Notice of Intention to Relinquish

If the subject real property is withdrawn land being declared excess, include the following information in the Notice of Intention to Relinquish (see § 1.6.2) to be submitted to the BLM:

- Data on floodplains/wetlands
- Changes or disturbances to floodplains/wetlands

- Terms and conditions necessary to be incorporated in any further disposition of the land to protect floodplains/wetlands in the public interest

## **2.9 GSA-Specific Requirements**

GSA requires completion of a Standard Form 118 for the transfer of the real property being declared excess. Information regarding floodplains and wetlands and restrictions on disturbances, improvements, or other uses must be included as an attachment to the form.

## **2.10 Checklist**

- Has a determination as described in § 2.4.1 been made as to whether the real property lies within or contains any wetlands or floodplains? (If there are no floodplains/wetlands involved, stop here.)
- Have considerations (such as not transferring the real property, excluding the floodplain/wetland from the transfer, or imposing restrictions on use of the floodplain/wetland) to protect and preserve the floodplain/wetland been made?
- Has an assessment for the floodplain/wetland been prepared as described in § 2.4.2?
- Have the required public notice and public comment/review procedures been implemented?
- If an EA or EIS is not prepared and the property being transferred involves a floodplain for which a floodplain determination and assessment have been completed, has a Statement of Findings been published?
- Have data on floodplains/wetlands been included in the environmental site assessment or environmental baseline survey?
- Have the floodplains/wetlands determinations, assessments, and Statements of Findings been included in the EA or EIS (if one is prepared)?
- If the real property is offered for an outgrant of an easement, lease, license, or permit (see glossary), have the floodplains/wetlands been identified, appropriate restrictions been incorporated, and the responsibility for obtaining the necessary permits been specified in the conveyance?
- If the real property being declared excess is withdrawn land, have data on floodplains/wetlands, any changes or disturbances to floodplains/wetlands, and any terms and conditions deemed necessary to be incorporated in any further disposition of the land to protect the public interest in floodplains/wetlands been included in the Notice of Intention to Relinquish submitted to the BLM?
- If the real property is being declared excess, have data on floodplains/wetlands been included in the SF 118?

## **2.11 References**

- ASTM, 1994. "Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process," American Society for Testing and Materials Standard E-1527-94, June 1994.
- ASTM, 1993. "Standard Practice for Environmental Site Assessments: Transaction Screen Process," American Society for Testing and Materials Standard E-1528-93, May 1993.
- FEMA, 1986. *Unified National Program for Floodplain Management*, Federal Emergency Management Agency, Interagency Task Force on Floodplain Management, March 1986.
- U.S. Army Corps of Engineers, 1987. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*, January 1987.

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# 3. NATURAL RESOURCES

## 3.1 Introduction

### 3.1.1 Background

For the purpose of real property transfers, there are four primary kinds of natural resources to consider:

- (1) Habitats of endangered and threatened species,
- (2) Environments of migratory birds,
- (3) Wild and Scenic Rivers Act designated areas, and
- (4) Other environmentally sensitive natural resource areas.

Other environmentally sensitive natural resource areas are exemplified by pristine wilderness areas, areas with species-rich ecosystems, and ecosystem sanctuaries. Natural resources that play a role in the traditional religious practices of Native Americans, such as geological formations or vistas that are regarded as sacred, are covered in Chapter 4. Natural resources that comprise the traditional subsistence of Native Americans are covered in Chapter 5. Natural resources (such as marine mammal sanctuaries, prime agricultural lands, tundra, coral reefs, and tropical rain forests) not found widespread on DOE lands are excluded from further discussion.

The most sensitive of the aforementioned types of natural resources is habitat of endangered and threatened species (see text box). Protection of such habitats is vital for reversing the decline of those species. In the U.S., nearly 600 plant and animal species are listed as endangered or threatened; another 4,000 species are candidates for listing. Protecting plant and animal species from extinction is essential to maintaining biological diversity and functional integrity in the perpetuation of ecosystems. Each plant or animal plays an integral role in the hydrologic, carbon, and nutrient cycles of an ecosystem. Healthy ecosystems are necessary to support fish and wildlife populations important for commercial, economic, recreational,

### Endangered and Threatened Species on DOE Facilities

DOE sites serve as stewards of numerous threatened and endangered species. Examples of such species include the red cockaded woodpecker, golden eagle, and smooth purple coneflower. DOE's role as stewards involves not only protecting but also improving the habitats for these species. One animal species whose population is recovering due to such efforts is the San Joaquin kit fox, a Federally listed endangered species, at Naval Petroleum Reserve Number 1, Elk Hills, California.

esthetic, ethical, and even cultural values. Maintaining a diversity of species and genetic strains provides a gene pool for potential use in agriculture, medicine, and industry (such as pulp and paper).

Another important habitat is that of migratory birds. The most common examples of migratory birds are ducks, geese, and swans. Destruction of nesting cover and degradation of migration and wintering habitats have contributed to long-term downward trends in populations of migratory species, such as pintails, American bitterns, and black ducks. Protection of such environments is necessary to allow breeding, wintering, or stopping over along migration routes in order to achieve and maintain optimum bird population levels. Congress amended the Migratory Bird Treaty Act in 1974 to add migratory bird environments to the items protected under the original 1918 Act. (This Act originally included only the birds and their nests and eggs).

The third type of natural resource is areas designated as wild and scenic rivers. The Wild and Scenic Rivers Act was passed in 1968 to protect certain selected river areas because of their "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or

### 3. Natural Resources

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similar values." There are three kinds of Wild and Scenic Rivers Act designated areas:

- (1) Wild river areas,
- (2) Scenic river areas, and
- (3) Recreational river areas.

Wild river areas are sections of a river that are free of impoundments and generally inaccessible except by trail, with essentially primitive watersheds or shorelines and unpolluted waters. Wild river areas represent vestiges of primitive America. Scenic river areas are sections of rivers that are free of impoundments, with shorelines or watershed largely undeveloped and accessible by roads. Recreational river areas are sections of rivers that are readily accessible by road, may have some development, and may have undergone impoundment or diversion in the past.

The fourth type of natural resource covers a miscellany of areas not addressed above that are also environmentally sensitive. These are areas that are unique or substantially different from their surroundings in terms of:

- Vegetation,
- Terrain,
- Soils,
- Water availability, or
- Other factors that may be ecologically critical (i.e., a large number of species may be adversely affected by a disturbance).

These areas are particularly species-rich or sensitive to nutrient enrichment. Examples of such areas other than wetlands (already discussed in Chapter 2) are shown in Exhibit 3-1.

#### 3.1.2 Definitions and Their Implications

The term "habitats of endangered and threatened" species includes and is broader than the regulatory term critical habitat. Critical habitats [Endangered Species Act (ESA) § 3(5)] are areas with physical or biological features that:

- (1) Are essential to the conservation of an endangered or threatened species, and

- (2) Require special management considerations or protection.

#### Exhibit 3-1. Examples of Other Environmentally Sensitive Natural Resources

- Ecosystem sanctuaries
- National Environmental Research Parks (NERPs) (see Section 3.3.4)
- Pristine Wilderness areas
- Special sources of water
  - Sole-source aquifers
  - Wellhead protection areas
- Species-rich ecosystems

Critical habitats are designated in 50 CFR Parts 17 or 226. Furthermore, ESA § 7(a)(4) requires consideration of impacts on species proposed for listing and their habitats (so-called proposed critical habitats). In addition, DOE NEPA implementing regulations (10 CFR 1021, Subpart D, Appendix B) require that the same considerations for Federally-listed endangered and threatened species be given for State-listed endangered and threatened species (State-proposed endangered and threatened species are not included). Thus, the term "habitats of endangered and threatened species" is used in this guidance document to encompass habitats of Federally-listed species, species proposed for Federal listing, and State-listed species.

### 3.2 Drivers for the Requirements

There are four statutes that ascribe a role for the consideration of natural resources in real property transfers: ESA, the Migratory Bird Treaty Act, the North American Wetlands Conservation Act, and the Wild and Scenic Rivers Act. In addition, several international treaties, to which the U.S. is a signatory, are also drivers: the 1916 and 1936 Migratory Bird Conventions, the Convention on Nature Protection and Wildlife Preservation in the Northern Hemisphere, and the North American Waterfowl Management Plan. DOE NEPA implementing regulations (10 CFR 1021, Subpart D, Appendix B) are also a driver because they list the particular environmentally sensitive natural

resources that must be taken into account in an environmental review.

### 3.3 Requirements for Real Property Transfers

#### 3.3.1 Habitats of Endangered and Threatened Species

Section 7(a)(2) of ESA requires every Federal agency to consult with the Secretary of the Interior (delegated to Regional Directors of U.S. Fish and Wildlife Service) regarding any Federal action to ensure that the action does not:

- (1) Jeopardize the continued existence of any species **listed** (as endangered or threatened), or
- (2) Adversely modify a critical habitat.

Likewise, Section 7(a)(4) of ESA requires similar consultation when the action involves a species **proposed** for listing (as endangered or threatened). In addition, DOE NEPA implementing regulations (10 CFR 1021, Subpart D, Appendix B) require that the same considerations for Federally-listed endangered and threatened species be given for State-listed endangered and threatened species. (State-proposed endangered and threatened species are not included).

#### 3.3.2 Environments of Migratory Birds

Section 9 of the North American Wetlands Conservation Act requires every Federal agency to cooperate with the Director of the U.S. Fish and Wildlife Service in protecting habitats for migratory birds within the lands and waters of each such agency.

#### 3.3.3 Wild and Scenic Rivers Act Designated Areas

Section 8(a) of the statute withdraws all public domain land within Wild and Scenic Rivers Act designated areas (listed in § 3 of the Act) from sale or other disposition except for leasing and exchange. Section 8(b) of the statute withdraws from sale or other disposition all public domain land that:

- (1) Constitutes the bed of or bank of, or
- (2) Lies within one-quarter mile of the bank of

any river listed as a potential addition to the Wild and Scenic Rivers Act designated areas (listed in § 5 of the Act).

#### 3.3.4 Other Environmentally Sensitive Natural Resources

Other environmentally sensitive natural resources are listed in 10 CFR 1021, Subpart D, Appendix B. If a real property transfer with use changed adversely affects an environmentally sensitive natural resource, 10 CFR 1021, Subpart D, Appendix B requires an environmental assessment, at the minimum, as the level of NEPA review. (See Chapter 13 on the implementation of the NEPA review requirement and preparation of environmental assessments.)

This is exemplified by the seven national laboratories designated as National Environmental Research Parks (NERP). The NERP system was initiated by DOE's predecessor, the U.S. Energy Research and Development Administration, in order to establish a system of ecosystem sanctuaries with much of the ecosystem land preserved in a natural, undeveloped state. Ecosystems preserved as NERPs embrace Carolina bays (a unique wetland found only on the southeastern coastal plain), deciduous and coniferous forests, tall grass prairies, and deserts. Two million acres have been designated as NERPs. Much of this acreage was established as buffer zones around nuclear production and research facilities. NERP directives acknowledge the need for a comprehensive inventory of ecological resources and the long-term monitoring of regional ecosystem components and processes. Although there are no enforcement provisions associated with NERPs, NERP ecosystem sanctuaries should be regarded as environmentally sensitive natural resources, which, if adversely affected by a real property transfer, are subject to the 10 CFR 1021, Subpart D, Appendix B requirement for an environmental assessment as the minimum level of NEPA review.

### 3. Natural Resources

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#### 3.4 Implementation of Requirements

Much of the information on whether a site contains habitats of endangered or threatened species, environments of migratory birds, Wild and Scenic Rivers designated areas, or other environmentally sensitive natural resource areas should already exist in the site's *Site Technical Information* or a site-wide NEPA document.

##### 3.4.1 Habitats of Endangered and Threatened Species

You may submit a written request to the Regional Director of the U.S. Fish and Wildlife Service for a list of (1) listed or proposed species and (2) listed or proposed critical habitats present in the area in which the site lies [see 50 CFR 402.12(c)]. The Director has 30 days to respond to a request. In addition to a response, the Director will provide a list of candidate species being considered for listing but not yet proposed formally. If the Director advises that no (1) listed or proposed species or (2) listed or proposed critical habitats are present, no further action is necessary.

The preparation of a biological assessment is required whenever a major construction activity is planned for the site and a listed species is identified in the area. If a species identified in the area is proposed for listing, the Federal agency must confer with the U.S. Fish and Wildlife Service. The biological assessment is not required until the species proposed for listing becomes listed. A biological assessment for a proposed real property transfer evaluates the potential effects of the transfer on (1) listed and proposed species and (2) designated and proposed critical habitats. It determines whether any such species or habitats are adversely affected, and is used in deciding whether formal consultation is necessary. If the lessee or new owner rather than DOE is developing a site, DOE may require the lessee or new owner to undertake the biological assessment. The lessee or new owner and DOE may request an informal consultation with the U.S. Fish and Wildlife Service at any time concerning the potential impact of a real property transfer. The informal consultation can be held to address whether the biological assessment, if needed, should be prepared as a condition for

transferring the property. Formal consultation (as defined in 50 CFR 402.14) may not be initiated until a biological assessment is completed.

This guidance document does not address State requirements concerning habitats of endangered and threatened species because of the vast number of such requirements. However, all States have their counterparts to the U.S. Fish and Wildlife Service and follow a protocol for State-listed endangered and threatened species similar to that provided by the ESA.

##### 3.4.2 Environments of Migratory Birds

Determine whether your site lies underneath the flyway of a migratory bird species. [General maps of flyways of migratory birds are available (e.g., National Geographic Society and *Atlas of Bird Migration*).] To verify whether there are any environments of migratory birds on your site, confer with the Regional Director of the U.S. Fish and Wildlife Service or the State counterpart to the U.S. Fish and Wildlife Service. As with informal consultation concerning impacts on habitats of endangered and threatened species, informal consultation may be held concerning impact on environments of migratory birds. The U.S. Fish and Wildlife Service attempts to provide a coordinated analysis of all environmental requirements (listed and proposed species, listed and proposed critical habitats, migratory birds, waterbody diversions and impoundments, etc.) under its jurisdiction.

##### 3.4.3 Wild and Scenic Rivers Act Designated Areas

Over one hundred Wild and Scenic Rivers Act designated areas in the National Wild and Scenic Rivers System are listed in § 3 of the Act. (The Wild and Scenic Rivers Act can be found at 82 Stat. 906, 16 USC 1271 et seq.; this statute has been amended over 50 times since the passage of the original Act in 1968.) Section 5 of the Act (16 USC 1276) lists 91 potential additions to the National Wild and Scenic Rivers System.

You should obtain a topographic map of your site. Determine if your site falls into any of the Wild and Scenic Rivers Act designated areas in the National Wild and Scenic Rivers System or within a quarter

mile of any bank of a river listed as a potential addition to the National Wild and Scenic Rivers System.

DOE is obligated under § 10 of the Act to administer designated areas under its jurisdiction in the National Wild and Scenic Rivers System in such a way as to protect and enhance the values which caused the designated area to be included in the System without limiting public use and enjoyment. Under § 12 of the Act, DOE is obligated to eliminate or diminish water pollution in rivers in the System.

### **3.5 Role of Biological Resource Management Plans**

Some DOE sites have biological resource management plans in place. A biological resource management plan establishes site-wide policies regarding management of wetlands, habitats of endangered and threatened species, systematic biomonitoring, wildlife disease, big game, trespass livestock, forest, and wildfire. These plans can be used to identify locations of habitats of endangered and threatened species, environments of migratory birds, Wild and Scenic Rivers Act designated areas, and other environmentally sensitive natural resources.

### **3.6 Relationship to Environmental Baseline Survey**

Make sure that information gathered about natural resources on a facility also appears in an environmental baseline survey (see Chapter 12). Be aware that the American Standard for Testing and Materials (ASTM) E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process" and ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process," do not address natural resources at all. However, natural resources should be addressed because ESA applies to private as well as public properties. Violators who disturb critical habitats are subject to criminal sanctions under the provisions of the ESA. Likewise, persons (except Native Alaskans for subsistence purposes) who remove eggs or nests of migratory birds are also subject to criminal penalties under the Migratory

Bird Treaty Act regardless of whether the location is publicly or privately owned.

### **3.7 Relationship to NEPA Documents**

If natural resources are affected by a real property transfer, pertinent information on affected natural resources should appear in an EA or EIS if either NEPA document is required (see Chapter 13). As already mentioned in § 3.3.4, if an environmentally sensitive natural resource is adversely affected, an environmental assessment is the minimum level of NEPA review required. In addition, Section 7(c)(1) of the ESA provides that biological assessments may be undertaken as part of a NEPA review. Because of the jurisdiction and expertise of the U.S. Fish and Wildlife Service in matters of protecting endangered and threatened species and migratory birds, DOE may invite the Service to serve as a cooperating agency in the NEPA process. Finally, in preparing an EA or EIS, it might be helpful to refer to EPA's "Habitat Evaluation: Guidance for the Review of Environmental Impact Assessment Documents."

### **3.8 Leases, Other Outgrants, and Dispositions**

In general, real property containing habitats of endangered and threatened species, environments of migratory birds, and other environmentally sensitive natural resources should not be transferred unless (1) the new owner is another Federal agency, (2) the prospective use is compatible, or (3) the prospective use fulfills a compelling need. An example of a compatible prospective use is a wildlife refuge or wilderness area, either public or private. Compelling needs can be difficult to justify and must be decided on a case-by-case basis. Protection of national security, life, and safety could be compelling needs. Section 8 of the Wild and Scenic Rivers Act prohibits DOE from selling or disposing of Wild and Scenic Rivers Act designated areas.

### **3.9 Notice of Intention to Relinquish**

If the subject real property is withdrawn land being declared excess, include the information on the

### 3. Natural Resources

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following in the Notice of Intention to Relinquish (see § 1.6.2) to be submitted to the BLM:

- Habitats of endangered and threatened species on the property. Identify the listed and proposed species.
- Environments of migratory birds. Identify the species and their flyways.
- Wild and Scenic Rivers Act designated areas. Identify the boundaries.
- Other environmentally sensitive natural resources, such as pristine wilderness areas and special sources of water (e.g., sole-source aquifers and wellhead protection areas). Describe the resources and their boundaries.

#### 3.10 Checklist

- Has the U.S. Fish and Wildlife Service (and State fish and wildlife counterpart) been contacted for (1) a list of listed or proposed species that are endangered or threatened, (2) a list of critical and proposed critical habitats, and (3) a list of migratory birds with flyways in the area of the property?
- Has an informal consultation been held with the U.S. Fish and Wildlife Service (and State fish and wildlife counterpart) regarding the impacts of the real property transfer on listed or proposed species, critical or proposed critical habitats, and migratory bird environments in the area?
- Has an attempt been made to identify any portions of the property that may lie in Wild and Scenic Rivers Act designated areas?
- Has an attempt been made to identify any other environmentally sensitive natural resources on the real property?
- Has information about listed or proposed threatened or endangered species and their habitats, environments of migratory birds, Wild and Scenic Rivers Act designated

areas, and other environmentally sensitive natural resources been included in the environmental baseline survey?

- Has information about Federally-listed or -proposed species, State-listed species, and the habitats of threatened and endangered species; environments of migratory birds; Wild and Scenic Rivers Act designated areas; and other environmentally sensitive natural resources been included in an EA or EIS, if either document is required?
- Has information about Federally-listed or -proposed species, State-listed species, and the habitats of threatened and endangered species; environments of migratory birds; Wild and Scenic Rivers Act designated areas; and other environmentally sensitive natural resources been included in the Notice of Intention to Relinquish for excess property that is withdrawn land being returned to the public domain?
- Has consideration been given to excluding habitats of endangered and threatened species, environments of migratory birds, Wild and Scenic Rivers Act designated areas, and other environmentally sensitive natural resources from leases, other outgrants, sale, or other disposition of the real property (unless the use is compatible with protecting and preserving the natural resource)?
- If there are either (1) listed or proposed threatened or endangered species in the area or (2) listed or proposed critical habitats on the real property and the lessee or new owner is planning major construction activity, has the lessee or new owner been informed about the potential need for a biological assessment and a formal consultation with the U.S. Fish and Wildlife Service?

#### 3.11 References

ASTM, 1994. "Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process,"

American Society for Testing and Materials  
Standard E-1527-94, June 1994.

ASTM, 1993. "Standard Practice for  
Environmental Site Assessments: Transaction  
Screen Process," American Society for Testing  
and Materials Standard E-1528-93, May 1993.

Elphick, Jonathan, 1995. *Atlas of Bird Migration:  
Tracing the Great Journey of the World's Birds.*  
Random House, New York.

EPA, 1993. "Habitat Evaluation: Guidance for the  
Review of Environmental Impact Assessment  
Documents." U.S. Environmental Protection  
Agency, Office of Federal Activities, January  
1993.

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# 4. CULTURAL RESOURCES

## 4.1 Introduction

Cultural resources encompass the following four broad categories:

- Archeological materials (artifacts) and sites dating to the Prehistoric, Historic, and Ethnographic Periods that are found on the ground surface or are buried.
- Standing structures that are over 50 years of age or are important because they represent a major historic theme or era (e.g., Cold War technology).
- Cultural and natural places, burial grounds, select natural resources, and sacred sites (rock formations, petroglyphs, pictographs, etc. that are fixed to the land) that have importance for American Indians, Native Alaskans, and Native Hawaiians.
- American folklife traditions and arts (e.g., Native American basketry and ceramics).

Of the above four categories, only two have relevance for real property transfers -- historic properties and sacred sites. Artifacts, sacred objects (such as masks, votive offerings, utensils, clothing, or materials used in a religious rite or ceremony), funerary objects, human remains, and other items that have been exhumed, unburied, or otherwise removed or freed from the ground are not considered part of real property and must be treated as personal property. Recordings of oral histories, folklore, and music must also be treated as personal property. The requirements in this guidance document pertain only to real property (see § 1.2.1). Artifacts that are still buried in the ground and collectively known as archeological sites are treated together with historic structures under the heading of historic properties. Fossils (i.e., paleontological artifacts) and fossiliferous sites are discussed later in § 4.10.

Cultural resources are considered environmentally sensitive resources along with floodplains/wetlands and natural resource habitats/ecosystems. The only difference between cultural resources and these

other environmentally sensitive resources is that cultural resources pertain to the human environment instead of the natural environment. Cultural resources are important because of the profound need to protect and preserve, as part of community life, the resources that remind us of our origins, give us a sense of direction, and serve as sources of inspiration. For further information and guidance, see the EH-412 Information Brief (DOE, 1993), *Management of Cultural Resources at Department of Energy Facilities* and the EH-412 memorandum (DOE, 1990) with the same title.

Of special significance is protection of cultural resources of Native Americans (American Indians, Native Alaskans, and Native Hawaiians). The Federal government is committed to a "Government-to-Government Relation" with Indian tribes, Native Alaskan villages, and Native Hawaiian organizations (see Executive Memorandum for Heads of Executive Departments and Agencies in 59 FR 22951 of May 4, 1994). Of particular importance are cultural resources that still serve a vital, day-to-day function in the traditional religious rites and ceremonies practiced by Native Americans. The term sacred site is used to refer to (1) habitats of sacred plants and animals and (2) places of Native American rites, ceremonies, and religious practices. Secular plant and animal resources that are vital to the subsistence of or used as medicine by Native Americans are generally regarded as socioeconomic resources and are addressed in Chapter 4. Regardless of whether they are Native traditional subsistence use areas, areas that are protected by treaty are not covered in this guidance document because the treaties are considered legally binding encumbrances (see glossary).

## 4.2 Drivers for the Requirements

A combination of two statutes and one Presidential Executive Order (E.O.) protects cultural resources with respect to transfers of Federal property. The National Historic Preservation Act (NHPA) is the most powerful of all of these (see EH-412 information brief, *National Historic Preservation Act*). The American Indian Religious Freedom Act protects sacred objects, sacred sites, and religious

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ceremonies. Sacred sites are further protected by E.O. 13007, "Indian Sacred Sites" issued May 24, 1996.

GSA regulations at 41 CFR 47.202-2(b)(8) reiterate the requirements of NHPA and mandate the reporting of impacts of real property transfer on historic properties. DOE Order 1230.2, "American Indian Tribal Government Policy," prescribes DOE procedures to implement the American Indian Religious Freedom Act as well as Federal policies, laws, treaty obligations, and DOE's responsibilities as a Federal agency to ensure that tribal rights and interests are identified and considered in pertinent decisionmaking. In addition, information on historic properties and sacred sites should be reported in the Notice of Intention to Relinquish for submission to BLM pursuant to 43 CFR 2372.1.

GSA regulations at 41 CFR 47.202-2(b)(5) require that the status of civil and criminal jurisdiction over the land be reported in Standard Form 118. Because the Archeological Resources Protection Act gives DOE civil and criminal jurisdiction with respect to archeological resources on its lands, the status of DOE as a Federal land manager and the consequences of loss of Federal ownership in real property transfers must be reported in Standard Form 118 (also see § 4.9 and § 4.10).

### 4.3 Requirements in Real Property Transfers

Section 106 of NHPA requires Federal agencies to determine the impact of any undertaking (including real property transfers) on historic properties. Historic properties are buildings, structures, sites, or archeological resources already on or eligible for inclusion on the National Register of Historic Places (NRHP). The Section 106 process is implemented by the Advisory Council on Historic Preservation regulations at 36 CFR Part 800. An EH-412 memorandum (DOE, 1994), "Cultural Resources and Future Land Use Options," calls attention to Section 110 of NHPA. Section 110(a)(2) of NHPA requires Federal agencies to "exercise caution to assure that any such property that might qualify for inclusion is not inadvertently **transferred, sold** [emphases added], demolished, substantially altered, or allowed to deteriorate significantly."

Attachment 1 of DOE Order 1230.2, "DOE American Indian Policy," requires DOE field elements to consult with potentially affected Tribes concerning impacts of proposed DOE actions (including real property transfers), and to avoid unnecessary interference with traditional religious practices. E.O. 13007 dictates that all Federal agencies (1) accommodate access to and ceremonial use of sacred sites by Native American religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites.

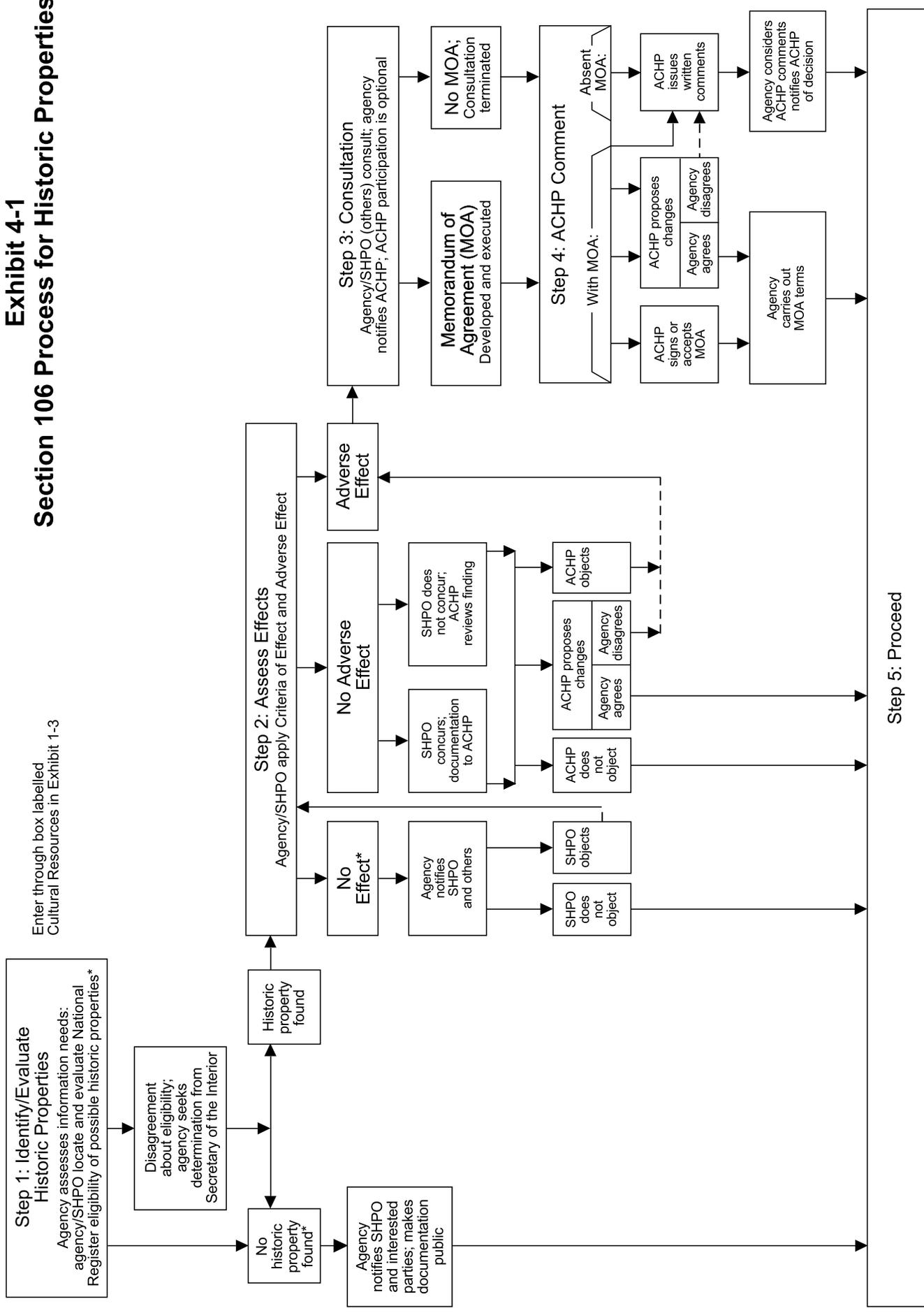
### 4.4 Implementation of the Requirements

The first step in implementing the requirements is to identify all possible historic properties and sacred sites on the land. This step may have already been accomplished in a cultural resource management plan, a site-wide environmental impact statement, a *Technical Site Information* document, or through a combination of surveys and studies. Data gathering is discussed in § 4.4.1. The second step is to assess the impact of a transfer of property on each of the two types of cultural resources. Assessment of impacts is discussed in § 4.4.2. Implementation of the Section 106 process of NHPA is depicted in Exhibit 4-1.

#### 4.4.1 Sources of Records on Cultural Resources

A complex-wide memorandum, "Management of Cultural Resources at Department of Energy Facilities," was issued February 23, 1990. Your DOE site should have prepared, at that time, a cultural resource management plan that responds to statutory mandates and regulations protecting and preserving cultural resources. If your site does not fall under the jurisdiction of any cultural resource management statute, it is not required to have such a plan if an explanatory letter has been transmitted to the DOE Federal Preservation Officer (EH-412). These plans are required under Section 101(f) of the NHPA; an individual plan should be developed to supplement the master plan for each specific unit of land. These plans should be prepared in accordance with *Environmental Guidelines for Development*

# Exhibit 4-1 Section 106 Process for Historic Properties



Enter through box labelled Cultural Resources in Exhibit 1-3

\*Public may request Council review of agency's findings at these points.

(Source: Working with Section 106 by ACHP and NPS)

Exit through box labelled Cultural Resources in Exhibit 1-3

## 4. Cultural Resources

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of *Cultural Resource Management Plans* issued by EH-412 in August 1995. A properly executed cultural resource management plan should include a survey for historic properties (indicating which properties are NRHP-listed or NRHP-eligible), burial grounds, sacred sites, areas protected by Indian treaties, and other cultural resources.

A second source of information about cultural resources on a site is a site-wide environmental impact statement (SWEIS) for continued operation of a facility. SWEISs are required under the National Environmental Policy Act implemented via DOE regulations at 10 CFR Part 1021. Although a SWEIS should discuss all the cultural resources that potentially could be affected by site operations, it is intended to provide neither a complete inventory nor a detailed description of all cultural resources on the property.

In the event that no inventory records are available on cultural resources at a site, you must conduct a combination of surveys and studies. Be sure that a survey is conducted to show which land parcels are disturbed and which are undisturbed. On parcels of disturbed or improved land, a further survey is needed to identify historic properties (both NRHP-listed and NRHP-eligible). On parcels with undisturbed land, a further survey is needed to identify buried archeological artifacts and Native American human remains and funerary objects. These surveys can be performed either by in-house experts or by a contractor archeologist. The archeologist should meet the Secretary of Interior's Professional Qualifications Standards (National Park Service, 1984). Have the surveys reviewed by the appropriate State Historic Preservation Officer.

As far as Native American sacred sites are concerned, retain a professional anthropologist to conduct a study. A professional anthropologist is necessary because specialized knowledge is required in ascertaining information about tribes that may have formerly occupied the land and have migrated elsewhere (see text box).

### 4.4.2 Assessment of Impact on Historic Properties

If you find cultural resources, then you must assess the effect of transferring the property on each cultural resource. For historic properties, the

#### A Professional Anthropological Survey

An example of a professional anthropological study of Native American sacred sites is found in the "American Indian Religious Freedom Act (AIRFA) Compliance at the Savannah River Site" (DOE, 1991). The study includes an inventory of plants used in religious ceremonies. Consultation was conducted with a number of Tribes no longer residing near Savannah River. For example, the Muskogee Creeks that once occupied the Savannah River Site vicinity were expelled by the Indian Removal Act of 1830 to Oklahoma. The consultation noted that although the Muskogees still continue their native religious traditions, they no longer have an interest in the Central Savannah River Valley. However, the Yuchis, also involuntarily removed to Oklahoma from the Central Savannah River Valley, indicated through consultation an interest in any DOE impacts on (1) five sacred sites or (2) Yuchi access to two sacred plants (New Jersey Tea and Button Snakeroot).

Advisory Council on Historic Preservation (ACHP) requires you to apply "criteria of effect" to determine whether there will be an effect [36 CFR 800.9(a)], and if so, then you must apply "criteria of adverse effect" to determine whether the effect is harmful [36 CFR 800.9(b)]. The effect must be assessed concluding in "no effect," "no adverse effect," or "adverse effect." As a rule of thumb, if the care or treatment of a historic property does not change in the transfer of the property (regardless of whether there is a change in ownership or use), there is essentially no effect on the historic property. The State Historic Preservation Officer (SHPO) [see the EH-412 information brief, *State Historic Preservation Officers*] must review an assessment of "no effect" and "no adverse effect." The ACHP reviews any assessments involving either a "no adverse effect" or a dispute between the SHPO and DOE. If there is an adverse effect, you must consult with the SHPO, who may or may not require a memorandum of agreement between DOE and the SHPO concerning mitigation of the adverse effect. You must notify the ACHP, which may sign or accept the memorandum of agreement. If there is no memorandum of agreement, the ACHP may issue written comments. The Section 106 process is usually integrated with the NEPA process where appropriate (see Section 4.6). At this time, ACHP

is revising the rules for protecting historic properties.

#### **4.4.3 Assessment of Impact on Sacred Sites**

The American Religious Freedom Act, Archaeological Resources Protection Act, Native American Graves Protection and Repatriation Act, and NHPA require DOE to consult with the potentially affected American Indian tribes, Native Alaskan villages, or Native Hawaiian organizations regarding the effect of the real property transfer on traditional religious rites and ceremonies. You should follow the protocol for consultation that should be established in a site-specific DOE-American Indian Tribal Government Policy Implementation Plan for your site, required under DOE Order 1230.2, § 7, ¶ f(2). In the event there is no such Plan for your site, follow the protocol for consultation in DOE Order 1230.2, § 7, ¶ f(5) & (6). In the consultation, you should present the results of any study identifying sacred sites and inquire if there are any other burial grounds, sacred sites, or ceremonies that should be protected. The Act requires that you use the consultation information to determine the appropriate measures to protect and preserve Native American religious rights and practices.

While the American Indian Religious Freedom Act does not require explicitly that DOE conform to the wishes of any American Indian tribe, Native Alaskan village, or Native Hawaiian organization, E.O. 13007 does impose certain obligations on DOE regarding sacred sites. These obligations are as follows:

- Accommodate, to the extent practicable and as allowed by law, access to and ceremonial use of Indian sacred sites by religious practitioners.
- Avoid affecting the physical integrity of such sacred sites.
- Maintain the confidentiality of such sacred sites.

In respect for Native Americans, the confidentiality of identity and locations of sacred sites, names of traditional native religious leaders, and practices associated with religious rites and ceremonies

should also be maintained. The same procedure for confidentiality given in the Archaeological Resources Protection Act § 9 should be followed. Implementation of the requirements for protecting and preserving sacred sites is summarized in Exhibit 4-2.

#### **4.5 Relationship to Environmental Baseline Survey**

Information gathered about cultural resources should also appear in an environmental baseline survey (see Chapter 12). Be aware that the ASTM E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process" and ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," treat cultural resources as "non-scope" considerations. Cultural resources are non-scope considerations because the focus of the ASTM Standards is on commercial real estate. NHPA and E.O. 13007 apply only to Federal actions and agencies, respectively, and do not apply to private parties.

#### **4.6 Relationship to NEPA Documents**

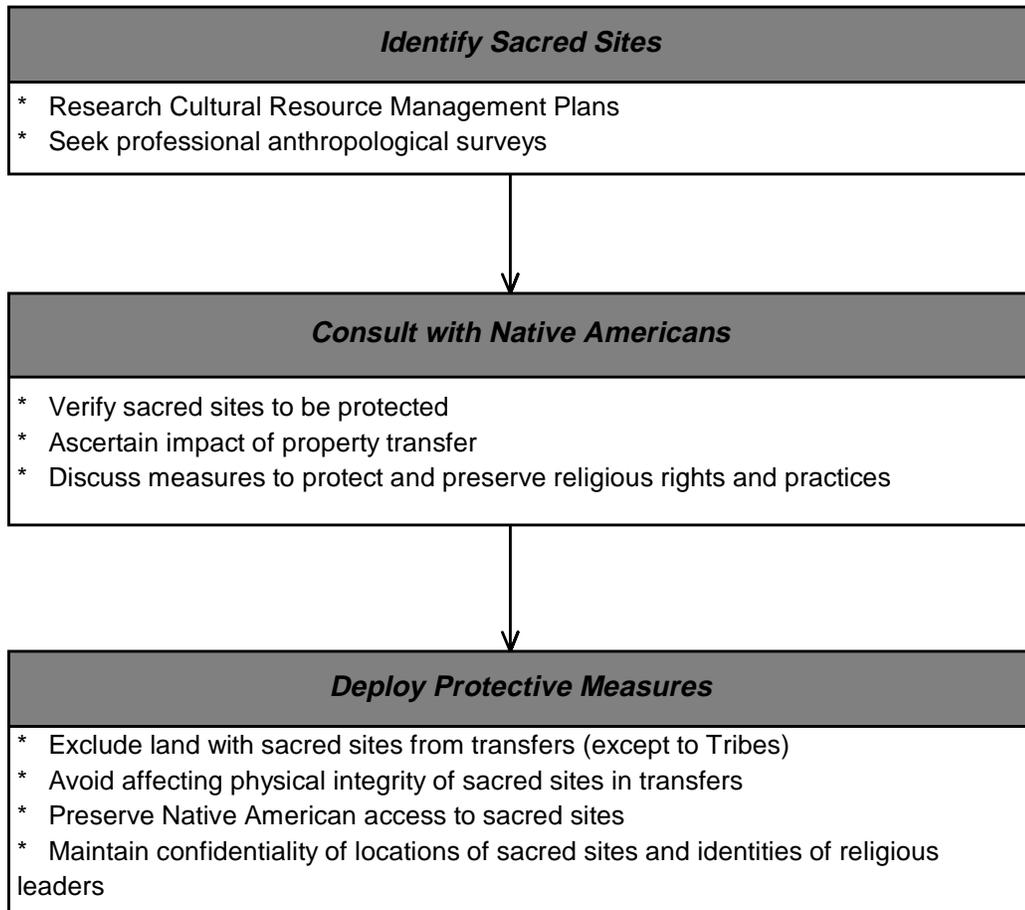
ACHP regulations at 36 CFR 800.14 encourage Federal agencies to coordinate the Section 106 process with environmental review processes, such as those established by NEPA. Similarly, the CEQ regulations implementing NEPA require that NEPA documents be prepared concurrently and integrated with other environmental reviews to the fullest extent possible (40 CFR 1502.25). You should prepare the (1) identification of historic properties and sacred sites and (2) assessment of impacts on historic properties and sacred sites and include both (1) and (2) in an environmental assessment or environmental impact statement (see Chapter 13). The discussion should be commensurate with the significance of the impacts.

#### **4.7 Leases and Other Outgrants**

##### **4.7.1 Leases of Historic Buildings**

While most environmental requirements restrict the use of environmentally sensitive resources, § 110 of the NHPA is unusual in encouraging the use of

## Exhibit 4-2 Implementation of Requirements for Sacred Sites



historic buildings, to the maximum extent feasible. Section 111(a) of NHPA authorizes DOE to lease or exchange historic buildings, after consultation with the ACHP. Thus, lease of space in DOE historic buildings is fettered only by the need to ensure that the (1) use by the lessee does not cause deterioration and (2) treatment of the buildings is consistent with the *Secretary's Standards and Guidelines for Historic Preservation Projects*. The National Park Service published *Section 110 Guidelines: Annotated Guidelines for Federal Agency Responsibilities under Section 110 of the National Historic Preservation Act*, covering leases of historic buildings at 53 FR 4727 on February 17, 1988.

DOE may retain the proceeds from the lease of a DOE-owned historic building for defraying the costs of administering, maintaining, reporting, and preserving the building. However, DOE must deposit surplus leasing proceeds with the U.S. Treasury.

A proposed rulemaking by ACHP may affect leases, sales, and other transfers of property.

#### **4.7.2 Outgrants Involving Other Cultural Resources**

You should exclude any archeological sites, burial grounds, sacred sites, and access routes to sacred sites from an outgrant (easement, lease, license, or permit) of real property. If there is a compelling reason to include any of the aforementioned parcels of land in an outgrant, you should explicitly impose in the conveyance specific restrictions on land use, disturbances, and improvements so as to protect and preserve cultural resources. In addition, cite the cultural resource management laws that protect such resources and provide for compliance by prospective lessees. For example, you might stipulate that data recovery be conducted by an archeologist before commencing an excavation to fulfill a memorandum of agreement with a SHPO. In all outgrants of undisturbed land which might be excavated, it is highly recommended that you append to the conveyance a mandatory plan for addressing inadvertent discoveries of Native American human remains and funerary objects consistent with the Native American Graves Protection and Repatriation Act.

#### **4.8 Notice of Intention to Relinquish**

If the subject real property is withdrawn land being declared excess, include the following information regarding historic properties and sacred sites in the Notice of Intention to Relinquish (see § 1.6.2) to be submitted to the Bureau of Land Management:

- Inventory and description of NRHP-listed and NRHP-eligible properties, burial grounds, sacred sites, and access routes to sacred sites.
- Changes or disturbances to any NRHP-listed and NRHP-eligible properties, burial grounds, sacred sites, and access routes to sacred sites.
- Terms and conditions necessary to be incorporated in any further disposition of the land to protect NRHP-listed and NRHP-eligible properties, burial grounds, sacred sites, and access routes to sacred sites. (Also, provide the names of the American Indian Tribes, Native Alaskan villages, or Native Hawaiian organizations who should be consulted regarding sacred sites.)

#### **4.9 GSA-Specific Requirement**

In the transfer of the real property being declared excess, a Standard Form 118 must be completed. As an attachment to the form, include information on historic properties identifying specifically (1) NRHP-eligible sites, (2) NRHP-listed sites, and (3) any public effort to have a property listed on the NRHP.

GSA regulations at 41 CFR 47.202-2(b)(5) require that the status of DOE civil and criminal jurisdiction over the land be reported in an attachment to Standard Form 118. If there are archeological artifacts, or Native American human remains or funerary objects buried on DOE land, the Archaeological Resources Protection Act makes DOE a Federal land manager. As a Federal land manager, DOE has civil and criminal jurisdiction over the protection of these items from looting, vandalism, or trafficking. Therefore, the status of DOE as a Federal land manager must be reported on this form. Furthermore, it is important to explain the consequence of loss of Federal ownership on this form. The major consequence of loss of

## 4. Cultural Resources

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Federal ownership would be the loss of Federal protection of these items because the Archaeological Resources Protection Act protects such items only if they are on Federal or Indian lands.

### 4.10 Disposal of Property with Cultural Resources

DOE property known to contain buried archeological artifacts, Native American human remains or funerary objects, or sacred sites should not be disposed of except for transfer to (1) another Federal agency, (2) an appropriate Indian tribe, (3) a prospective owner with a compatible use, or (4) a prospective owner with a compelling need. As previously mentioned, such items and sites are protected insofar as the land remains Federally owned. An example of disposal of property to prospective owners with compatible uses would be an archeological site to a museum. It is difficult to justify real property transfers on the basis of meeting a compelling need; disposals of such properties must be decided on a case-by-case basis. Compelling needs include those for the protection of national security, life, and safety.

DOE-owned historic property may be transferred for historic monument purposes.

Disposals of historic properties are discouraged because of the loss of Federal protection. However, disposals of historic properties may be carried out provided they are subjected to the Section 106 process as described in § 4.4.2. To show that a disposal has no adverse effect, the new owner would have to be committed to (1) protecting the property from deterioration and (2) treating the buildings in accordance with the *Secretary's Standards and Guidelines for Historic Preservation Projects* (see text box).

### 4.11 Checklist

- Have all cultural resources, including historic properties and burial grounds, sacred sites, and access routes to sacred sites, been identified? (If there are no cultural resources involved, stop here.)
- Have the impacts of real property transfer on all identified cultural resources been

#### The Secretary of Interior's Involvement in Transfers of Historic Properties

The Federal Property and Administrative Services Act of 1949, as amended, allows the transfer of surplus Federal government real property for historic monument purposes. The procedures for such a transfer are specified in 41 CFR 101-47.308-3. Under these regulations, the Secretary of the Interior determines whether the proposed use of a real property is compatible with its historic character and approves the architectural and financial plans for rehabilitation, restoration, and maintenance. The Secretary will adopt and approve the transferee's plans if the plans are the subject of a memorandum of agreement executed pursuant to 36 CFR Part 800. In the absence of a memorandum of agreement, the Secretary follows the procedures established in 41 CFR 101-47.308-3.

NHPA Section 110(e) allows the transfer of historic properties for other reasons when the plans of the transferee are reviewed and approved by the Secretary of the Interior. The Secretary's reviews under Section 110(e) are conducted in conjunction with the Advisory Council's review of the proposed real property transfer under NHPA Section 106.

assessed as described in § 4.4.2 and § 4.4.3?

- If burial grounds, sacred sites, and access routes to sacred sites have been identified on the property, have the potentially affected Indian tribes, Native Alaskan villages, and Native Hawaiian organizations been consulted?
- From the consultation, have the appropriate measures necessary to protect and preserve Native American religious rights and practices, the physical integrity of sacred sites, and access to such sites been determined?
- Have considerations been made, such as: (1) not transferring the real property; (2) excluding from the transfer archeological sites, burial grounds, sacred sites, and access routes to sacred sites; or (3) imposing restrictions so as to protect and preserve archeological sites or lands

with sacred sites, access routes to sacred sites, and the physical integrity of sacred sites?

- If the real property is being declared excess, have data on these historic properties, burial grounds, sacred sites, and access to sacred sites been included in the environmental site assessment or environmental baseline survey?
- If an environmental assessment or environmental impact statement is being prepared in association with a real property transfer, have data on these historic properties, burial grounds, sacred sites, and access to sacred sites been included?
- If historic buildings are offered for lease, license, or permit (see glossary), has there been consultation with the ACHP and have the appropriate restrictions been incorporated to protect the buildings in the conveyance?
- If the real property being declared excess is withdrawn land, have (1) data on historic properties, burial grounds, sacred sites, and access routes to sacred sites; (2) any changes or disturbances to these cultural resources; and (3) any terms and conditions deemed necessary to be incorporated in any further disposition of the land to protect these cultural resources been included in the Notice of Intention to Relinquish to be submitted to the Bureau of Land Management?
- If the real property being declared excess is acquired land or withdrawn land rejected by the Bureau of Land Management, have data on historic properties been included as an attachment to Standard Form 118?
- If the property is offered for sale, have the parcels with cultural resources been excluded from the sale? If there is compelling reason to include these resources in the sale, have sufficient restrictions been placed in the deed to protect and preserve historic properties,

burial grounds, sacred sites, and access routes to sacred sites?

- Have confidentiality provisions been attached to all data concerning burial grounds, sacred sites, and access routes to sacred sites as well as identities of Native traditional religious leaders?

#### 4.12 References

- ASTM, 1994. "Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process," American Society for Testing and Materials Standard E-1527-94, June 1994.
- ASTM, 1993. "Standard Practice for Environmental Site Assessments: Transaction Screen Process," American Society for Testing and Materials Standard E-1528-93, May 1993.
- DOE, 1995. *Environmental Guidelines for Development of Cultural Resource Management Plans*, DOE/EH-0501, U.S. Department of Energy, Office of Environmental Policy and Assistance, Air, Water, and Radiation Division, EH-412, August 1995.
- DOE, 1993. *State Historic Preservation Officers*, EH-232-0007/1193, Cultural Resources Management Information Brief, U.S. Department of Energy, Office of Environmental Guidance, Air, Water, and Radiation Division, EH-412, November 1993.
- DOE, 1993. *Management of Cultural Resources at Department of Energy Facilities*, EH-232-0005/0893, Cultural Resources Management Information Brief, U.S. Department of Energy, Office of Environmental Guidance, Air, Water, and Radiation Division, EH-412, August 1993.
- DOE, 1992. *National Historic Preservation Act*, EH-232-002/0692, Cultural Resources Management Information Brief, Office of Environmental Guidance, U.S. Department of Energy, Air, Water, and Radiation Division, EH-412, June 1992.

#### 4. Cultural Resources

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DOE, 1991. "American Indian Religious Freedom Act (AIRFA) Compliance at the Savannah River Site," U.S. Department of Energy, Savannah River Operations Office, Environmental Division, April 1991.

DOE, 1990. "Management of Cultural Resources at Department of Energy Facilities," EH-213 Memorandum, U.S. Department of Energy, Office of Environmental Guidance, Air, Water, and Radiation Division, EH-412, February 23, 1990.

National Park Service (NPS), 1984. *Professional Qualifications Standards*, 36 CFR Part 61, Appendix A.

National Park Service (NPS), 1983. *Secretary's Standards and Guidelines for Historic Preservation Projects*, U.S. Department of the Interior, National Park Service, Interagency Resources Division, September 29, 1983.

# 5. SOCIOECONOMIC IMPACTS

## 5.1 Introduction

Cultural resources, as one aspect of the human environment, are considered in the previous chapter. Another aspect of the human environment is socioeconomic impact. DOE real property transfers may not be considered in isolation from termination of DOE operations and the socioeconomic consequences of that termination. The socioeconomic consequences can be dire on a personal level. For workers, it means the loss of jobs and possible retraining or relocation. Also affected are Native Americans who may have been using DOE lands for subsistence fishing, hunting, or gathering and may be forced into other ways of survival if such lands are no longer available. Socioeconomic impacts also include effects on local economies that may depend in whole or in part on DOE site activities and workers.

Before transfer of DOE real property may take place, an analysis and mitigation of socioeconomic impacts, as well as a cost-benefit analysis of the proposed real property transfer, may be required. Two DOE Orders and the National Defense Authorization Act of 1993 mandate various measures designed to cushion the impact on DOE and DOE-contractor employees of reconfiguring DOE's nuclear weapons facilities in the aftermath of the Cold War. Any mitigation measures proposed to reduce adverse socioeconomic impacts should be included in a NEPA document prepared for the proposed real property transfer.

## 5.2 Drivers for the Requirement

The requirements for covering socioeconomic impacts are contained in DOE Orders 4300.1C, "Real Property Management," and 4330.5, "Surplus Facility Transfer;" (both to be subsumed by DOE Order 430.1 in accordance with the schedule in §2 of DOE Order 430.1); Executive Order 12898, "Environmental Justice in Minority Populations and Low-Income Populations;" and Public Law 102-484, The National Defense Authorization Act of 1993.

## 5.3 Requirements in Real Property Transfers

Although DOE Order 4300.1C (to be subsumed by DOE Order 430.1 in accordance with the schedule in §2 of DOE Order 430.1) mandates that DOE sites address the following items in a real property transfer, the consideration of these items may be required by a NEPA review:

- Number of personnel affected;
- Detailed estimate of one-time closing and other costs and of recurring annual savings, including a breakdown of operational and maintenance cost savings; and
- Disposition of, and impact upon, tenants of the installation.

DOE Order 4330.5 (to be subsumed by DOE Order 430.1 in accordance with the schedule in §2 of DOE Order 430.1) requires a Human Resources Plan that covers the following:

- Federal and contractor personnel impacts;
- The need to retain critical skills; and
- Funding necessary to meet socioeconomic challenges.

In addition, DOE and DOE-contractor personnel associated with the facilities to be transferred must be identified.

Executive Order 12898, "Environmental Justice," mandates that Federal agencies ensure that the impacts of their actions do not adversely affect minority and low-income populations any more than they adversely affect the majority population. DOE has a strategy for implementing Executive Order 12898 (see DOE, 1995).

Section 3161 of the National Defense Authorization Act of 1993 (Section 3161 is called the Department of Energy Defense Nuclear Facilities Work Force

## 5. Socioeconomic Impacts

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Restructuring Plan) requires various measures designed to minimize the social and economic impacts associated with reconfiguration of the DOE nuclear weapons complex, a category that includes most real property likely to be declared excess and transferred from DOE control. Specifically, Section 3161 mandates that DOE shall execute the following actions when it closes a nuclear weapons facility:

- Notify all affected DOE and DOE-contractor employees no less than 120 days prior to carrying out work force changes;
- Implement work force changes that maximize the use of retraining, early retirement, attrition, and other options that minimize layoffs;
- Assign hiring preferences to terminated employees;
- Retrain affected DOE and DOE-contractor employees, to the extent practicable, in environmental restoration and waste management at DOE facilities;
- Assist transferred employees in relocation;
- Offer assistance to terminated employees in the form of retraining, education, and in employment placement; and
- Provide local-impact assistance to communities affected by restructuring.

### 5.4 Implementation of Requirements

In general, DOE must take three actions to comply with all of the preceding mandates or considerations:

- (1) Address socioeconomic impacts in such a way so as to affirm the principle of environmental justice;
- (2) Mitigate socioeconomic impacts on DOE and DOE-contractor personnel; and

- (3) Perform a cost-benefit analysis of the proposed real property transfer.

These requirements are described in detail below. Some of the information needed to meet these requirements may already exist in the site's *Technical Site Information* or NEPA documents.

#### 5.4.1 Environmental Justice

DOE must consider, as a matter of environmental justice, the impacts of a real property transfer on minority and low-income populations. Native Americans are considered a minority and low-income population.

A number of Native Americans rely on traditional subsistence use areas for their livelihoods. In other words, these Native Americans depend on fishing, hunting, and gathering on certain DOE (or other Federal) lands for their survival. The socioeconomic dependence of Native American livelihoods on these traditional subsistence use areas is as crucial as the dependence of DOE and DOE-contractor personnel livelihoods on jobs at DOE sites. Applying the principle of environmental justice requires that DOE be just as concerned about the impacts of closure and real property transfer on Native American traditional subsistence use areas as it is about the impacts on the rest of the population. Moreover, DOE Order 1230.2 requires DOE to consult with affected tribes concerning these impacts.

Native American traditional subsistence use areas should be considered environmentally-sensitive resources, not just because of Executive Order 12898, but also because of the trust relationship (see Cohen, 1982) that the Federal government holds with Native Americans.

Unless there is a compelling governmental interest in not doing so, DOE should lease or dispose of excess property in a manner that protects established Native American patterns of subsistence-oriented hunting and fishing. For example, whenever possible, exclude Native American traditional subsistence use areas from any real property transfer (except when the transfer is to a tribe).

### 5.4.2 Mitigation of Socioeconomic Impacts

There are three actions that are required to mitigate socioeconomic impacts:

- (1) Preparation of a Human Resources Plan,
- (2) Allocation of funding to address these impacts, and
- (3) Implementation of the Human Resources Plan.

First, prepare a Human Resources Plan that identifies DOE or DOE-contractor employees that would be affected by the real property transfer. In addition, address DOE's need to retain personnel with critical skills. Identify any critical skills among the affected employees and propose appropriate measures to retain those individuals in the DOE or DOE-contractor work force. Estimate the level of DOE resources necessary to retain those personnel and to mitigate the potentially adverse impacts of job transfers and reassignments, layoffs, and early retirements. Estimate funding needed for retraining, early retirement, relocation assistance, and employment placement, as well as for assistance to local communities that might be affected by the job disruptions.

Second, allocate adequate funding to address the socioeconomic impacts of layoffs and job transfers or reassignments. Be sure that the funding estimates and associated justifications are contained in the Human Resources Plan.

Third, implement the Human Resources Plan. Allow 120 days to notify all DOE or DOE-contractor employees who will be affected by layoffs or job transfers/reassignments (for nuclear weapons facilities only). Incorporate work force (at nuclear weapons facilities only) changes that maximize the use of retraining, early retirement, attrition, and other options that minimize layoffs. For those employees that are terminated (at nuclear weapons facilities only), make available retraining, education, and employment placement services and ensure hiring preferences for other DOE jobs. With regard to workers (from nuclear weapons facilities only), this effort should (to the extent practicable)

emphasize retraining in environmental restoration and waste management at DOE facilities.

### 5.4.3 Cost-Benefit Analysis

After preparing a Human Resources Plan and estimating the costs associated with mitigating socioeconomic impacts, conduct a cost-benefit analysis for closing the property. In this analysis, compare the total one-time cost for closing the facility and preparing the real property transfer with the annual savings over a 20-year period that would be derived from the fact that DOE would no longer control the property.

With regard to the total one-time closing **cost**, incorporate the estimates of funding necessary to mitigate socioeconomic impacts contained in the Human Resources Plan (see Section 5.4.2 above). Include retraining and education, as well as employment placement services. Also include the cost of moving any personnel that might have to be transferred (e.g., relocation assistance, travel reimbursement, freight costs, assistance with home sales and purchases, etc.) The cost side of the cost-benefit calculation also should include unemployment compensation costs associated with any layoffs and the cost of construction or demolition activities necessary to transfer the property. Finally, calculate one-time costs (including specific items identified above) incurred by Federal government agencies (other than DOE) that are tenants on the property to be transferred (see text box on the following page).

On the **benefits** side, the analysis should estimate, over a 20-year time frame, the annual savings that would be derived from DOE relinquishing responsibility for the property. Include among these benefits overhead costs associated with real property maintenance, facility support, construction, environmental remediation or pollution prevention, and administration/planning. In addition, include the funding that would potentially be derived from sale or lease of the property in the benefits calculation. Finally, to facilitate comparison with the total one-time closing cost, calculate the estimated benefits over a 20-year period as a net present value (NPV) using a discount rate based on the U.S. Department of Treasury's borrowing rate.

## 5. Socioeconomic Impacts

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### 5.5 Notice of Intention to Relinquish

Native American traditional subsistence use areas on withdrawn land should be identified and reported as one of the 13 items (see § 1.6.2) in the Notice of Intention to Relinquish to be sent to the BLM.

### 5.6 Relationship to Environmental Baseline Survey

The results of the cost-benefit analysis and assessment of socioeconomic impacts may be included (but is not required) in any environmental baseline survey (see Chapter 12).

### 5.7 Relationship to NEPA Documents

Socioeconomic impacts, including impacts on the local community, must be addressed in a NEPA document prepared for a real property transfer (see Chapter 13). The impacts should be addressed in proportion to their significance. With respect to both EAs and EISs, 40 CFR 1508.8 mandates consideration of various "effects" that may include "effects related to induced changes in the pattern of land use, population density..." Relevant factors also include "social" or "economic" effects, whether direct, indirect, or induced. Summarize or reference the cost-benefit analysis (§ 5.4.3) in the EA or EIS. In addition, the EA or EIS should discuss the relationship between the quantified factors in cost-benefit analysis and unquantified environmental impacts, values, and amenities.

Native American traditional subsistence use areas should be identified and reported in any EA or EIS under the topic of socioeconomic, environmental justice, or Native American issues.

### 5.8 Checklist

- Has the real property been used by Native Americans for subsistence consumption of fish or wildlife? If so, have the parcels identified as Native traditional subsistence use areas been set aside for continuation of such use and excluded from any real property transfer?

- Has a Human Resources Plan been prepared as described in § 5.4.2?
- Has a cost-benefit analysis been conducted that compares the total one-time closing cost with recurring, annual savings over a 20-year time frame?

### 5.9 References

Cohen, F., 1982. *Cohen's Handbook of Federal Indian Law*, The Michie Company, Charlottesville, VA, p. 225.

DOD, 1992. "Users Manual for the Cost of Base Realignment Actions (COBRA) Model," U.S. Department of Defense.

DOE, 1995. "U.S. Department of Energy Environmental Justice Strategy," U.S. Department of Energy, Office of Economic Impact and Diversity, April 1995.

#### Considering the Effect of Closure on a Tenant: Example of DOE as a Tenant

In 1995, the U.S. Air Force recommended the realignment of Kirtland Air Force Base (AFB), New Mexico. However, the General Accounting Office's (GAO) analysis did not support the Air Force's recommendation (GAO, 1995). GAO contended that certain substantial costs to operate existing facilities would be transferred to DOE, which has been a principal tenant at Kirtland.

While Kirtland's realignment would reduce the Air Force's operational overhead (including support which has been provided to DOE and its Sandia National Laboratory located on Kirtland), DOE's operational support cost would increase. DOE estimated that its operational support cost would exceed \$30 million per year in addition to the one-time cost of over \$60 million. Thus, while the Air Force might reap some savings, the Federal government would be unlikely to realize any substantial net savings.

It is important to consider the impact of a closure on tenants on Federal government property because closure may not result in substantial total net savings to the Federal government although substantial savings could result for the agency effecting the closure.

GAO, 1995. *Military Bases: Analysis of DoD's 1995 Process and Recommendations for Closure and Realignment*, GAO/NSTAD 95-133, U.S. General Accounting Office, Washington, D.C. April 14, 1995, pp. 44.

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# 6. HAZARDOUS SUBSTANCES, HAZARDOUS WASTES, AND PETROLEUM PRODUCTS

## 6.1 Introduction

In October 1992, Congress passed the Community Environmental Response Facilitation Act (CERFA) to amend CERCLA. The enactment was in response to the adverse effects of closing Federal facilities on the economies of local communities and, especially, to the delays in cleanup of contaminated property. The delays in cleanup were impeding the transfer of property for private development. The intent of CERFA is to facilitate economic development by requiring Federal agencies to identify uncontaminated parcels that could be separated from contaminated properties and transferred (sold or leased) quickly to the private sector. CERFA imposes several additional requirements. It adds petroleum products and their derivatives as contaminants or pollutants that must be considered. It prescribes a process for identifying uncontaminated parcels (discussed in Chapter 12). It requires EPA or the appropriate state to concur in the identification of uncontaminated parcels. It mandates notification to the appropriate state of a property at which closure will take place and for which a lease is being offered if hazardous substances and petroleum products were stored, released, or disposed.

## 6.2 Drivers for the Requirements

CERCLA § 120(h)(1) and (3), implemented via EPA regulations at 40 CFR Part 373, impose a reporting requirement for hazardous substances and certain hazardous wastes. GSA regulations at 41 CFR 101-47.202-2(b)(10) reiterate the CERCLA § 120(h)(1) and (3) requirements. BLM regulations at 43 CFR 2372.1 require reporting of the extent to which contamination has occurred and decontamination has taken or will take place. Conversely, CERCLA § 120(h)(4) requires identifying uncontaminated parcels of land. CERCLA § 120(h)(5) requires notification of the leasing of DOE real property which has been contaminated and where Government operations will cease.

## 6.3 Requirements in Real Property Transfers

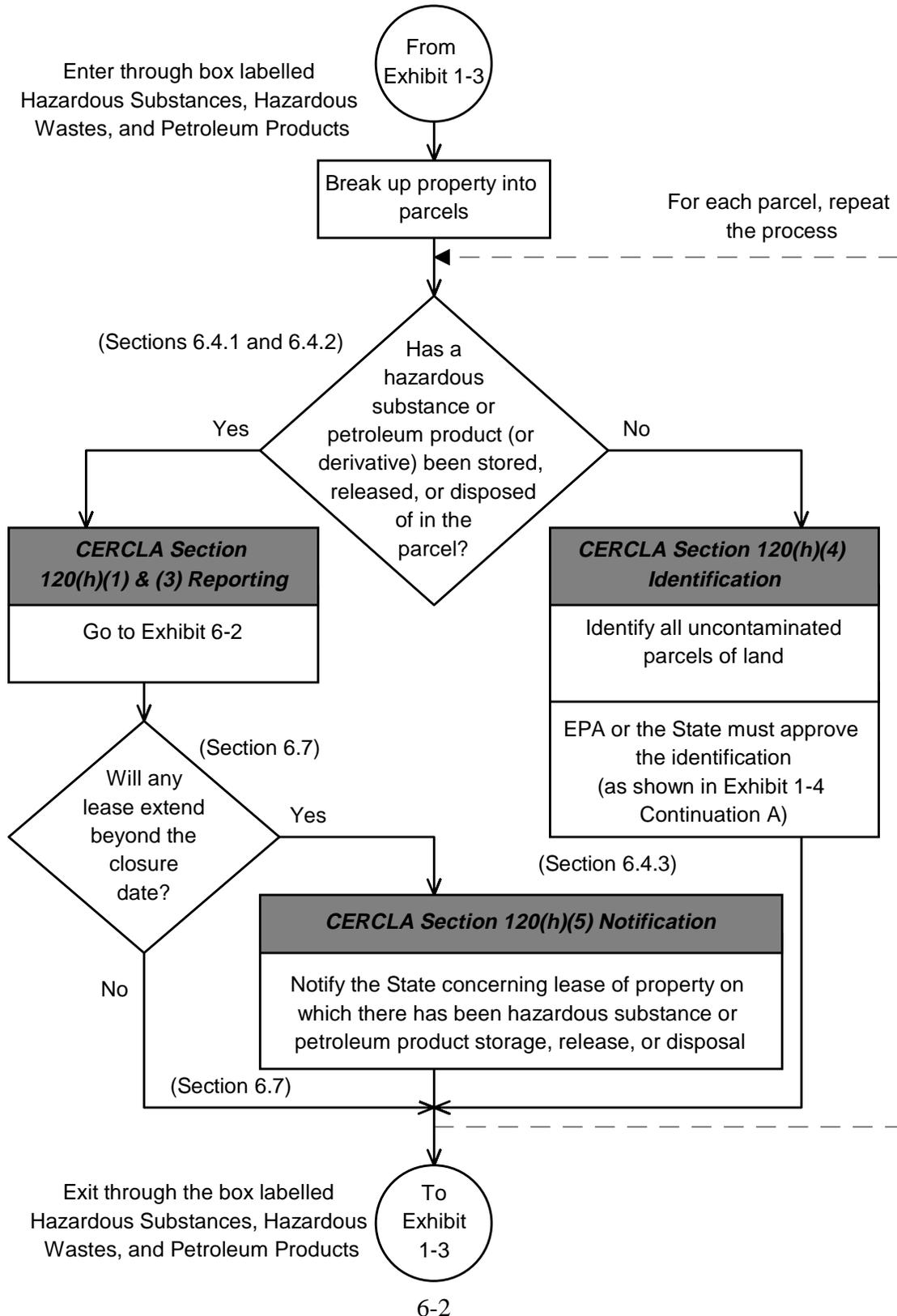
### 6.3.1 The Requirements

The overall procedures for meeting the CERCLA § 120(h)(1), (3), (4), and (5) requirements are depicted in Exhibit 6-1. Exhibit 6-2 shows the flow chart for the CERCLA § 120(h)(1) and (3) procedures. If 1,000 or more kilograms, or an amount equal to or greater than the reportable quantity (RQ), whichever is greater, of a hazardous substance (excluding petroleum products) was stored for one year or more, or if an amount equal to or more than the RQ was released or disposed on the property, CERCLA § 120(h)(1) and (3) require reporting of the information (see Exhibit 6-2). The CERCLA § 120(h)(1) and (3) reporting requirements are further discussed in § 6.9 and § 6.10 below. Note that the information to be reported for fulfilling CERCLA § 120(h)(1) and (3) need be complete only to the extent that it is available on the basis of a complete search of DOE files (40 CFR 373.1). Contamination of a property must be reported as well as any remedial action that has been, is being, or will be taken (see § 6.8, § 6.9, and § 6.10). Conversely, parcels of uncontaminated land must also be identified under CERCLA § 120(h)(4) (see § 6.4.3). CERCLA § 120(h)(5) requires DOE to notify states about the leasing of properties that are being closed and have been contaminated with hazardous substances or petroleum products or their derivatives.

### 6.3.2 Definitions and Their Implications

The term "hazardous substances," as used in this guidance document, is defined as any one of the substances listed in 40 CFR 302.4 (Table 302.4). In accordance with CERCLA § 101 (14), Table 302.4 is effectively a compilation of hazardous substances from multiple statutory sources, including: the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act (RCRA), and Toxic Substances Control Act. Because

# Exhibit 6-1 Procedures for CERCLA Section 120(h) Reporting





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## 6. Hazardous Substances, Hazardous Wastes, and Petroleum Products

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hazardous substances in the contexts of underground storage tanks, radioactive substances, PCBs, and asbestos have been singled out for special treatment by non-CERCLA requirements, these particular topics are specifically discussed in Chapters 7, 8, 9, and 10, respectively.

"Hazardous wastes" are a subset of hazardous substances regulated under RCRA and defined in the implementing regulations at 40 CFR 261 Subparts C and D. A hazardous waste is one that either exhibits a hazardous characteristic (Subpart C) or is listed (Subpart D). Facilities that treat, store, or dispose of hazardous waste (and meet other waste volume and accumulation time criteria) are subject to permitting requirements (40 CFR 270). The transfer of RCRA permits is discussed in Chapter 11. All listed hazardous wastes are designated as Hazardous Substances under CERCLA at 40 CFR 302.4 (Table 302.4), as are wastes that exhibit any of the characteristics listed in 40 CFR 261.20-24 [40 CFR 302.4(a) and (b)].

The term "petroleum products and their derivatives" is defined by neither CERCLA nor CERFA. However, a practical definition of the term can be adopted from the RCRA implementing regulations. Under the 40 CFR 280.12 definition for a regulated substance, the term is defined as "petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60° Fahrenheit and 14.7 pounds per square inch absolute)."

The term "contaminant" is defined at CERCLA § 101(33). In brief, it is a substance, which after release into the environment and upon direct or indirect exposure, threatens the safety or health of living organisms. *De minimis* levels and cleanup levels are not defined. Cleanup levels are, typically, risk-dependent. The amount of acceptable risk, in turn, depends on the future use of a site. However, cleanup levels, risk analysis, and planning of the future use of DOE sites are beyond the scope of this guidance document.

Although the term "storage" is defined in 40 CFR Part 373 (see glossary), an accounting problem arises in keeping track of the rotating inventories of hazardous substances. For example, consider a large capacity tank of methylene chloride that is always filled whenever it is 25% empty. It is

conceivable that enough of the original hazardous substance that was first placed into the tank may be retained for a year, thus triggering the storage quantity threshold. To resolve the potential confusion, it is suggested that if the total capacity of the tank (or a rotating inventory of a hazardous substance in a supply room) is equal to the greater of either 1,000 kilograms or the RQ of the hazardous substance, then the storage threshold should be considered triggered.

### 6.3.3 Possible Areas of Confusion

Four areas of possible confusion in fulfilling the CERCLA § 120(h)(1), (3), (4), and (5) requirements are identified and addressed below. These four are summarized in Exhibit 6-3. First, while CERCLA § 120(h)(1) and (3) excludes petroleum products, CERCLA § 120(h)(4) and (5) specifically include petroleum products. To resolve possible confusion, it is suggested that data gathering include petroleum products in all of the records searches. However, petroleum products may be omitted from reporting on SF 118 and the deed.

Second, while thresholds are specified by EPA regulation for the reporting requirements of CERCLA § 120(h)(1) and (3) for hazardous substances, no such thresholds are specified for the identification and reporting requirements in CERCLA § 120(h)(4) and (5). The thresholds for the reporting requirements of CERCLA § 120(h)(1) and (3) for hazardous substances are specified by EPA at 40 CFR Part 373. EPA has no analogous implementing regulations for CERCLA § 120(h)(4) and (5). EPA has provided limited guidance in implementing CERCLA § 120(h)(4) (see EPA memorandum, "Military Base Closures: Guidance on EPA Concurrence in the Identification of Uncontaminated Parcels Under CERCLA § 120(h)(4)"). In this memorandum, EPA does not establish any threshold quantities but insists on a case-by-case determination of whether a parcel is uncontaminated. EPA's criterion is whether the storage, release, or disposal associated with past hazardous substance and petroleum product activities would be expected to pose a threat to human health or the environment. EPA suggests, "The decision-maker should apply best professional judgment based on the available information in

**Exhibit 6-3. Comparison of the CERCLA § 120(h)(1), (3), (4) and (5) Requirements**

Requirement	CERCLA § 120(h)(1)	CERCLA § 120(h)(3)	CERCLA § 120(h)(4)	CERCLA § 120(h)(5)
Brief Description	Include in the contract for sale or transfer, a notice of the types and quantities of hazardous substances stored $\geq$ 1 year, released, or disposed on the property and the time at which these activities took place.	Report on the deed the types and quantities of hazardous substances stored for $\geq$ 1 year, released, or disposed on the property and the time at which these activities took place.	Identification of uncontaminated parcels of land (i.e., land on which <b>no</b> contaminants were stored $\geq$ 1 year, released, or disposed of).	Notification to States of sites that are being closed and that are encumbered by a lease beyond the closure date and are contaminated (i.e., land on which contaminants were stored $\geq$ 1 year, released, or disposed of).
Contaminants Covered	Hazardous substances as found at 40 CFR 302.4 only.	Hazardous substances as found at 40 CFR 302.4 only.	Hazardous substances or petroleum product or its derivatives.	Hazardous substances or petroleum product or its derivatives.
Threshold Quantities	As specified by 40 CFR Part 373: the greater of 1,000 kg or the RQ for storage of $\geq$ 1 year; the RQ for release or disposal; and 1 kg for acutely hazardous waste.	As specified by 40 CFR Part 373: the greater of 1,000 kg or the RQ for storage of $\geq$ 1 year; the RQ for release or disposal; and 1 kg for acutely hazardous waste.	Not specified; the same thresholds specified by § 120(h)(1) & (3) are suggested. Also see § 6.3.3.	Not specified; the same thresholds specified by § 120(h)(1) & (3) are suggested. Also see § 6.3.3.
Information Source	Departmental files only; however, it is a best management practice to follow the most stringent data gathering requirements [found at § 120(h)(4)].	Departmental files only; however, it is a best management practice to follow the most stringent data gathering requirements [found at § 120(h)(4)].	Reasonably obtainable Federal, State, and local government records and other sources (interviews, physical inspection, sampling, and aerial photographs).	Not specified; however, it is a best management practice to follow the most stringent data gathering requirements [§ 120(h)(4)].
Types of Real Property Transfers Covered	All real property transfers regardless of whether ownership changes, including transfers between Federal agencies.	All real property transfers in which ownership changes, and transfers between Federal agencies.	Not specified.	Leases of real property after operations cease.

making determinations under CERCLA § 120(h)(4)." To provide some rough guidelines to resolve the confusion, it is strongly suggested that except for radioactive substances and asbestos-containing materials, the same thresholds that are specified for CERCLA § 120(h)(1) and (3) apply to CERCLA § 120(h)(4) and (5). For radioactive substances, the threshold quantities should be replaced by the RQ (see Chapter 8). For asbestos-

containing materials inside a building intended for human occupancy, the threshold quantities should be replaced by the presence of damage to asbestos-containing materials (see Chapter 10).

Third, while the information to meet CERCLA § 120(h)(1) and (3) requires a search of only DOE's files, the range of information sought to meet CERCLA § 120(h)(4) requirements must be

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## **6. Hazardous Substances, Hazardous Wastes, and Petroleum Products**

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extended to include reasonably obtainable Federal, State, and local government records. Gathering of data from other information sources such as interviews and aerial photographs is covered in Chapter 12. There is no statutory limit or guidance on sources of information from which DOE must gather data to fulfill the requirements of CERCLA § 120(h)(5) with respect to contaminated property for which DOE must provide notification to a state about leasing. To resolve the possible confusion, it is suggested that the most stringent data gathering requirement [imposed by CERCLA § 120(h)(4)] also be applied to fulfilling the requirements of CERCLA § 120(h)(1), (3), and (5) also.

Fourth, be aware that CERCLA § 120(h)(1) and (3), (4), and (5) apply to different scenarios relative to Federal real property transfers. Section § 120(h)(1) covers contracts for real property sales or transfers regardless of ownership changes (e.g., leases). Section 120(h)(3) covers real property transfers in which ownership changes, including transfers between Federal agencies (see 55 *FR* 14208). Section 120(h)(4) is independent of the type of real property transfer. Section 120(h)(5) applies to leases that are in effect beyond the termination of DOE operations at a site.

### **6.4 Data Gathering**

#### **6.4.1 Sources of Records**

You need to do a search of procurement records, delivery logs, U.S. Department of Transportation shipping manifests, inventory records, personal property transfer logs, and uniform hazardous waste manifests. Material Safety Data Sheets help to identify the types of hazardous substances but do not provide the information necessary to determine if the quantities stored exceed the thresholds. Because the thresholds for Superfund Amendments and Reauthorization Act § 311 and § 312 reporting (500 pounds for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals) are far higher than that for CERCLA § 120(h)(1) and (3), the § 311 and § 312 reports are of limited use. There are also records and reports that are required under RCRA that can be searched to obtain information; these include any RCRA permits, the operating records, unmanifested waste reports, and biennial reports. (The last two types of reports are on EPA Form 8700-13B.) In accordance with 40 CFR 264.73, the operating records of a

RCRA facility include a description and the quantity of each hazardous waste, the location of each hazardous waste, results of waste analyses and determinations, and inspection records.

You also need to do a records search for leaks, spills, or releases. Reports of releases of amounts equal to or greater than the RQ (see 40 CFR 302.4, Table 302.4) must be made to the National Response Center and to the DOE Headquarters Emergency Operations Center (DOE Order 232.1). You can search DOE Occurrence Notification Reports to uncover hazardous substance spills. If there was ever a leak or spill, there was probably contamination. Searches for groundwater monitoring reports, closure reports, site investigations (e.g., RCRA Facility Investigation and CERCLA Preliminary Assessment/Site Investigation), site characterizations, corrective action plans, cleanup actions, and removal actions would also indicate whether certain parcels had been or could be contaminated.

Lastly, DOE's Office of Field Management (FM-20) has developed a Facilities Information Management System (FIMS) database that will include information on hazardous materials on DOE-owned, DOE-leased, GSA-assigned, and contractor-leased land, buildings, trailers, and other structures. As of August 1997, FM-20 was still working with DOE's field elements to populate unclassified data for hazardous substances (including radioactive substances).

#### **6.4.2 Inspection**

Unfortunately, records may not be available. Even when available, they may not provide all the information necessary for you to know whether the property is or was contaminated. Therefore, it may be necessary for you to have a physical inspection conducted. The most common ways to treat, store, or dispose of hazardous waste are in units that include drums (and other types of containers), tank systems, surface impoundments, waste piles, land treatment units, landfills, incinerators, other thermal units, and underground injection wells. Unmarked drums and unidentified containers with fluids, sludges, or solids should be opened and their contents checked. Sampling and analysis will be necessary to identify the contents and the concentrations of the ingredients. As part of the

physical inspection, you should look for signs of contamination -- dead or dying vegetation, dead animals (or the absence of fauna), and stained soil and discolored ground covering. Analyze samples taken from stained soil and discolored ground covering. You should seek the services of an environmental professional if you have any concerns about overlooking signs of contamination.

#### **6.4.3 Identification of Contaminated and Uncontaminated Parcels**

You can use the results of the inspection to determine what parts of the property are contaminated and what parts are uncontaminated. You can use the results of both the physical inspection and records search (for releases) for the identification of parcels contaminated to satisfy BLM requirements (see § 6.8). Inversely, the identification of uncontaminated parcels can be used to satisfy the CERCLA § 120(h)(4) requirements for DOE facilities being closed (see Exhibit 6-1). The identification of parcels of uncontaminated land is subject to concurrence by EPA for sites on the National Priorities List or by the appropriate state for all other sites.

EPA's ability to concur with the identification of uncontaminated parcels will depend on the information available concerning the current and historical uses of the parcel, the proximity of the parcel to sources of contamination requiring response actions, and the nature of the threat, if any, reasonably associated with the type of activity or contamination associated with the parcel (see EPA, 1994). EPA gives examples of three categories where it could concur on a parcel as being uncontaminated:

- (1) Housing areas where heating oil (a petroleum product) or household products (hazardous substances) have been stored, released, or disposed of, but there is no evidence of a threat to human health or the environment.
- (2) Stained pavement of roadways and parking lots where incidental releases of automotive fluids have occurred, but there is no evidence of a threat to human health or the environment.
- (3) Areas where there was licensed pesticide application, but there is no evidence of a threat to human health or the environment. (EPA may condition its concurrence on further information concerning the nature and quantities of pesticide or the results of sampling.)

#### **6.5 Relationship to Environmental Baseline Survey**

The information gathered about hazardous substances, hazardous wastes, and petroleum products on a facility should be included in an environmental baseline survey (see Chapter 12). You may conduct part of or the entire environmental baseline survey yourself. If you conduct your own environmental site assessment, it is recommended that you follow ASTM E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process." Alternatively, you may have an environmental professional, such as an environmental auditor, conduct the assessment in accordance with ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process."

#### **6.6 Relationship to NEPA Documents**

A NEPA document prepared for a proposed real property transfer should address the presence of any hazardous substances, hazardous wastes, and petroleum products. Examples of when these materials could be an issue include: (1) they are the subject of an enforcement, remediation, or removal action to be completed for the real property transfer; (2) there is a change in the risks or hazards when the property is transferred; or (3) the public or stakeholders express a concern about hazardous substances, hazardous wastes, or petroleum products. For example, if a facility which formerly stored flammable materials is proposed to be used for a homeless shelter, a discussion of how the hazard has been or will be removed should be included in associated NEPA documentation.

#### **6.7 Leases**

Because of complex legal issues involving real property law, EPA has not addressed the applicability of § 120(h)(1) to leases or easements

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## 6. Hazardous Substances, Hazardous Wastes, and Petroleum Products

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(55 FR 14209). However, as the result of a strict interpretation and as a best management practice, it is recommended that the same information EPA requires for contracts (see Section 6.10) be incorporated into lease or easement agreements.

CERCLA § 120(h)(5) requires you to notify the appropriate state official(s) of any lease of DOE real property on which a hazardous substance or petroleum product (or its derivatives) has been stored beyond one year, disposed of, or released if the lease encumbers the property beyond the date of termination of operations on the property. The notification must be made before entering into the lease and must include information on the length of the lease, name of the lessee(s), and the uses that will be allowed under the lease. (See Exhibit 6-1).

### 6.8 Notice of Intention to Relinquish

If the real property being declared excess is withdrawn land, the Notice of Intention to Relinquish (to be prepared and submitted to the Bureau of Land Management) must include any information on the extent of contamination and measures that have been taken or will be taken for decontamination. As explained in § 1.6.2, contamination is one of the 13 items that must be addressed, although there is no specific standard form for providing the information.

### 6.9 GSA-Specific Requirements

If 1,000 or more kilograms, or an amount equal to or greater than the RQ, whichever is greater, of a hazardous substance (see 40 CFR 302, Table 302.4) has been stored for one year or more, or if an amount equal to or more than the RQ of a hazardous substance has been disposed of, spilled, or otherwise released on DOE property (see Exhibit 6-2), this information needs to be reported to the extent that it is available on the basis of a complete search of DOE files (40 CFR 373.1). Also, report the dates on which hazardous substances were stored, released, or disposed of in excess of the quantity and time thresholds. In addition, report any remedial action necessary to protect human health and the environment that has been taken or will be completed. Attach the report of hazardous substance activity and of any remedial action to the Standard Form 118 (Appendix A) for the property. If no hazardous substance activity took place at the

property, then the following statement must be attached to SF 118:

*DOE has determined, in accordance with regulations issued by the Environmental Protection Agency at 40 CFR Part 373, that there is no evidence to indicate that hazardous substance activity took place on the property during the time the property was owned by the United States.*

Also, GSA requires that the disposal agency (itself or DOE, as the case may be) insert this information into the Invitation for Bids/Offer to Purchase as well as the following statements (as prescribed in 41 CFR 101-47.304-14):

#### **NOTICE REGARDING HAZARDOUS SUBSTANCE ACTIVITY:**

*The information contained in this notice is required under the authority of regulations promulgated under section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. section 9620(h).*

*The holding agency (i.e., DOE) advises that [provide information on the type and quantity of hazardous substances; the time at which storage, release, or disposal took place; and a description of the remedial action taken.]*

*All remedial action necessary to protect human health and the environment with respect to the hazardous substance activity during the time the property was owned by the United States has been taken. Any additional remedial action found to be necessary shall be conducted by the United States.*

In the case where the purchaser is a potentially responsible party with respect to hazardous substances, you must modify the above statement to represent the liability of the potentially responsible party for any remedial action.

### 6.10 Requirements for the Contract and Deed

If 1,000 or more kilograms, or an amount equal to or greater than the RQ, whichever is greater, of a hazardous substance (see 40 CFR 302, Table 302.4) has been stored (see glossary) for one year or more, or if an amount equal to or more than the RQ of a

## 6. Hazardous Substances, Hazardous Wastes, and Petroleum Products

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hazardous substance has been disposed of, spilled, or otherwise released on DOE property (see Exhibit 6-2), report the information on the contract (for sale, lease, or other transfer) and deed. Note that petroleum products are excluded. In particular, 40 CFR 373.3 and CERCLA § 120(h)(1) and (3) require you to report the following information on the contract (for sale, lease, or other transfer) and deed:

- (1) Name of the hazardous substance and its regulatory synonym; the Chemical Abstracts Service Registry Number; and the applicable RCRA hazardous waste number(s).
- (2) Quantity (in kilograms and pounds) of the hazardous substance (excluding petroleum products) stored for one year or more, or known to have been disposed of, spilled, or otherwise released on the property.
- (3) Dates on which the hazardous substance was stored, disposed of, or released.
- (4) Description of remedial action (if any). [This description is not required by 40 CFR Part 373 but by CERCLA § 120(h)(3)(A)(i)(III) to be put on the deed only.]
- (5) The following statement: "The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h)." [This statement is not required by CERCLA § 120(h)(1) or (3) but by 40 CFR 373.3 to be put on the contract (for sale, lease, or other transfer only).]

In addition, a covenant to the deed (not required for leases) must be attached if the property is not being transferred to a potentially responsible party with respect to the real property. The covenant must warrant the following pursuant to CERCLA § 120(h)(3)(A)(ii) and (iii):

- (1) *All remedial action necessary to protect human health and the environment from*

*hazardous substances remaining on the property has been taken before the date of the property transfer. (Note: all remedial action has been considered taken if the construction and installation of an approved remedial design has been completed, and the remedy has been demonstrated to EPA (or State) to be operating properly and successfully. The carrying out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to EPA (or State) to be operating properly and successfully does not preclude the property transfer.)*

- (2) *Any additional remedial action found to be necessary after the date of property transfer shall be conducted by the United States.*
- (3) *Permission granting the United States access to the real property in any case in which remedial or corrective action is found to be necessary after the property transfer.*

See § 14.3.4 for how paragraph (1) above of the covenant statement may be deferred under CERCLA § 120(h)(3)(C).

### 6.11 Checklist

- Have there been any hazardous substances, hazardous wastes, or petroleum products (or their derivatives) on the real property? (If not, stop here.)
- Have the data gathered on the real property concerning hazardous substances, hazardous wastes, and petroleum products (or their derivatives) been included in the environmental site assessment or environmental baseline survey?
- If hazardous substances, hazardous wastes, or petroleum products (or their derivatives) are an issue in an environmental assessment or environmental impact statement for a real property transfer, have the data gathered on the real property concerning hazardous substances,

## 6. Hazardous Substances, Hazardous Wastes, and Petroleum Products

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hazardous wastes, and petroleum products been included?

- If the real property is being offered for lease, have the appropriate State officials been notified as described in § 6.7?
- If the real property being declared excess is withdrawn land, have data on the extent of contamination and decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- Have the data gathered on the real property being declared as surplus concerning hazardous substances, hazardous wastes, and petroleum products been included in the Invitation for Bids/Offers described in § 6.9?
- Have the data gathered on the real property concerning hazardous substances, hazardous wastes, and petroleum products and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 6.10?
- If underground storage tanks could be present (or you are not sure), go to Chapter 7.
- If radioactive substances or contamination could be present (or you are not sure), go to Chapter 8.
- If polychlorinated biphenyls could be present (or you are not sure), go to Chapter 9.
- If asbestos could be present (or you are not sure), go to Chapter 10.

ASTM, 1993. "Standard Practice for Environmental Site Assessments: Transaction Screen Process," American Society for Testing and Materials E-1528-93 Standard, May 1993.

DOE, 1993. *RCRA and CERCLA Requirements Associated with the Sale or Transfer of DOE Property*, EH-231-022/1193, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, EH-413, November 1993.

EPA, 1994. "Military Base Closures: Guidance on EPA Concurrence in the Identification of Uncontaminated Parcels Under CERCLA § 120(h)(4)," Memorandum from Elliott P. Laws, Assistant Administrator, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response to Waste Management Directors (Regions I-X), Regional Counsels (Regions I-X), and the Federal Facilities Leadership Council, April 19, 1994.

### 6.12 References

ASTM, 1994. "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process," American Society for Testing and Materials E-1527-94 Standard, June 1993.

# 7. UNDERGROUND STORAGE TANKS (USTs)

## 7.1 Introduction

An underground storage tank (UST) is a tank or combination of tanks that is used to store a regulated substance (i.e., a petroleum product or a hazardous substance), the volume of which is 10% or more beneath the surface of the ground.

EH-41 has prepared a number of Information Briefs about USTs: *Identifying and Classifying an UST, Excluded USTs, Deferred USTs, Hazardous Substance USTs, and Petroleum USTs*. A comprehensive guidance document, *Regulated Underground Storage Tanks*, is also available (see references).

Leakage from USTs poses two types of dangers. First, an overwhelming number of USTs hold petroleum products which present fire and explosion hazards that threaten human safety. More insidious is the hidden danger of undetected groundwater contamination from USTs. For example, a leak of one gallon of gasoline can render a million gallons of groundwater unpotable because of a carcinogenic ingredient -- benzene. Because over half the population of the U.S. depends on groundwater as a source of drinking water, the direct threat of contamination posed by USTs became a focus for national concern.

It was this national concern that prompted Congress to take action in 1984. Senator Durenberger introduced an amendment to the Safe Drinking Water Act to mandate the EPA to set standards for new USTs. These standards later were expanded and incorporated into the Hazardous and Solid Waste Amendments (HSWA) of 1984. HSWA amends RCRA by adding Subtitle I for regulating USTs containing hazardous substances only. (Note that USTs storing hazardous waste are covered under Subtitle C of RCRA). Section 9007 in Subtitle I requires all Federal agencies, including DOE, to comply with UST regulations unless granted a Presidential exemption. In 1986, Congress passed the Superfund Amendments and Reauthorization Act significantly modifying Subtitle I by extending UST regulations to USTs containing petroleum products. In September 1988,

EPA promulgated regulations at 40 CFR Part 280. These regulations also cover EPA procedures for review and approval of State enforcement programs, which must be at least as stringent as Federal enforcement programs.

DOE site managers should expect to deal with local authorities on issues of real property transfers with respect to USTs. State and local requirements that go beyond Federal requirements will not be discussed in this document.

## 7.2 Drivers for the Requirements

There are several mandates that drive the need to comply with requirements with respect to USTs in real property transfers. If the contents of the USTs are hazardous substances, CERCLA § 120(h)(1) and (3) implemented via EPA regulations at 40 CFR Part 373 imposes a reporting requirement. GSA regulations at 41 CFR 101-47.202-2(b)(10) reiterate the CERCLA § 120(h)(1) and (3) requirement. If USTs cause contamination, BLM regulations at 43 CFR 2372.1 require reporting of the extent to which contamination has occurred and decontamination has taken or will take place. CERCLA § 120(h)(4) requires identification of uncontaminated parcels, and CERCLA § 120(h)(5) requires notification of states about leasing of contaminated or formerly contaminated land.

## 7.3 Requirements in Real Property Transfers

The overall procedures for meeting CERCLA § 120(h)(1), (3), (4), and (5) requirements are shown in Exhibit 6-1. The reader should refer to § 6.3 to be acquainted with the issues related to the types of contaminants, *de minimis* threshold quantities, and records searches.

If 1,000 or more kilograms, or an amount equal to or greater than the Reportable Quantity (RQ) (whichever is greater) of a hazardous substance (excluding petroleum products) from the USTs was stored for one or more years, or if an amount equal to or more than the RQ was released from or disposed of on the property, CERCLA §120(h)(1) and (3) requires reporting of the information (see

## 7. Underground Storage Tanks

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Exhibit 6-2). This reporting requirement is discussed further in § 7.11 below. The information to be reported need be complete only to the extent that it is available on the basis of a complete search of DOE files (40 CFR 373.1). If an amount equal to or greater than the RQ from an UST is released or disposed of on a property, the information must be reported as well as any remedial action that has been taken, is being taken, or will be taken. This reporting is discussed further in § 7.9 and § 7.11. Parcels of uncontaminated land must also be identified in accordance with CERCLA § 120(h)(4). The identification of uncontaminated parcels is further discussed in § 7.4.3. Notification of states about leasing of formerly contaminated land is discussed in § 7.8

### 7.4 Data Gathering

#### 7.4.1 Sources of Records on USTs

It is prudent to conduct a preliminary records search before a physical search for the presence of and inspection of USTs on the property. There are at least two types of records that you can examine to determine whether the property has USTs. Although some of these clues may seem redundant, there is no guarantee that an UST will always be found through these records. Neglect or compounding of errors may preclude an UST from being documented or reported. The objective of this records search is to determine the location, size, and current or former use of any UST.

First, find out if your facility has any records required by 40 CFR Part 280. Your facility must maintain certain records and recordkeeping practices for any UST (see text box).

Second, you may want to make an inquiry to the regulatory authority having jurisdiction over USTs in your State or local area. The regulatory authority should maintain records of all USTs in its jurisdiction. It should also maintain the Leaking Underground Storage Tank (LUST) list. The LUST list is a list of sites containing USTs identified as having leaked or potentially leaking their contents into the ground or groundwater; these sites may be involved in a cleanup program.

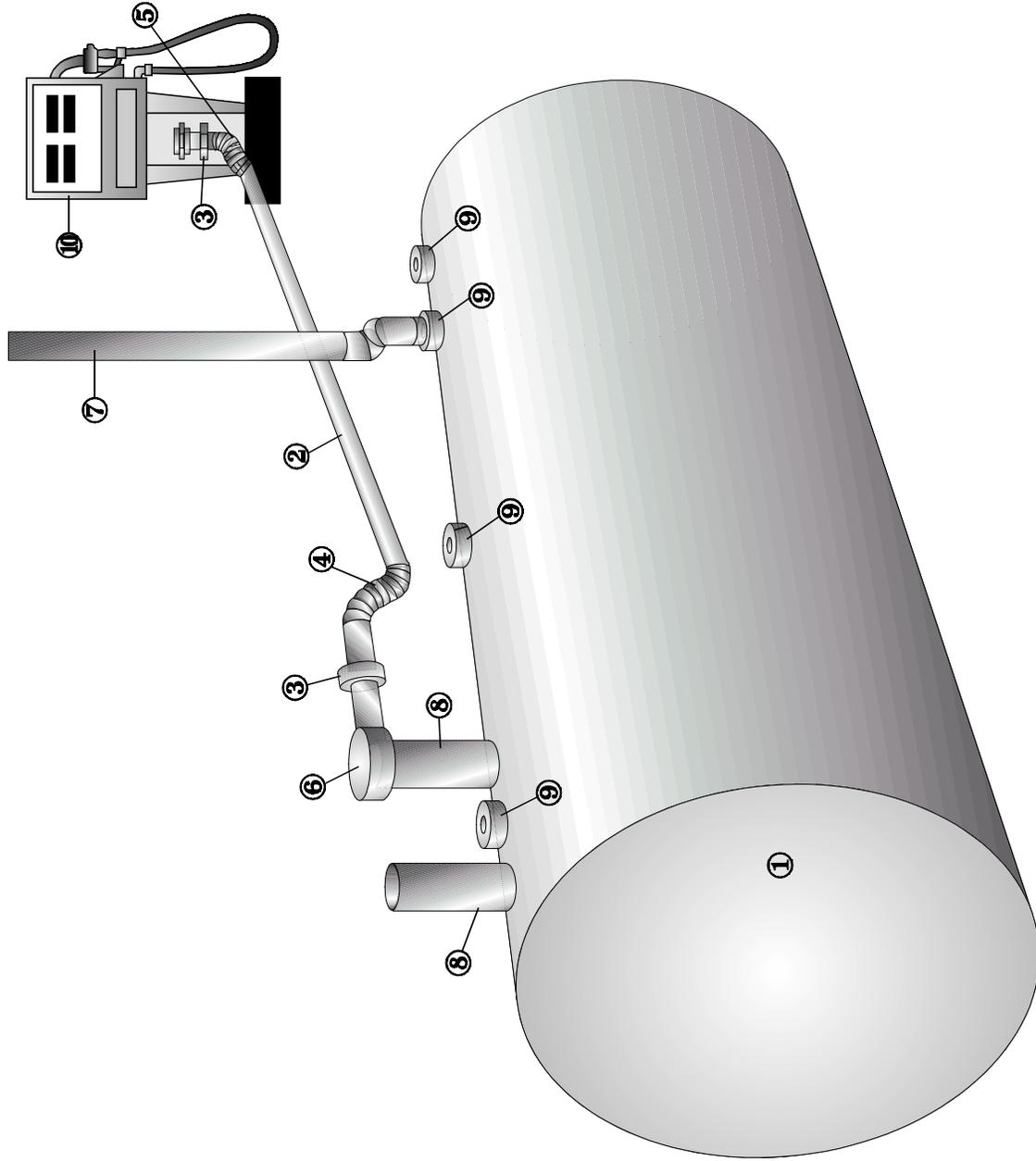
#### Required records and recordkeeping for USTs:

- Permits or licenses required for installation, operation, or closure of an UST
- A corrosion expert's analysis of an UST (40 CFR 280.20)
- Documentation of the operation of all UST corrosion protection equipment (40 CFR 280.31):
  - results of the last three inspections of impressed current cathodic protection systems
  - results of testing from the last two inspections by a qualified cathodic protection tester
- Documentation of all UST repairs [40 CFR 280.33(f)]
- Release detection requirement records (40 CFR 280.45):
  - written performance claims
  - results of sampling or testing
  - documentation of calibration and maintenance
- Closure records (40 CFR 280.74):
  - excavation zone assessment

#### 7.4.2 Inspection

Unfortunately, records may not be available or may not provide all the information necessary for you to know whether USTs are present. Thus, it is necessary to conduct a physical inspection. Clues to the locations of USTs are the presence of vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground (see Exhibit 7-1). Asphalt or concrete patching might indicate the possibility of the removal of an UST or associated pipes and vents. If possible, check any UST for erratic behavior in dispensing, sudden loss of product from the UST system, or an unexplained presence of water in the tank. It may be possible to see or smell the presence of free product or vapors in soils, basements, sewers, storm drains, utility

Exhibit 7-1  
 Typical UST System Assembly



- ① Tank
- ② Product Line Piping
- ③ Unions
- ④ Swing Joint
- ⑤ Flex Hose
- ⑥ Submerged Pump
- ⑦ Vent Line
- ⑧ Fill Pipe Riser
- ⑨ 4" Plug into Tank Bung
- ⑩ Dispensing Unit

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lines, manholes, or surface water near or surrounding an UST. Organic vapor monitors are available in the form of hydrogen flame ionization, photoionization, and metal oxide semi-conductor detectors. The use of an environmental professional with UST expertise is recommended.

### 7.4.3 Identification of Contaminated and Uncontaminated Parcels

To ascertain whether the property has ever been contaminated due to USTs, you need to do a records search for information relating to leaks, spills, and overfills. There is no Federal requirement to report releases of petroleum from USTs although the states may have reporting requirements. However, reports of releases of more than the RQ of a hazardous substance (see 40 CFR 302.4, Table 302.4 for the hazardous substance involved) must be made to the National Response Center and to the DOE Headquarters Emergency Operations Center (DOE Order O 232.1). You can search DOE Occurrence Notification Reports to uncover hazardous substance spills involving USTs. If there was ever a leak, spill, or overfill, there was probably contamination. Check the results of any records maintained on sampling, testing (e.g., tightness), groundwater monitoring, vapor monitoring, repair work, site investigations or characterizations, corrective action plans, and cleanup actions. Also check the LUST list.

You can use the results of both the inspection and records search (for releases) for the identification of parcels contaminated by USTs to satisfy BLM requirements (see § 7.9). Inversely, the identification of parcels uncontaminated by USTs can be used to satisfy the CERCLA § 120(h)(4) requirements for Federal facilities being closed. The identification of parcels of land uncontaminated by USTs, as with the other hazardous substances, hazardous wastes, and petroleum products, is subject to concurrence by EPA for sites on the National Priorities List or by the appropriate state for all other sites.

EPA's ability to concur with the identification of uncontaminated parcels will depend on the information available concerning the current and historical uses of the parcel, the proximity of the parcel to sources of contamination requiring response actions, and the nature of the threat, if any,

resulting from the type of activity or contamination associated with the parcel (see EPA, 1994).

### 7.5 Relationship to Environmental Baseline Survey

Be sure that information gathered about USTs on a facility appears in an environmental baseline survey (see Chapter 12). You may either conduct part of or the entire environmental baseline survey yourself. If you conduct your own environmental site assessment, it is recommended that you follow ASTM E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process." Alternatively, you may have an environmental professional, such as an environmental auditor, conduct the assessment in accordance with ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process."

### 7.6 Relationship to Occupational Safety and Health Baseline Survey

Note that information gathered about USTs on the property should also appear in the occupational safety and health baseline survey for the property. USTs, unless closed or removed, can present confined space hazards (see 29 CFR Part 1910.146) on the property. Workers who fill or dispense from USTs, or who service, repair, inspect, or maintain USTs must receive the Hazard Communication Standard training pursuant to the regulations at 29 CFR 1910.1200. Workers who clean up spills or respond to releases from USTs require the Hazardous Waste Worker and Emergency Response Operations Standard training under regulations at 29 CFR 1910.120.

### 7.7 Relationship to NEPA Documents

A NEPA document prepared for a proposed real property transfer should address the existence of USTs. Examples of when USTs could be an issue include: (1) they are the subject of an enforcement, remediation, or removal action to be completed for the real property transfer; (2) there is a change in the service of an UST when the property is transferred; or (3) the public or stakeholders express

a concern about USTs (for example, during a scoping meeting or as a comment).

### 7.8 Leases

Because of complex legal issues involving real property law, EPA has not addressed the applicability § of 120(h)(1) to leases or easements (55 FR 14209). However, as the result of strict interpretation and as a best management practice, it is recommended that the same information EPA requires for contracts (see Section 7.11) be incorporated into lease or easement agreements.

CERCLA § 120(h)(5) requires you to notify the appropriate state official(s) of any lease of DOE real property on which a hazardous substance or petroleum product has been stored beyond one year, disposed of, or released if the lease encumbers the property beyond the date of termination of operations on the property. The notification must be made before entering into the lease and must include information on the length of the lease, the name of the lessee(s), and the uses allowed by the lease.

### 7.9 Notice of Intention to Relinquish

If the real property being declared excess is withdrawn land, the Notice of Intention to Relinquish to be prepared and submitted to the Bureau of Land Management must include any information on the extent of contamination from a leaking UST and measures that have been taken or will be taken for decontamination. As explained in § 1.6.2, contamination is one of the 13 items that must be addressed although there is no specific standard form for providing the information.

### 7.10 GSA-Specific Requirements

If 1,000 or more kilograms, or an amount equal to or greater than the RQ (whichever is greater) of a hazardous substance (see 40 CFR 302, Table 302.4) has been stored in an UST for one or more years, or if an amount equal to or greater than the RQ of a hazardous substance has been disposed of, spilled, or otherwise released during filling of or dispensing from an UST on DOE property (see Exhibit 6-2), you must report this information to the extent that it is available on the basis of a complete search of DOE files (40 CFR 373.1). Report this information as part of the reporting of hazardous substances

(excluding petroleum products). Also, report the dates on which hazardous substances have been stored, disposed of, or released. Report any remedial action necessary to protect human health and the environment that has been taken or will be completed. Attach the report of hazardous substance activity and of any remedial action to the Standard Form 118 (Appendix A) for the property. If no hazardous substance activity took place at the property, then you must attach to the Form 118 the following statement:

*DOE has determined, in accordance with regulations issued by the Environmental Protection Agency at 40 CFR Part 373, that there is no evidence to indicate that hazardous substance activity took place on the property during the time the property was owned by the United States.*

Also, GSA requires that the disposal agency (itself or DOE, as the case may be) insert this information into the Invitation for Bids/Offer to Purchase as well as the following statements (as prescribed in 41 CFR 101-47.304-14):

#### *NOTICE REGARDING HAZARDOUS SUBSTANCE ACTIVITY:*

*The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h).*

*The holding agency (i.e., DOE) advises that (provide information on the type and quantity of hazardous substances; the time at which storage, release, or disposal took place; and a description of the remedial action taken.)*

*All remedial action necessary to protect human health and the environment with respect to the hazardous substance activity during the time the property was owned by the United States has been taken. Any additional remedial action found to be necessary shall be conducted by the United States.*

In the case where the purchaser is a potentially responsible party with respect to hazardous substances, you must modify the above statement to

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represent the liability of the potentially responsible party for any remedial action.

### 7.11 Requirements for the Contract and Deed

If 1,000 or more kilograms, or an amount equal to or greater than the RQ (whichever is greater) of a hazardous substance (see 40 CFR 302, Table 302.4) has been stored (see glossary) in an UST for one year or more, or if an amount equal to or more than the RQ of a hazardous substance has been disposed of, spilled, or otherwise released during filling of or dispensing from an UST on DOE property, the information must be reported (see Exhibit 6-2). Note that petroleum products are excluded. In particular, 40 CFR 373.3 and CERCLA § 120(h)(1) and (3) require you to report the following information on the contract (for sale, lease, or other transfer) and deed:

- (1) Name of the hazardous substance in the UST (excluding petroleum products); and the Chemical Abstracts Service Registry Number (of the hazardous substance in the UST, excluding petroleum products).
- (2) Quantity (in kilograms and pounds) of the hazardous substance in the UST (excluding petroleum products) stored for one or more years, or known to have been disposed of, spilled, or otherwise released on the property.
- (3) Dates on which the hazardous substances in the UST were stored, disposed of, or released.
- (4) Description of remedial action (if any). [This description is not required by 40 CFR Part 373 but by CERCLA § 120(h)(3)(A)(i)(III) to be put on the deed only.]
- (5) The following statement: "The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h)." [This statement is not required by CERCLA § 120(h)(1) or (3) but by 40 CFR

373.3 to be put on the contract (for sale, lease, or other transfer only).]

In addition, you must attach a covenant to the deed (not required for leases) if the property is not being transferred to a potentially responsible party with respect to the real property. The covenant must warrant the following pursuant to CERCLA § 120(h)(3)(A)(ii) and (iii):

- (1) *All remedial action necessary to protect human health and the environment from hazardous substances that leaked from an UST remaining on the property has been taken before the date of the property transfer. (Note: all remedial action described has been considered taken if the construction and installation of an approved remedial design has been completed and the remedy has been demonstrated to EPA (or State) to be operating properly and successfully. The carrying out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to EPA (or State) to be operating properly and successfully does not preclude the property transfer.)*
- (2) *Any additional remedial action found to be necessary after the date of property transfer shall be conducted by the United States.*
- (3) *Permission granting the United States access to the real property in any case in which remedial or corrective action is found to be necessary after the property transfer.*

See § 14.3.4 for how paragraph (1) above of the covenant statement may be deferred under CERCLA § 120(h)(3)(C).

### 7.12 Notification of Change in Ownership

You should notify the regulatory authority having jurisdiction about the change in ownership of an UST if the real property transfer involves a change of ownership. In particular, if an UST has been closed or changed-in-service (see glossary), pay

attention to the requirements of 40 CFR 280.74 with respect to results of the excavation zone assessment records. Such records have to be maintained for at least three years after completion of permanent closure or change-in-service by:

- DOE (i.e., the owner and operator who took the UST system out of service), or
- The new owner and operator of the site.

These records must be mailed to the state or local regulatory authority having jurisdiction if the records cannot be maintained at the closed facility.

### 7.13 Checklist

- Are there any USTs on the real property? (If not, stop here.)
- Have the data gathered concerning USTs on the real property being declared as excess been included in the environmental site assessment or environmental baseline survey?
- Have the data on USTs been included in the occupational safety and health baseline assessment as possible confined space hazards?
- If USTs are an issue in an environmental assessment or environmental impact statement, have the data concerning USTs gathered on the real property been included?
- If the real property is being offered for lease, have the appropriate state officials been notified as described in § 7.8?
- If the real property being declared excess is withdrawn land, have data on the extent of UST contamination and UST decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- Have the data gathered on the real property being declared as surplus concerning USTs been included in the Invitation for Bids/Offer described in § 7.10?
- Have the data gathered on the real property concerning USTs and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 7.11?
- If USTs have been closed or changed in service and ownership changes, has the regulatory authority having jurisdiction been notified and have the excavation zone assessment records been properly addressed as described in § 7.12?

### 7.14 References

- ASTM, 1994. "Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process," American Society for Testing and Materials Standard E-1527-94, June 1994.
- ASTM, 1993. "Standard Practice for Environmental Site Assessments: Transaction Screen Process," American Society for Testing and Materials Standard E-1528-93, May 1993.
- DOE, 1994. *Hazardous Substance USTs* DOE/EH-231/012e/0194, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, EH-413, January 1994.
- DOE, 1994. *Petroleum USTs* DOE/EH-231/012d/0194, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, EH-413, January 1994.
- DOE, 1993. *Deferred USTs* DOE/EH-231/012c/0593, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, EH-413, May 1993.
- DOE, 1993. *Excluded USTs* DOE/EH-231/012b/0593, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, EH-413, May 1993.
- DOE, 1993. *Identifying and Classifying an UST*, DOE/EH-231/012a/0593, U.S. Department of

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EPA Concurrence in the Identification of  
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Laws, Assistant Administrator, U.S.  
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Counsels (Regions I-X), and Federal Facilities  
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# 8. RADIOACTIVE SUBSTANCES AND CONTAMINATION

## 8.1 Introduction

Radioactive substances are composed of pure radionuclides or mixtures of radionuclides. Radionuclides are unstable atoms or isotopes of the natural and manmade elements that make up the matter in the universe. The number and arrangement of the small particles (i.e., protons, neutrons, and electrons) of which atoms are composed distinguish one element from another. There are about 1700 nuclides of the more than 100 natural and manmade elements (which can be in the form of gas, solid, or liquid). When unstable nuclides change into their more stable form (through a process known as disintegration or decay), they release invisible waves of energy or particles, known as ionizing radiation. The natural activity of emitting ionizing radiation is called radioactivity. Ionizing radiation deposits energy in matter and causes a chemical change. When this occurs in human tissue it can cause a variety of ill-health effects in people, the most serious of which is cancer.

The existence of radioactive substances and contamination throughout the Department of Energy facilities stems mostly from the production of nuclear weapons since the early 1940's. The end of the Cold War has instigated a change in national priorities shifting DOE's mission from nuclear weapons production to cleanup of nuclear weapons facilities. Decontaminating and decommissioning these aging facilities and cleaning up the environmental damage that has occurred from 50 years of production present a major challenge. There are approximately 100 contaminated installations spread out over 36 states and territories. DOE property that used radionuclides or has radioactive contamination includes, but is not limited to, sites identified in the Formerly Utilized Sites Remedial Action Program (FUSRAP), Surplus Facilities Management Program (SFMP), and Uranium Mill Tailings Remedial Action (UMTRA) program.

DOE and its predecessor, the Atomic Energy Commission (AEC), have been aware of the dangers of radiation and have set guidelines, based on U.S. Environmental Protection Agency (EPA) standards, Nuclear Regulatory Commission (NRC) guidelines, and International Council of Radiation Protection (ICRP) guidelines to stringently protect workers and the public against radiation. An extensive body of literature exists on radiation carcinogenesis in man and animals that indicates that ionizing radiation can be considered "pancarcinogenic" (i.e., acts as a complete carcinogen by serving as both an initiator and a promoter of cancer in almost any tissue or organ).

Although the carcinogenic effects typically are used as the sole basis for assessing radiation-related human health risks of a site (or substance) contaminated with radionuclides, be aware that noncarcinogenic effects (teratogenicity and mutagenicity) increase with exposure to radiation. Teratogenicity is the ability to induce or increase the incidence of congenital malformations, which are permanent structural or functional deviations produced during embryonic growth and development. Mutagenicity is the ability to induce genetic mutation in the nuclei of either body cells or reproductive cells

Under the Atomic Energy Act (AEA) of 1954, as amended, DOE is responsible for implementing and enforcing all regulations governing the monitoring and control of radionuclides released by DOE operations. DOE issued DOE Order 5400.5, "Radiation Protection of the Public and the Environment" under the authority of the AEA. In addition, the Uranium Mill Tailings Radiation Control Act, which amended the Atomic Energy Act, applies to DOE sites in the UMTRA program. UMTRA sites are covered by separate requirements enforced by EPA under the Uranium Mill Tailings Radiation Control Act of 1978 (as amended by the Uranium Mill Tailings Remedial Action Amendments Act of 1988). Note that state and local governments may impose their own radiological protection requirements; however,

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## 8. Radioactive Substances and Contamination

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these requirements will not be discussed because they are beyond the scope of this document.

### 8.2 Drivers for the Requirements

There are several mandates that drive the need to comply with requirements protecting the public from radioactive substances and contamination in real property transfers: GSA regulations at 41 CFR 101-47.202-2(b)(10) and DOE Order 5400.5, Chapters II and IV. EPA regulations in 40 CFR Part 192, "Standards for Remedial Actions at Inactive Uranium Processing Sites" apply to UMTRA sites only. Because of the uniqueness of these EPA requirements for UMTRA sites, no further discussion will be made of UMTRA sites except in § 8.9.

In addition, CERCLA § 120(h), implemented via EPA regulations at 40 CFR Part 373, requires reporting of radionuclides in real property transfers. Bureau of Land Management regulations at 43 CFR 2372.1 require reporting of the extent to which contamination has occurred and decontamination has taken place or will take place.

### 8.3 Requirements in Real Property Transfers

The requirements of DOE Order 5400.5 must be met before property on which any radioactive substances or residual radioactive material (see glossary) was present can be released. No analogous requirements can be found for any other kind of hazardous substance. In particular, DOE Order 5400.5, Chapter II, § 5, ¶ a, b, and c and Chapter IV state the generic guidelines for residual radioactive material (see Exhibit 8-1) for all sites except UMTRA sites (which are covered by 40 CFR Part 192). DOE Order 5400.5 also mandates that FUSRAP and SFMP sites be subjected to the requirements in DOE/CH-8901, *A Manual for Implementing Residual Radioactive Material Guidelines, A Supplement to the U.S. Department of Energy Guidelines for Residual Radioactive Material at FUSRAP and SFMP Sites*. DOE/CH-8901 provides procedures for deriving specific guidelines for allowable levels of residual radioactive material for specific types of property from basic dose limits.

The other requirements, including the GSA requirements, are merely reporting requirements. CERCLA § 120(h) requires identification of uncontaminated parcels of land (see § 8.4.4), notification of leases (see § 8.9), reporting data on deeds (see § 8.12), and placing a covenant in deeds (see § 8.12). The Bureau of Land Management requires identification of contaminated parcels in withdrawn land being returned to the public domain (see § 8.10).

Radioactive PCBs and radioactive asbestos are subject to non-radiological regulatory requirements under the Toxic Substances Control Act, Asbestos Hazard Emergency Response Act, and Asbestos School Hazard Abatement Reauthorization Act, as well as those of DOE Order 5400.5. Refer to Chapter 9 for PCBs and Chapter 10 for asbestos.

### 8.4 Implementation of the Requirements

#### 8.4.1 Definitions

To implement the requirements in Exhibit 8-1, you must first understand how and where radionuclides and radioactive contamination may be present at your facility. You should be familiar with how radioactive hazards are generally grouped, given as follows:

- (1) Residual concentrations of radionuclides in soil,
- (2) Concentrations of airborne radon decay products,
- (3) External gamma radiation (see glossary),
- (4) Surface contamination, and
- (5) Radionuclide concentrations in air or water resulting from or associated with any of the above.

You must also understand and distinguish between basic dose limits, guidelines, authorized limits, and the policy of "As Low As Reasonably Achievable (ALARA)." Basic dose limits resulting from exposures to properties or equipment contaminated

## Exhibit 8-1. Generic Guidelines for Residual Radioactive Material

**Residual Radionuclides in Soil.** Concentrations of radioactive material in soil are defined as those in excess of background concentrations averaged over an area of 100 square meters.

**Hot Spots.** If the average concentration in any surface or below-surface area less than or equal to 25 square meters exceeds the basic dose limit (100 mrem/yr) or guideline (see the table at end of exhibit) by a factor of  $(100/A)^{0.5}$ , where A is the area in square meters of the region in which concentrations are elevated, then limits for "hot-spots" shall be developed and applied according to DOE/CH-8901. In addition, reasonable efforts shall be made to remove any source of radionuclide that exceeds 30 times the appropriate limit for soil (see table), regardless of the average concentration in the soil.

**Generic Guidelines.** Concentrations of Radium-226 and -228, and thorium-230 and -232 should neither exceed 5 picocuries per gram (pCi/g) averaged over the first 15 cm of soil below the surface nor 15 pCi/g averaged over 15-cm-thick layers of soil more than 15 cm below the surface.

**Ingrowth and Mixtures.** The generic guidelines take into account ingrowth of Radium-226 from Thorium-230 and of Radium-228 from Thorium-232, and assume secular equilibrium (see glossary). If other mixtures of radionuclides occur, the concentrations of individual radionuclides shall be reduced so that either the dose for the mixtures will not exceed the basic dose limit (100 mrem/yr) or the sum of the ratios of the soil concentration of each radionuclide to the allowable limit for that radionuclide (see table below) will not exceed unity. Explicit formulas for calculating residual concentration guidelines for mixtures are given in DOE/CH-8901.

**Airborne Radon Decay Products.** The radon decay product concentration (including background) shall not exceed 0.03 Working Level. A Working Level (WL) is any combination of short-lived radon decay products in 1 liter of air that will result in the ultimate emission of  $1.3 \times 10^5$  MeV of potential alpha energy. Remedial actions are not required when there is reasonable assurance that residual radioactive material is not the source of the radon concentration.

**External Gamma Radiation.** The average level of gamma radiation (see glossary) inside a building or habitable structure on a site to be released without restrictions shall not exceed the background level by more than 20 uR/hr and shall comply with the basic dose limit (100 mrem) when an "appropriate-use" scenario (e.g., an industrial/commercial use) is considered.

**Surface Contamination.** The generic surface contamination guidelines apply to existing structures and equipment including interior equipment and building components that are potentially salvageable or recoverable scrap. A table of surface contamination guidelines showing, in disintegrations per minute (dpm) per 100 cm<sup>2</sup>, the average, maximum, and removable total residual contamination allowed is found in Figure IV-1 of DOE 5400.5 (reproduced as a table on the next page). These guidelines are based on the Nuclear Regulatory Commission's *Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material*.

**8. Radioactive Substances and Contamination**

**Exhibit 8-1. Generic Guidelines for Residual Radioactive Material  
(Continued)**

Type of Radioactive Substance	Acceptable Surface Contamination Levels (disintegrations per minute/100 square centimeters) <sup>1</sup>		
	Average <sup>2, 3</sup>	Maximum <sup>3, 4</sup>	Removable <sup>5</sup>
Beta/Gamma emitters <sup>6</sup> (except strontium-90); Uranium-natural, -235, & -238, and their associated decay product alpha emitters	5,000	15,000	1,000
Transuranics; Iodine-125, and -129; Radium-226 and -228; Actinium-227; Thorium-228 & -230; and Protactinium-231	Reserved	Reserved	Reserved
Thorium-natural and -232; Strontium-90; Iodine-126, -131, & -133; Radium-223 & -224, and Uranium-232	1,000	3,000	200

<sup>1</sup> The dpm emitted by radioactive material as determined by correcting for background, efficiency, and geometric factors associated with the instrumentation.

<sup>2</sup> Measurements of average contamination should not be averaged over an area of more than one square meter. For objects of less surface area, the average should be derived for each such object.

<sup>3</sup> The average and maximum dose rates associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/h and 1.0 mrad/h, respectively, at 1 cm.

<sup>4</sup> The maximum concentration level applies to an area of not more than 100 square centimeters.

<sup>5</sup> The amount of removable material per 100 square centimeters of surface area should be determined by wiping an area of that size with dry filter or soft absorbent paper, applying moderate pressure, and measuring the amount of radioactive material on the wiping with an appropriate instrument of known efficiency. When removable contamination on objects of surface area less than 100 square centimeters is determined, the activity per unit area should be based on the actual area, and the entire surface should be wiped. It is not necessary to use wiping techniques to measure removable contamination levels if direct scan surveys indicate that the total residual surface contamination levels are within the limits for removable concentration.

<sup>6</sup> Where surface contamination by both alpha- and beta-gamma emitting radionuclides exists, the limits established for alpha- and beta-gamma emitting radionuclides should apply independently.

with residual radioactive material have been prescribed in standards. From these standards, numbers can be derived and specified in terms of an effective dose equivalent (see glossary). Three radiological protection standards are pertinent:

- (1) 40 CFR Part 192, *Standards for Remedial Actions at Inactive Uranium Processing Sites* (January 1983)
- (2) Nuclear Regulatory Commission, Regulatory Guide 1.86, *Termination of Operating Licenses for Nuclear Reactors* (June 1974)
- (3) Nuclear Regulatory Commission publication, *Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material* (July 1982)

In consideration of these three radiological protection standards, DOE Order 5400.5, Chapter II, § 1, ¶ a, proclaims as official policy that the public shall not be exposed to an effective dose equivalent greater than 100 mrem/yr (1 mSv/yr) (excluding naturally-occurring background radiation) as a consequence of all routine DOE activities. The basic dose limit is used for deriving guidelines (see next paragraph) for the first four of the five groups of aforementioned radioactive hazards. (Guidelines for radionuclide concentrations in air and water are set by EPA in 40 CFR Part 61 and 40 CFR Part 141, respectively.) See text box for temporary higher public dose limit.

A guideline for residual radioactive material is a level of radioactivity that is acceptable for use of a property without restrictions. Guidelines are generally predicated on a presumed "worst-case, plausible-use" scenario for a property. There are two kinds of guidelines: generic and specific. Generic guidelines are independent of the type of property, derived from the basic dose limit, and given in Exhibit 8-1. Specific guidelines are also derived from the basic dose limit but are calculated using specific property models and data; DOE/CH-8901 gives procedures and data for derivation of specific guidelines.

### Temporary Higher Dose Limit

Under unusual circumstances, a temporary higher public dose limit may be requested from EH-1 provided that it is accompanied by documentation that discusses the need for the increase, the alternatives considered, and the application of the ALARA process. The temporary higher dose limit is derived from the recommendations of the International Commission on Radiological Protection (ICRP Publication 45) for a principal dose limit of 100 mrem effective dose equivalent in a year for exposures to the public, and a subsidiary dose limit of 500 mrem effective dose equivalent in a year, for some years, if the dose averaged over a lifetime does not exceed the principal limit of 100 mrem effective dose equivalent per year.

An authorized limit is a level of residual radioactivity that shall not be exceeded if the remedial action is to be considered completed and the property is to be released without restrictions. Under normal circumstances, authorized limits for residual radioactive material are set equal to the guideline values (discussed above). Exceptions occur when the guideline values are not appropriate for use at a specific property. In such cases, authorized limits are to be established that do not exceed the basic dose limit (100 mrem/yr) under the "worst-case" or "plausible-use" scenarios, consistent with the procedures and guidance provided in DOE/CH-8901 or consistent with the applicable generic guidelines.

As Low As Reasonably Achievable (ALARA) is a phrase (acronym) used to describe an approach to radiation protection to control or manage exposures (both individual and collective to the work force and the general public) and releases of radioactive material to the environment as low as social, technical, economic, practical, and public policy considerations permit. ALARA is not a dose limit but rather a process that has as its objective the attainment of dose levels as far below the applicable limits as practicable. DOE Order 5400.5, Chapter IV, § 2, ¶ e, requires that applications of ALARA policy be documented and filed as permanent records.

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## 8. Radioactive Substances and Contamination

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### 8.4.2 Sources of Records on Radioactive Substances and Contamination

It is prudent to conduct a preliminary records search before conducting a radiological survey of the property. Records include information and data necessary to identify and characterize radioactive materials by their release and fate in the environment, and their probable impact on radiation doses to the public. Information and data must be retained in accordance with the requirements of DOE Order 1324.2 and other legally applicable requirements.

It is important to determine if your facility has any records required by these regulations. A good starting point is the collection of hazardous waste manifests, manifest discrepancy reports, notifications of Low-Level Waste (LLW) activity, or approval for a LLW landfill.

Radioactive spills or releases (either planned or unplanned) must be reported in accordance with DOE Orders 5400.1 and 5484.1 as well as a notification of the relevant Program Office and the Deputy Assistant Secretary for Environment of actual or potential exposures of members of the public that could result in either:

- (1) An effective dose equivalent exceeding 10 mrem in a year;
- (2) Exceeding any limit (such as not meeting any other requirement specified in DOE Order 5400.5 or any other legally applicable limit); or
- (3) Exceeding a combined dose equal to or greater than 100 mrem effective dose equivalent in a year due to DOE and other man-made sources of radiation (except medical, consumer product, and natural sources).

Additionally, you may want to refer to the Annual Site Environmental Report that must be prepared by October 1 of each calendar year under DOE Order O 231.1, "Environmental, Safety, and Health Reporting," (formerly DOE Order 5400.1, "General Environmental Protection Program"). DOE M 231.1, the mandatory manual implementing the DOE Order, provides that the Annual Site

Environmental Report must review the facility's compliance with all environmental requirements, discuss noncompliances, and describe corrective actions. In addition, the Compliance Summary of the Annual Site Environmental Report must discuss notices of violation issued by a regulatory agency.

Lastly, DOE's Office of Field Management (FM-20) has developed a Facilities Information Management System (FIMS) database that will include information on hazardous materials on DOE-owned, DOE-leased, GSA-assigned, and contractor-leased land, buildings, trailers, and other structures. As of August 1997, FM-20 was still working with DOE field elements to populate unclassified data for hazardous substances (including radioactive substances).

### 8.4.3 Radiological Surveys

DOE Order 5400.5, Chapter II, § 5, ¶ (c), states that prior to being released, property shall be surveyed to determine whether both removable and total surface contamination (including contamination present on and under any coating) is greater than the levels given in Exhibit 8-1 and the contamination has been subjected to the ALARA process. You must have the survey conducted on areas of the property that have the potential for contamination. Areas have the potential for contamination if they have been

- (1) Used for storing, handling, processing, or treating unconfined radioactive substances; or
- (2) Exposed to beams of particles capable of inducing radiation (e.g., neutrons and protons).

You must ensure that instruments and techniques used for radiological surveys of areas of potential contamination are appropriate for detecting the levels of radiation in the guidelines given in Exhibit 8-1.

Where potentially contaminated surfaces are not accessible for radiological survey (e.g., pipes, drains, and ductwork), such an area of the property is released on a case-by-case evaluation. The evaluation is based on both the history of the use of the area and available measurements. If the

unsurveyable surfaces are likely to be within the limits given in Exhibit 8-1, then the area may be released.

Documentation of the radiological survey is required for release of the property and is described in § 8.12.

#### **8.4.4 Identification of Contaminated and Uncontaminated Parcels**

You can use the identification of parcels of contaminated land to satisfy BLM requirements (see § 8.10). You must also report on whether remedial action necessary to protect human health and the environment has been taken or will be completed (see § 8.5, § 8.10 and § 8.12). You can use the identification of parcels of uncontaminated land to satisfy CERCLA § 120(h)(4) for Federal facilities being closed. The identification of parcels of land uncontaminated by radionuclides, as with the other hazardous substances, hazardous wastes, and petroleum products, is subject to concurrence by EPA for sites on the National Priorities List or by the appropriate state for all other sites.

Note that there may be instances in which DOE or another authority will impose restrictions on the management and/or use of the property if the residual radioactive material guidelines of Chapter IV of DOE Order 5400.5 are not met or if other applicable Federal, State, or local requirements impose such restrictions. Restrictions and controls on the use of property with residual radioactive material exceeding the authorized limits are discussed in DOE Order 5400.5 Chapter IV, § 6 and § 7.

### **8.5 GSA-Specific Requirements**

If an amount equal to or greater than the RQ of a radionuclide (see 40 CFR 302, Table 302.4, Appendix B) has been stored for one or more years, or if an amount equal to or more than the RQ of a radionuclide has been disposed of, spilled, or otherwise released on DOE property (see Exhibit 6-2), report this information to the extent that it is available on the basis of a complete search of DOE files (40 CFR 373.1) (see text box). Also, report the dates on which radionuclides were stored, released, or disposed of in excess of the quantity and time thresholds. In addition, report any remedial action necessary to protect human health

#### **Basis for Radiation Hazard**

Although CERCLA §120(h)(1) and (3) and 40 CFR 373.1 give a reporting threshold in units of weight, weight is a wholly inappropriate measurement for radionuclides. Furthermore, a storage reporting threshold of 1,000 kg is far too excessive for radionuclides. As a more conservative alternative, it is recommended that the reporting threshold for the storage, release, or disposal of radionuclides all be set at the RQ.

Note that the RQs for all radionuclides in 40 CFR Table 302.4, Appendix B are in units of curies (or becquerels) based on radiation hazard not weight in pounds (or kilograms) as in Table 302.4. The curie (Ci) represents a rate of radioactive decay where one curie is the quantity of any radioactive nuclide which undergoes  $3.7 \times 10^{10}$  disintegrations per second. The becquerel undergoes one disintegration per second, and therefore, one curie is equal to  $3.7 \times 10^{10}$  becquerel.

and the environment that has been taken or will be completed. Attach the report of radioactive substance activity and of any remedial action to the Standard Form 118 (Appendix A) for the property. If no hazardous substance (including radioactive substance) activity took place at the property, then you must attach to the Form 118 the following statement:

*DOE has determined, in accordance with regulations issued by the Environmental Protection Agency at 40 CFR Part 373, that there is no evidence to indicate that hazardous substance activity took place on the property during the time the property was owned by the United States.*

### **8.6 Relationship to Environmental Baseline Survey**

Note that information gathered about the presence of radionuclides or radioactive contamination on a facility must also appear in an environmental baseline survey (see Chapter 12). You may conduct part of or the entire environmental baseline survey yourself. If you conduct your own environmental baseline survey, it is recommended that you follow ASTM E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process." Alternatively, you may have an

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## **8. Radioactive Substances and Contamination**

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environmental professional, such as an environmental auditor, conduct the assessment in accordance with ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process." The use of a Certified Health Physicist is recommended to avoid overlooking an item that could be regulated under any of the above regulations or if you do not know whether an item is in compliance.

### **8.7 Relationship to Occupational Safety and Health Baseline Survey**

Include the information gathered about the presence of any equipment that is part of a real property and that emits ionizing radiation in any occupational safety and health baseline survey for the property. Workers who inspect, service, transport, or operate equipment that emits ionizing radiation must comply with the Ionizing Radiation Standard under the Occupational Safety and Health Administration (OSHA) regulations at 29 CFR 1910.96. Workers who clean up spills or respond to radioactive releases require the Hazardous Waste Worker and Emergency Response Operations Standard training under regulations at 29 CFR 1910.120.

### **8.8 Relationship to NEPA Documents**

Discuss the existence of radionuclides and radioactive contamination in any NEPA document required to be prepared regarding the proposed transfer of DOE real property. Radionuclides and radioactive contamination are almost always a sensitive issue with the public and stakeholders.

### **8.9 Leases and Other Outgrants**

CERCLA § 120(h)(5) requires that you notify the appropriate state official(s) of any lease of DOE real property on which radionuclides have been stored beyond one year, disposed of, or released if the lease encumbers the property beyond the date of termination of operations on the property (see Exhibit 6-1). The notification must be made before entering into the lease and must include information on the length of the lease, name of the lessee(s), and the uses allowed by the lease. (There may be instances in which DOE or another authority will

impose restrictions on the management and/or use of the property if the residual radioactive material guidelines of Chapter IV of DOE Order 5400.5 are not met or if other applicable Federal, State, or local requirements cause the imposition of such restrictions.) Moreover, be aware that the notification of states regarding UMTRA sites may be handled differently when such sites are included in state cooperative agreements in accordance with the requirements of Section 103 of the Uranium Mill Tailings Radiation Control Act of 1978 and 40 CFR Part 192.

Although not required, it is a best management practice to notify the lessees, occupants, or tenants of the locations of any equipment emitting ionizing radiation. If such equipment is a part of the real property included in the lease (e.g., a reactor), make available copies of service, inspection, and maintenance records.

### **8.10 Notice of Intention to Relinquish**

If the real property being declared excess is withdrawn land, the Notice of Intention to Relinquish to be prepared and submitted to the Bureau of Land Management must include any information on the extent of radioactive contamination and measures that have been taken or will be taken for decontamination. As explained in § 1.6.2, contamination is one of the 13 items that must be addressed, although there is no specific standard form for providing the information.

### **8.11 Invitation for Bids/Offers**

If the storage, release, or disposal of radionuclides (or any hazardous substance) was reported in the attachment to Form 118 (see § 8.5), then GSA requires that the disposal agency (itself or DOE, as the case may be) incorporate the information reported with the following statements (as prescribed in 41 CFR 101-47.304-14) into the Invitation for Bids/Offers to Purchase:

#### ***NOTICE REGARDING HAZARDOUS SUBSTANCE ACTIVITY:***

*The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and*

*Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h).*

*The holding agency (i.e., DOE) advises that (provide information on the type and quantity of hazardous substances; the time at which storage, release, or disposal took place; and a description of the remedial action taken.)*

*All remedial action necessary to protect human health and the environment with respect to the hazardous substance activity during the time the property was owned by the United States has been taken. Any additional remedial action found to be necessary shall be conducted by the United States.*

In the case where the purchaser is a potentially responsible party with respect to radionuclides, you must modify the above statement to represent the liability of the potentially responsible party for any remedial action.

### **8.12 Requirements for the Contract and Deed**

If an amount equal to or greater than the RQ of a radionuclide (see 40 CFR 302, Table 302.4, Appendix B) has been stored (see glossary) for one or more years, or if an amount equal to or more than the RQ of a radionuclide has been disposed of, spilled, or otherwise released on DOE property (see Exhibit 6-2), report the following information on the contract (for sale, lease, or other transfer) and deed in accordance with 40 CFR 373.3 and CERCLA § 120(h)(1) and (3):

- (1) Name and mass number of the radionuclide(s) (e.g., Carbon-14).
- (2) Quantity (in curies) of the radionuclides stored, or known to have been disposed of, spilled, or otherwise released on the property.
- (3) Dates on which radionuclide storage, release, or disposal occurred.
- (4) Description of remedial action (if any).  
[This description is not required by 40 CFR Part 373 but is by CERCLA § 120(h)(3)(A)(i)(III) to be put on the deed only.]

- (5) The following statement: "The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h)." [This statement is not required by CERCLA § 120(h)(1) or (3) but by 40 CFR 373.3 to be put on the contract (for sale, lease, or other transfer only).]

In accordance with DOE Order 5400.5, Chapter II, § 5, ¶ (5), the records of the released property are required to include:

- (1) A description or identification of the property;
- (2) The date of the last radiological survey;
- (3) The identity of the organization and the individual who performed the monitoring operation;
- (4) The type and identification number of the monitoring instruments;
- (5) The results of the monitoring operation; and
- (6) The identity of the recipient of the released property.

In addition, you must attach a covenant to the property deed (not required for leases) if the property is not being transferred to a potentially responsible party with respect to the real property. The covenant must warrant the following pursuant to CERCLA § 120(h)(3)(A)(ii) and (iii):

- (1) *All remedial action necessary to protect human health and the environment from radionuclides remaining on the property has been taken before the date of the property transfer. (Note: all remedial action has been considered taken if the construction and installation of an approved remedial design has been completed and the remedy has been demonstrated to EPA to be operating properly and successfully. The carrying*

## 8. Radioactive Substances and Contamination

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*out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to EPA to be operating properly and successfully does not preclude the property transfer.)*

(2) Any additional remedial action found to be necessary after the date of property transfer shall be conducted by the United States.

(3) Permission granting the United States access to the real property in any case in which remedial or corrective action is found to be necessary after the property transfer.

See § 14.3.4 for how paragraph (1) above of the covenant statement may be deferred under CERCLA § 120(h)(3)(C).

### 8.13 Notification of Change in Ownership

Notify the appropriate NRC Regional Administrator of a change in facility status with respect to radionuclides and equipment with radioactive sources. Such a change includes a change in ownership as well as activities associated with a change in ownership.

### 8.14 Checklist

- Are there any radionuclides or radioactive contamination on the real property? (If not, stop here.)
- Has all radioactive surface contamination been cleaned up to levels specified in "Generic Guidelines for Residual Radioactive Material" (which is shown in Exhibit 8-1 in this chapter) in DOE Order 5400.5?
- Have the radionuclide data gathered on the real property being declared as excess been included in the environmental site assessment or environmental baseline survey?
- Have the radionuclide data gathered on the real property being declared as excess been

included in the occupational safety and health baseline survey?

- If radioactive materials or contamination had been present, has information on cleanup and assurance of compliance with requirements on residual radioactive materials been included in an environmental assessment or environmental impact statement for a real property transfer?
- If the real property is being offered for lease, have the appropriate State officials been notified as described in § 8.9?
- If the real property is being offered for lease, license, or permit (see glossary), will the tenants and occupants be informed about the presence and location of equipment with radioactive substances as a best management practice?
- If the real property being declared excess is withdrawn land, have data on the extent of radioactive contamination and decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- Have the radionuclide data gathered on the real property being declared as surplus been included in the Invitation for Bids/Offeres described in § 8.11?
- Have the radionuclide data gathered on the real property and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or transfer) and deed as described in § 8.12?
- Has the appropriate NRC Regional Administrator been notified of any changes in ownership affecting the status of an NRC license?

### 8.15 References

ASTM, 1994. "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process," American Society for

Testing and Materials E-1527-94 Standard,  
June 1993.

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Environmental Site Assessments: Transaction  
Screen Process," American Society for Testing  
and Materials E-1528-93 Standard, May 1993.

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Radioactive Material Guidelines, A Supplement  
to the U.S. Department of Energy Guidelines  
for Residual Radioactive Material at FUSRAP  
and SFMP Sites*, DOE/CH-8901, U.S.  
Department of Energy, June 1989.

DOE, 1994. *Radiological Control Manual*,  
DOE/EH-0256T, Revision 1, U.S. Department  
of Energy, April 1994.

NRC, 1974. *Termination of Operating Licenses for  
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Unrestricted Use or Termination of Licenses  
for Byproduct, Source or Special Nuclear  
Material*, U.S. Nuclear Regulatory Commission  
publication, July 1982.

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# 9. POLYCHLORINATED BIPHENYLS (PCBs)

## 9.1 Introduction

Polychlorinated biphenyls (PCBs) are part of an extensive series of synthetic chemicals known as chlorinated hydrocarbons. There are over 200 PCB isomers and compounds, which vary from mobile, oily liquids to white, crystalline solids and hard resins.

Although PCBs have not been manufactured since 1977, they were widely used between 1929 and 1977. One dominant use was as dielectric fluid in electrical equipment (see EH-413 Technical Assistance Project, *PCB Regulations and Their Application to Deactivation and Decommissioning Activities*, April 1996). Examples of electrical equipment in which they were used include transformers, capacitors, voltage regulators, circuit breakers, switches, and electric motors. They have also been used as heat transfer, hydraulic, and vacuum pump fluids in machinery. Other uses include plasticizers, additive lubricants, cutting oils, optical fluids, and in the laboratory (see Information Brief, *Management of PCB Laboratory Waste*, EH-413-061/1195, November 1995).

PCB contamination was discovered through bioconcentration, bioaccumulation, and biomagnification in the food chain. These findings were of concern as PCBs were known to cause chronic reproductive effects, gastric disorders, and skin lesions in laboratory animals. Based on the animal evidence (although lacking data in humans), EPA in 1988 concluded that PCBs were probable human carcinogens. PCBs also are suspected of being environmental estrogens (i.e., compounds in the environment that mimic the effects of the natural hormone estrogen on the body).

Another concern is that PCB mixtures are contaminated with polychlorinated dibenzofurans (PCDFs), which are more toxic than PCBs. Furthermore, decomposition products from the incomplete combustion of PCBs (e.g., transformer fires) include polychlorinated dibenzo-p-dioxins (PCDDs) as well as PCDFs. PCDDs are more toxic than PCDFs.

As a result of all of these concerns, Congress enacted the Toxic Substances Control Act (TSCA) in 1976 which regulates PCBs. The regulations implementing TSCA on PCBs are found at 40 CFR Part 761. As a general rule, the use of PCBs is banned for the most part unless certain conditions are met. PCBs are still being used at many DOE facilities under such conditions. A number of DOE facilities are storing PCB/fissionable waste beyond the one-year limit under a National Compliance Agreement with EPA.

## 9.2 Drivers for the Requirements

The mandate that drives the need to comply with requirements with respect to PCBs in real property transfers is GSA regulations at 41 CFR 101-47.202-2(c)(3). In addition, CERCLA § 120(h) implemented via EPA regulations at 40 CFR Part 373, requires reporting of PCBs in real property transfers. Bureau of Land Management regulations at 43 CFR 2372.1 require reporting of the extent to which contamination has occurred and decontamination has taken place or will take place.

## 9.3 Requirements in Real Property Transfers

The GSA regulation at 41 CFR 101-47.202-2(c)(3) is not a mere reporting requirement but a requirement certifying compliance. The GSA requirement directs that the responsible person:

- Certify whether the property contains any equipment subject to 40 CFR Part 761 (e.g., transformers).
- If the property does contain equipment subject to 40 CFR Part 761, certify that each item of the equipment is and will be maintained in compliance until disposal of the property.

EPA is proposing a new rule requiring documentation of transfer of ownership of PCB Items (see Exhibit 9-1) if they are not included in the transfer of real property (see text box).

## 9. Polychlorinated Biphenyls (PCBs)

Establishing whether equipment on the property complies with TSCA regulations fulfills only part of the entirety of requirements. CERCLA § 120(h) requires identification of uncontaminated parcels of

### Property Transactions Involving PCB Items

EPA is proposing in its notice of rulemaking on the disposal of PCBs (59 FR 62871 of December 6, 1994) to require recordkeeping for the transfer of ownership of PCB Items, including PCB and PCB-contaminated Transformers and Large High-Voltage Capacitors. The affected section is 40 CFR 761.180(a)(2)(ix). The purpose of this particular provision of the proposed rulemaking is to prevent illegal disposal of PCB Items, which are alleged to have been sold by their owners. The proposed rule would require documentation of the following:

- Name, address, and telephone number of the parties to whom the item was transferred,
- Date of the transfer, and
- Identifying number of the item as recorded in the Annual Document Log.

However, EPA would **not** require the Annual Document Log to identify the transfer of ownership of PCB Items with a concentration of 50 parts per million or greater when the transfer was included in a transfer of real property. For example, if DOE sells a warehouse and the surrounding property, as long as the PCB Transformers and Large High-Voltage Capacitors are transferred in the same transaction as the real estate, separate documentation of the transfer of the transformers and capacitors would not be necessary.

land (see § 9.4.5), notification of leases (see § 9.9), reporting data on deeds (see § 9.12), and placing a covenant in deeds (see § 9.12). The Bureau of Land Management requires identification of contaminated parcels in withdrawn land being returned to the public domain (see § 9.10). The reader should refer to Exhibits 6-1 and 6-2 for a depiction of the procedures for meeting CERCLA § 120(h) requirements. Bear in mind that PCBs are listed as a CERCLA hazardous substance (40 CFR 302,

Table 302.4) with a Reportable Quantity of one pound. The reader should also be acquainted with the issues pertaining to the types of contaminants, threshold quantities, and records searches discussed in § 6.3.

## 9.4 Data Gathering

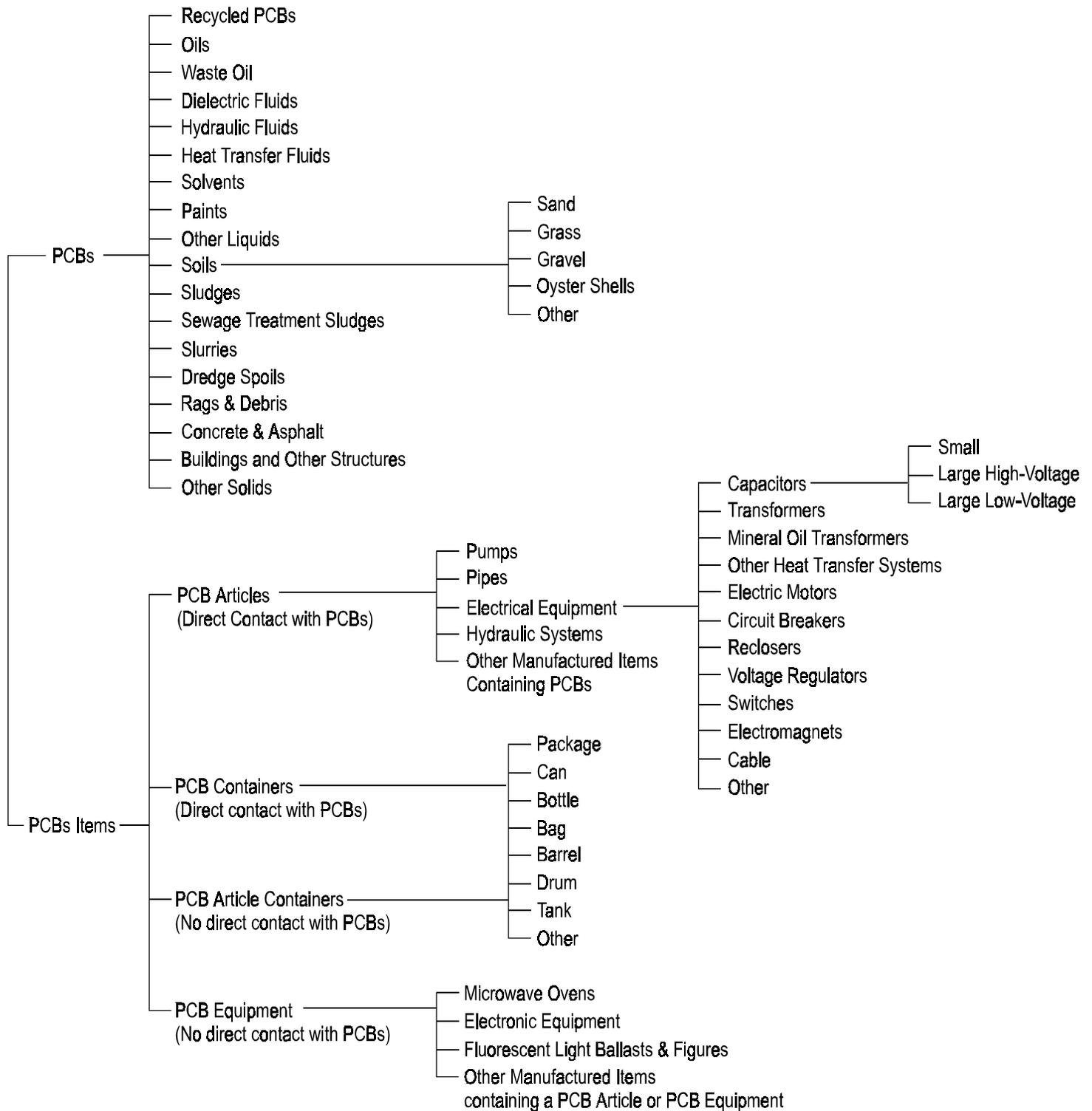
### 9.4.1 Definitions

Before gathering the data, it is necessary to address the definition of the term "equipment subject to 40 CFR Part 761." This term is confusing because it is not a regulatory term, and it is not synonymous with what appears to be the closest regulatory term, "PCB Equipment." In contrast, the regulations distinguish between equipment coming into direct contact with PCBs, so-called "PCB Articles," and that not coming into direct contact with PCBs, so-called "PCB Equipment" (see Exhibit 9-1). GSA has no intention to require certification of compliance for PCB Equipment (e.g., microwave ovens, fluorescent light ballasts and fixtures, and electronic equipment); instead it intends to focus on equipment such as transformers, switchgear, capacitors, etc. (Kwan, 1996). Much of PCB Equipment (e.g., microwave ovens and electronic equipment) is personal property (as opposed to real property), which is beyond the scope of this guidance document. Secondly, occupants, tenants, and maintenance personnel have no direct contact with PCBs in PCB Equipment. Although PCB Equipment is "equipment subject to 40 Part 761," it is only minimally regulated in contrast to the regulation of PCB Articles. Thus, henceforth, for the sake of clarity, the well-defined regulatory term PCB Articles will be used in lieu of "equipment subject to 40 CFR Part 761." The term "PCB Item" refers to PCB Articles, PCB Containers, PCB Article Containers, and PCB Equipment. For the same reasons, PCB Equipment will be ignored in the range of elements covered by "PCB Item."

### 9.4.2 Getting Started

You must understand how and where PCBs may be present at your facility. You can do so by referring to the EH-41 (formerly EH-23) *Guidance on the Management of Polychlorinated Biphenyls*, DOE/EH-0350,

# Exhibit 9-1 PCB Identification Chart



## 9. Polychlorinated Biphenyls (PCBs)

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November 1993 (see text box). The most common uses for PCBs are as dielectric fluid in transformers and other electrical equipment and as hydraulic fluid in factory machinery, elevators, and auto lifts. However, be forewarned that it is not always simple. For example, PCBs have been used in gaskets in the heating, ventilation, and air conditioning systems of certain DOE facilities constructed in the 1940s and 1950s.

**You must answer five questions for each container or equipment that could contain PCBs:**

- (1) What is the TSCA PCB category for the material or equipment?
- (2) Is the material or equipment to be managed as a waste?
- (3) What is the concentration of PCBs in the material or equipment?
- (4) Is the PCB material mixed with RCRA hazardous waste?
- (5) Is the PCB material contaminated with radioactive constituents?

Look at the PCB Identification Chart (Exhibit 9-1) for the categories of PCBs and PCB Items. Containers of PCBs should be identified by their labels; if in doubt, they should be sampled and analyzed for PCB concentration. Check to see if any equipment on site meets the criteria for a PCB Article. In many cases, subcategorization of the PCB Item and determination of the PCB concentration are necessary.

Second, determine what sections of 40 CFR Part 761 apply and whether the PCB Article is in compliance with those sections. Because determination of compliance can be rather complicated, you may want to seek the assistance of an environmental professional familiar with TSCA.

Third, if 1,000 or more kilograms of PCBs have been stored for one or more years, or of one or more pounds of PCBs have been disposed of, spilled, or released on the property, you must report this information on SF 118 (see § 9.5) and on the deed (see § 9.12). The information must be reported to

the extent that it is available on the basis of a complete search of DOE files (40 CFR 373.1).

### 9.4.3 Sources of Records on PCBs

It is prudent to conduct a preliminary records search before a physical search for the presence of and inspection of PCBs and PCB Items (see Exhibit 9-1) on the property. There are at least four types of records that you can examine to determine whether there are any PCBs stored, disposed of, or released on the property. Although some of the information in these records may seem redundant, there is no guarantee that all PCB Items will always be found through these records. Neglect or compounding of errors may preclude a PCB Container or PCB Item from being documented or reported.

First, find out if your facility has any records required by 40 CFR Part 761. A good starting point is the Annual Document Log. The Annual Document Log must list specific information about all PCBs and PCB Items that are either in service or in storage for reuse or disposal during the year. Annual Records consist of all manifests for the transport of PCBs and PCB Items, Exception Reports, One-year Exception Reports, and Certificates of Disposal generated or received at a facility during the year. Note that facilities are not required to keep Annual Document Logs and Annual Records more than three years beyond actually ceasing to store or use PCBs [see 40 CFR 761.180(b)] except that chemical waste landfills must maintain their Annual Document Logs and Annual Records at least 20 years after closure. Aside from the Annual Document Logs and Annual Records, other records include correspondence with regulatory agencies, as well as any manifest Discrepancy Report, Notification of PCB Waste Activity (EPA Form 7710-53), approval for a TSCA incinerator, and approval for a TSCA chemical waste landfill.

Second, a record of a PCB spill (including post-cleanup verification sampling data) must be retained for five years (under TSCA) after a spill, and reports of spills of more than one pound must be made to the National Response Center and to the DOE Headquarters Emergency Operations Center (DOE Order O 232.1). You can search DOE

Occurrence Notification Reports to uncover PCB spills.

Third, refer to the Annual Site Environmental Report that must be prepared by October 1 of each calendar year under DOE Order O 231.1, "Environmental, Safety, and Health Reporting," (formerly DOE Order 5400.1, "General Environmental Protection Program"). DOE M 231.1, the mandatory manual implementing the DOE Order, provides that the Annual Site Environmental Report must review the facility's compliance with all environmental requirements, discuss noncompliances, and describe corrective actions. In addition, the Compliance Summary of the Annual Site Environmental Report must discuss notices of violations issued by a regulatory agency.

Lastly, DOE's Office of Field Management (FM-20) has developed a Facilities Information Management System (FIMS) database that will include information on hazardous materials on DOE-owned, DOE-leased, GSA-assigned, and contractor-leased land, buildings, trailers, and other structures. As of August 1997, FM-20 was still working with DOE field elements to populate unclassified data for hazardous chemicals (including PCBs).

### 9.4.4 Inspection

Unfortunately, records do not provide all the information necessary for you to know whether any PCBs or PCB Articles are present or whether PCBs or PCB Articles present are in compliance. Therefore, it is necessary to conduct a physical inspection. For example, individual PCB Items and PCB Containers must be checked to determine if (1) they are properly stored, (2) they are properly marked to note the date of removal of a PCB Article or PCB fluid from service, and (3) the length of storage has not been exceeded. Again, sampling and analysis of fluids in PCB Articles and PCB Containers may be necessary to determine PCB concentration for purposes of verifying compliance. An excellent reference for inspection for PCB compliance is EPA's *TSCA Inspection Manual, Part I, Volume I*. Otherwise, you should seek the services of an environmental professional familiar with TSCA. You can use the results of the inspection either to certify compliance or bring

PCB Articles into compliance and then certify compliance with 40 CFR Part 761 (see § 9.5).

### 9.4.5 Identification of Contaminated and Uncontaminated Parcels

In addition to inspecting PCB Containers and PCB Items, be sure the following areas are also inspected: the soil and ground covering around and beneath PCB Articles, PCB Containers, and PCB storage areas. It is important to note that certifying compliance with 40 CFR Part 761 does not automatically meet the requirement of identifying parcels of land contaminated and uncontaminated by PCBs, especially where PCB Articles are absent. Therefore, it is necessary to check the soil and ground covering around and beneath containers storing hydraulic fluid, dielectric fluids, and heat transfer fluids and unmarked containers of oil-like substances and petroleum products. Have samples from stained soil and ground covering taken and analyzed. Section 6.3.2 indicated the ambiguity with which "contaminated" is defined by CERCLA § 120(h)(4) and BLM. In the absence of guidance from either source, the next best guidance is to refer to the cleanup levels specified in the TSCA Spill Cleanup Policy (40 CFR 761.125) to determine what should be regarded as contaminated or uncontaminated.

Use the identification of parcels of land contaminated by PCBs to satisfy BLM requirements (see § 9.10). Report on whether remedial action necessary to protect human health and the environment has been taken or will be completed (see § 9.5, § 9.10 and § 9.12). You can use the identification of parcels of land uncontaminated by PCBs to satisfy CERCLA § 120(h)(4) for DOE facilities being closed. The identification of parcels of land uncontaminated by PCBs (along with other hazardous substances, hazardous wastes, and petroleum products) is subject to concurrence by EPA for sites on the National Priorities List or by the appropriate State for all other sites.

EPA's ability to concur with the identification of uncontaminated parcels will depend on the information available concerning the current and historical uses of the parcel, the proximity of the parcel to sources of contamination requiring response actions, and the nature of the threat, if any,

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## 9. Polychlorinated Biphenyls (PCBs)

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resulting from the type of activity or contamination associated with the parcel (see EPA, 1994).

### 9.5 Attachments to Form 118

GSA requires certification by the responsible person that any PCB Articles on the real property comply with 40 CFR Part 761. This certification must accompany Standard Form 118 (see Appendix A). In addition, if 1,000 or more kilograms of PCBs have been stored for one or more years, or if one or more pounds of PCBs have been disposed of, spilled, or released on the property, report this information as an attachment to Form 118. In addition, report on the attachment the dates on which the threshold quantities of PCBs have been stored, disposed of, or released on the property and any remedial action that has been taken or will be completed. If no hazardous substance activity (including PCBs) took place at the property, then attach to the Form 118 the following statement:

*DOE has determined, in accordance with regulations issued by the Environmental Protection Agency at 40 CFR Part 373, that there is no evidence to indicate that hazardous substance activity took place on the property during the time the property was owned by the United States.*

### 9.6 Relationship to Environmental Baseline Survey

Note that information gathered about the presence of PCBs on a facility must also appear in an environmental baseline survey (see Chapter 12). You may conduct part of or the entire environmental baseline survey yourself. If you conduct your own environmental baseline survey, it is recommended that you follow ASTM E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process." Alternatively, you may have an environmental professional, such as an environmental auditor, conduct the assessment in accordance with ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process." The use of an environmental professional with expertise in PCBs is recommended to avoid overlooking an item that could be regulated under 40 CFR Part 761 or if

you do not know whether an item regulated under 40 CFR Part 761 is in compliance.

### 9.7 Relationship to Occupational Safety and Health Baseline Survey

Include the information gathered about the presence of PCBs on a facility in any occupational safety and health baseline survey for the property. Workers who inspect, service, transport, or operate equipment with PCBs require the Hazard Communication Standard training under the Occupational Safety and Health Administration (OSHA) regulations at 29 CFR 1910.1200. Workers who clean up spills or respond to releases of PCBs require the Hazardous Waste Worker and Emergency Response Operations Standard training under regulations at 29 CFR 1910.120.

### 9.8 Relationship to NEPA Documents

A NEPA document prepared for a proposed real property transfer must address the existence of PCBs. Examples of when PCBs could be an issue include: (1) they are the subject of an enforcement action, remediation, or removal action to be completed for the real property transfer; (2) there is a change in the status of PCBs or equipment with PCBs when the property is transferred; or (3) the public or stakeholders express a concern about PCBs (for example, during a scoping meeting or as a comment).

### 9.9 Leases and Other Outgrants

Notify the appropriate state officials of any lease of DOE real property on which PCBs have been stored beyond one year, disposed of, or released if the lease encumbers the property beyond the date of termination of operations on the property. The notification must be made before entering into the lease and must include information on the length of the lease, name of the lessee(s), and the uses allowed by the lease.

Although not required, it is a best management practice to notify the lessees, occupants, or tenants of the locations of PCB Articles. If the PCB Articles are a part of the real property included in

the lease (e.g., a substation), make available copies of service, inspection, and maintenance records.

### **9.10 Notice of Intention to Relinquish**

If the real property being declared excess is withdrawn land, the Notice of Intention to Relinquish to be prepared and submitted to the Bureau of Land Management must include any information on the extent of PCB contamination and measures that have been taken or will be taken for decontamination. As explained in § 1.6.2, contamination is one of the 13 items that must be addressed although there is no specific standard form for providing the information. BLM does not define contamination, but refer to the cleanup levels specified in the TSCA Spill Cleanup Policy (40 CFR 761.125) to determine what should be regarded as contaminated or uncontaminated.

### **9.11 Invitation for Bids/Offers**

If the storage, release, or disposal of PCBs (or any hazardous substance) was reported in the attachment to Form 118 (see § 9.5), then GSA requires that the disposal agency (itself or DOE, as the case may be) incorporate in the Invitation for Bids/Offers to Purchase this information with the following statements (as prescribed in 41 CFR 101-47.304-14):

***NOTICE REGARDING HAZARDOUS SUBSTANCE ACTIVITY:***

*The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h).*

*The holding agency (i.e., DOE) advises that (provide information on the type and quantity of hazardous substances; the time at which storage, release, or disposal took place; and a description of the remedial action taken.)*

*All remedial action necessary to protect human health and the environment with respect to the hazardous substance activity during the time the property was owned by the United States has been taken. Any additional remedial action found to be necessary shall be conducted by the United States.*

In the case where the purchaser is a potentially responsible party with respect to PCBs, you must modify the above statement to represent the liability of the potentially responsible party for any remedial action.

### **9.12 Requirements for the Contract and Deed**

If 1,000 or more kilograms of PCBs have been stored for one or more years, or if one or more pounds of PCBs have been disposed of, spilled, or released on the property, 40 CFR 373.3 and CERCLA § 120(h)(1) and (3) require you to report in the contract (for sale, lease, or other transfer) and deed for the property the following information:

- (1) Name of the hazardous substance (i.e., PCBs) and regulatory synonym (i.e., polychlorinated biphenyls), and the Chemical Abstracts Service Registry Number (i.e., 1336-36-3).
- (2) Quantity (in kilograms and pounds) of the PCBs stored for one or more years, or known to have been disposed of, spilled, or otherwise released on the property.
- (3) Dates on which PCB storage, release, or disposal occurred.
- (4) Description of remedial action (if any). [This description is not required by 40 CFR Part 373 but by CERCLA § 120(h)(3)(A)(i)(III) to be put in the deed only.]
- (5) The following statement: "The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. Section 9620(h)." [This statement is not required by CERCLA § 120(h)(1) or (3) but by 40 CFR 373.3 to be put on the contract (for sale, lease, or other transfer only).]

In addition, you must attach a covenant to the property deed (not required for leases) if the

## 9. Polychlorinated Biphenyls (PCBs)

property is not being transferred to a potentially responsible party with respect to the real property. The covenant must warrant the following pursuant to CERCLA § 120(h)(3)(A)(ii) and (iii):

- (1) *All remedial action necessary to protect human health and the environment from PCBs remaining on the property has been taken before the date of the property transfer. (Note: all remedial action has been considered taken if the construction and installation of an approved remedial design has been completed and the remedy has been demonstrated to EPA to be operating properly and successfully. The carrying out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to EPA to be operating properly and successfully does not preclude the property transfer.)*
- (2) *Any additional remedial action found to be necessary after the date of property transfer shall be conducted by the United States.*
- (3) *Permission granting the United States access to the real property in any case in which remedial or corrective action is found to be necessary after the property transfer.*

See § 14.3.4 for how paragraph (1) above of the covenant statement may be deferred under CERCLA § 120(h)(3)(C).

In addition, EPA is proposing certain deed restrictions after certain PCB remedial activities (see text box).

### 9.13 Notification of Change in Ownership

Notify the appropriate EPA Regional Administrator of a change in facility status with respect to PCBs. Such a change includes a change in ownership as well as activities associated with a change in ownership (e.g., termination of PCB waste handling activities or initiation of disposal activities). On behalf of the DOE facility, you should indicate in a cover letter the changes that will take place.

Specify that an amended form (e.g., a Form 7710-53, TSCA incinerator approval, or TSCA chemical waste landfill approval) is being re-submitted in order to revise the original form. The steps for transfer of ownership or operation of a TSCA incinerator are prescribed in 40 CFR 761.70(d)(8). The steps for transfer of ownership or operation of a TSCA chemical waste landfill are prescribed in

#### Deed Restriction After Certain PCB Remedial Activities

EPA is proposing in its notice of rulemaking on the disposal of PCBs (59 FR 62864 of December 6, 1994) that a restriction be placed on deeds of properties that are required to have caps or fences. Caps or fences would be required if certain cleanup levels are not achieved after PCB remediation. The provision at 40 CFR 761.61(a)(4)(iv)(A) would require within 30 days of completion of a PCB remediation activity, two actions: (1) a notice of the existence of any cap or fence in the deed by the property owner, and (2) the requirement to maintain the cap or fence in accordance with 40 CFR 761.61(a)(4)(iii). In addition, the EPA Regional Administrator may request a copy of the above notice within 60 days of completion of the PCB remediation.

The provision at 40 CFR 761.61(a)(4)(iv)(B) would allow the owner to remove the cap or fence after conducting additional remedial activities and achieving the cleanup levels specified for the absence of a cap or fence. The owner would be required to remove the notice on the deed no earlier than 30 days after achieving the aforementioned cleanup levels.

Generally, it is not legally permissible for a notice to be physically placed on a deed after it is recorded. A way to insure that the requirement of maintaining a cap or fence (for perpetuity if the prescribed cleanup levels are not achieved) is placed on the deed is to record a separate notice that refers to the deed so that the requirement will appear in the chain of the title when a title search is conducted.

On behalf of DOE, EH-41 urged EPA, in its comment package of June 8, 1995, to allow 180 days or an exemption for Federal facilities for recording the notice because of two impediments. One is that most states require inclusion of the property description in recording the notice. Second is the impracticality of recording such a notice within 30 days of completing a remediation activity.

40 CFR 761.75(c)(7).

In particular, you should notify the appropriate EPA Regional Administrator of any change in ownership of lower secondary voltage network PCB Transformers (see glossary) in use in or near

**Transfer of Ownership of Commercial Storage Facilities**

DOE facilities that store more than 500 liquid gallons of PCBs at any time and store PCB waste generated by a source other than DOE or a DOE contractor, including other Federal facilities, are considered commercial storage facilities. EPA's proposed rulemaking at 40 CFR 761.65(j) (59 FR 62867 of December 6, 1994) affects transfers of ownership of commercial storage facilities. In order for a non-Federal government person to receive ownership of a commercial storage facility from a Federal agency (i.e., DOE), EPA would require the new owner to establish financial assurance, complete an amended application for storage approval, and resolve any deficiencies in DOE's original application or operation of the facility. These three conditions would apply regardless of whether the status with respect to DOE's original application for operating the facility was interim or final approval. (All existing commercial storage facilities had until August 2, 1990 to submit an application and receive interim status until the application was formally approved or denied.)

To facilitate the transfer of ownership, EPA would allow the new owner to amend the appropriate parts of the original application instead of requiring an entirely new application. EPA indicated it would approve or deny the transfer of ownership of the facility within 90 days of receipt of the amended application.

commercial buildings which have not been protected as specified in 40 CFR 761.30(a)(1)(iv)(A) and which are not located in sidewalk vaults.

You should notify in writing the fire response personnel with primary jurisdiction of any change in ownership of a PCB Transformer (see glossary). According to 40 CFR 761.30(a)(1)(vi), all PCB Transformers must be registered with the fire department or fire brigade which would normally be called upon for the initial response to a fire involving the equipment.

You should be aware of a proposed rulemaking concerning commercial storage facilities (see text box).

**9.14 Checklist**

- Have there been any PCBs or is there any equipment with PCBs on the real property? (If not, stop here.)
- Is the PCB material or equipment in compliance with the applicable regulations in 40 CFR Part 761 for the TSCA PCB category for that material or equipment?
- If not in compliance, what does it take to bring it into compliance?
- Has a Certification for Compliance with 40 CFR Part 761 been completed and included in the submission package described in § 9.5 for real property being declared as excess?
- Have the PCB data gathered on the real property being declared as excess been included in the environmental site assessment or environmental baseline survey?
- Have the PCB data gathered on the real property being declared as excess been included in the occupational safety and health baseline survey?
- If PCBs are an issue in an environmental assessment or environmental impact statement, have the PCB data gathered on the real property been included?
- If the real property is being offered for lease, have the appropriate State officials been notified as described in § 9.9?
- If the real property is being offered for lease, license, or permit (see glossary), will the tenants and occupants be informed about the presence and location of PCBs and PCB Articles as a best management practice?

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- If the real property being declared excess is withdrawn land, have data on the extent of PCB contamination and PCB decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
  - Have the PCB data gathered on the real property being declared as surplus been included in the Invitation for Bids/Offers described in § 9.11?
  - Have the PCB data gathered on the real property and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 9.12?
  - Has the appropriate EPA Regional Administrator been notified of any changes in ownership affecting the status of PCBs, PCB activities, and unprotected, lower secondary voltage network PCB Transformers in or near commercial buildings?
  - Has the fire department or fire brigade that would normally be called upon for the initial response to a fire involving a PCB Transformer been notified of any change in ownership concerning the equipment?
- DOE, 1995. *Management of PCB Laboratory Waste*, Information Brief, EH-413-061/1195, U.S. Department of Energy, Office of Environmental Policy and Assistance, EH-413, RCRA/CERCLA Division, November 1995.
- DOE, 1993. *Guidance on the Management of Polychlorinated Biphenyls*, DOE/EH-0350, U.S. Department of Energy, Office of Environmental Guidance, EH-413, RCRA/CERCLA Division November 1993.
- EPA, 1994. "Military Base Closures: Guidance on EPA Concurrence in the Identification of Uncontaminated Parcels Under CERCLA § 120(h)(4)," Memorandum from Elliott P. Laws, Assistant Administrator, Office of Solid Waste and Emergency Response to Waste Management Directors (Regions I-X), Regional Counsels (Regions I-X), and the Federal Facilities Leadership Council, April 19, 1994.
- Kwan, Q.Y., 1996. personal communication with John Martin, Environmental Specialist, Property Disposal Division, General Services Administration, August 26, 1996.
- EPA, 1987. *TSCA Inspection Manual. Part I. Volume II. PCB Inspection Manual*. U.S. Environmental Protection Agency, Pesticides and Toxic Substances Enforcement Division, November 1987.

### 9.15 References

- ASTM, 1994. "Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process," American Society for Testing and Materials Standard E-1527-94, June 1994.
- ASTM, 1993. "Standard Practice for Environmental Site Assessments: Transaction Screen Process," American Society for Testing and Materials Standard E-1528-93, May 1993.
- DOE, 1996. *Technical Assistance Project: PCB Regulations and Their Application to Deactivation and Decommissioning Activities*, U.S. Department of Energy, Office of Environmental Policy and Assistance, EH-413, RCRA/CERCLA Division, April 1996.

# 10. ASBESTOS

## 10.1 Introduction

Asbestos is a naturally occurring mineral which is distinguished by its crystalline form consisting of long, thin, thread-like fibers. There are two groups of asbestos minerals -- serpentine and amphibole. The serpentine group consists of only one mineral -- chrysotile, which accounts for 95% of the asbestos found in buildings in the U.S. The amphibole group consists of five minerals: amosite ("brown asbestos," the second most common), crocidolite ("blue asbestos"), anthophyllite, tremolite, and actinolite (the last three are extremely rare).

Asbestos has been used commercially in the U.S. since the early 1900s. Asbestos found widespread popularity because it is noncombustible and corrosion-resistant and has high tensile strength and low electrical conductivity. Asbestos has been mixed with various binders to create over 3,000 different commercial products. U.S. consumption of asbestos peaked at 800,000 tons in the early 1970s. Since then consumption has steeply plummeted due to concerns of potential health hazards and ensuing liability. Although in 1989 EPA banned the importing, manufacturing, and processing of asbestos over a period of seven years, much of the asbestos originally installed in buildings may still be present. The EPA categories of asbestos-containing materials (ACM) are shown in the text box.

The potential for an ACM to pose a health problem depends on its friability. A friable ACM means that the material can be crumbled with hand pressure, and therefore is likely to release fibers. The primary route of entry of asbestos fibers into the human body is inhalation. Inhalation of airborne asbestos fibers can result in a noncancerous respiratory disease called asbestosis, which consists of scarring of lung tissue accompanied by shortness of breath. Asbestos is known for causing cancer, especially lung cancer and mesothelioma (a cancer of the thin membrane lining of the chest and abdomen). Thus, friable asbestos is listed as a CERCLA hazardous substance (40 CFR 302, Table 302.4) with a Reportable Quantity of one pound.

### EPA Categories of Asbestos-Containing Materials (ACM)

- Surfacing materials -- ACM sprayed or troweled on surfaces (such as walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This category includes plaster and insulation.
- Thermal system insulation -- ACM used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold fluid systems and heating, ventilation, and air conditioning (HVAC) systems. This category includes pipe lagging and pipe wrap; block, batt, and blanket insulation; cements and "muds;" and a variety of other products such as gaskets and "ropes."
- Miscellaneous materials -- Other, largely nonfriable products and materials such as floor tile, ceiling tile, and cement pipe.

As a result of the health hazard concerns, EPA began regulating asbestos under the National Emission Standards for Hazardous Air Pollutants (under the Clean Air Act) in 1971. The Occupational Safety and Health Administration (OSHA) issued a standard of 2 fibers/cubic centimeter for asbestos exposure in 1972 that was tightened to 0.2 fibers/cubic centimeter in 1986. In 1977, the Consumer Product Safety Commission prohibited asbestos in consumer patching compounds. In 1986, Congress passed the Asbestos Hazard Emergency Response Act (AHERA), amending TSCA, to regulate the inspection of all schools; implementation of response actions; and establishment of operations and maintenance and training programs.

In 1990, Congress enacted the Asbestos School Hazard Abatement Reauthorization Act (ASHARA), again amending TSCA; it extends the AHERA regulations (see 59 FR 5236 of February 3, 1994) on training and accreditation to persons performing asbestos work on public and commercial buildings. TSCA Section 202(10) defines a public or commercial building as "any

## 10. Asbestos

building which is not a school building, except that the term does not include any residential apartment building of fewer than 10 units." Thus, the requirement to use AHERA-accredited personnel applies to virtually all DOE facilities.

DOE EH-413 has produced an Information Brief on asbestos entitled, *Regulatory Requirements Affecting the Disposal of Asbestos-Containing Waste*. DOE field elements should be aware that not only can asbestos be present within buildings but that there may also be asbestos disposal sites on their property. For example, Nevada Test Site has received low-level radioactive, nonfriable asbestos waste from Fernald for disposal. Savannah River Site, Los Alamos National Laboratory, and a few other DOE sites dispose of nonradioactive and low-level radioactive asbestos onsite.

### 10.2 Drivers for the Requirements

There are several mandates that drive the need to comply with requirements with respect to asbestos in real property transfers. The GSA regulations are the primary driver for singling out asbestos for separate additional consideration. The GSA regulations are found at 41 CFR 101-47.202-2(b)(9) & 41 CFR 101-47.304-13. CERCLA § 120(h) implemented via EPA regulations at 40 CFR Part 373 and BLM regulations at 43 CFR 2372.1 all apply to friable asbestos.

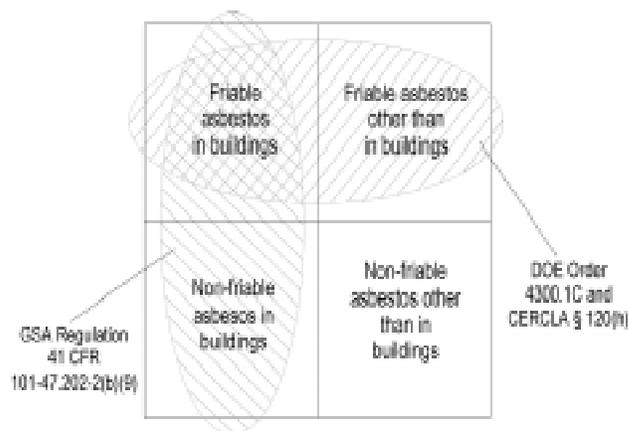
### 10.3 Requirements in Real Property Transfers

The GSA regulations require a complete record survey of all buildings and facilities to determine (1) the type, location, and condition of ACM; (2) measures to control the asbestos (e.g., an asbestos operations and maintenance plan); and (3) costs and time necessary to remove all or portions of ACM. However, satisfying the GSA requirement for a survey of buildings and facilities only partially satisfies the other requirements regarding asbestos (see Exhibit 10-1).

Compliance with CERCLA § 120(h)(4) and (5) calls for an investigation of friable asbestos, regardless of whether it is in buildings or in the

ground. CERCLA § 120(h)(1), (3), (4), and (5) require identification of uncontaminated parcels of land (see § 10.4.3), notification of leases (see § 10.8), reporting data on deeds (see § 10.11), and placing a covenant in deeds (see § 10.11). BLM requires identification of contaminated parcels in withdrawn land being returned to the public domain and a statement of the extent to which decontamination has taken place or will take place (see § 10.9).

One issue that must be addressed is the threshold quantity. As mentioned in § 6.3, this quantity was not defined for the purposes of implementing CERCLA § 120(h)(4) and (5). Thus, in § 6.3 it was strongly recommended that the threshold quantities for implementing CERCLA § 120(h)(4) and (5) be consistent with those established by EPA in 40 CFR Part 373 for CERCLA § 120(h)(1). However, this recommendation is not suitable for ACM because it would not be protective of human health in light of the OSHA standard of 0.2 fibers/cubic centimeter. The potential to create an environment of 0.2 fibers/cubic centimeter is present wherever there is any damaged ACM inside a building intended for human occupancy. Therefore, it is argued that the threshold quantity for ACM, for the purposes of implementing CERCLA § 120(h)(4) and (5), should be replaced by the presence of any damaged ACM inside a building intended for human occupancy. Damaged ACM can be determined by a records



**Exhibit 10-1. Domains of Asbestos Requirements with Respect to Real Property**

search, but it must be updated by inspection. The threshold quantities for friable asbestos in all other places should be the same as for CERCLA § 120(h)(1) and (3): storage of 1,000 or more kilograms for one or more years and the release or disposal of one or more pounds.

## 10.4 Data Gathering

### 10.4.1 Records

The easiest way to comply with the GSA requirements is first to determine the age of each building or facility. As a rule-of-thumb, buildings or facilities constructed after 1990 do not contain ACM. For older buildings and facilities, conduct a records search with the objective of locating an asbestos survey and inspection report for each building or facility on the property. There may be a comprehensive survey and report covering all buildings and facilities. Such a survey or surveys should be recent (i.e., within the last few years) and should have been conducted by an AHERA-accredited inspector. Before 1990, it was a best management practice to utilize an AHERA-accredited inspector; it is now a mandatory practice due to ASHARA.

You will also need to conduct a search of records to ascertain whether 1,000 or more kilograms of friable asbestos have been stored for one or more years, or if one or more pounds of friable asbestos have been disposed of or otherwise released on the property. "Stored" means the holding of friable asbestos for a temporary period, at the end of which the friable asbestos is used, disposed of, or stored elsewhere (40 CFR 373.4). Because releases of one or more pounds of friable asbestos must be reported to the National Response Center and to the DOE Headquarters Emergency Operations Center (DOE Order O 232.1), searches of records should include DOE Occurrence Notification Reports. You need this information to fulfill the CERCLA § 120(h)(1) and (3) requirements (see § 10.11 below).

### 10.4.2 Inspection

It is a best management practice to have an AHERA-accredited inspector conduct a survey of all buildings and facilities to determine the type, location, and condition of all ACM. Although GSA does not require an actual physical survey,

CERCLA § 120(h) requires information on friable asbestos, which cannot be determined without an actual inspection of the condition of the asbestos. An AHERA-accredited inspector is trained and experienced to recognize the most likely places in a building or facility where ACM would be used, identify trade names associated with ACM, assess the condition (friable, non-friable) of any ACM or suspected ACM, assign one of the seven categories (see Exhibit 10-2) of damaged asbestos-containing building material (ACBM) or damaged suspected ACBM, and employ proper sampling protocols (see *Asbestos in Buildings: Simplified Sampling Scheme for Friable Surface Materials*).

Positive identification of asbestos requires laboratory analysis of samples. Standard laboratory analysis using polarized light microscopy is the most inexpensive. A better but much more expensive laboratory analysis uses transmission electron microscopy, which can distinguish extremely thin asbestos from nonasbestos fibers. You should receive the results of the inspection and laboratory analyses in a report (see text box).

#### An asbestos inspection and laboratory analysis report should contain the following:

- A list of identified homogeneous areas classified by type of material (surfacing, thermal system insulation, or miscellaneous).
- The location of homogeneous sampling areas and individual sampling areas, and the location of both friable and non-friable suspected ACM with the sampling dates.
- Approximate square or linear footage of any area sampled for suspected ACM.
- A copy of the laboratory analyses for each bulk sample and conclusion as to the presence of asbestos in each area sampled. The sampling dates must be included.
- The physical assessment of ACBM and suspected ACBM and assignment of one of the seven categories of damaged ACBM or suspected ACBM (see Exhibit 10-2).

### Exhibit 10-2. Seven Categories of Damaged ACBM and the Required Responses

Damage Type	Definition	Required Response
Damaged or significantly damaged thermal insulation	Insulation has lost structural integrity, or its covering (in whole or part) is crushed, gouged, water-damaged, with ends exposed such that (1) it is not able to contain fibers and/or (2) debris is present.	<ul style="list-style-type: none"> <li>• As a minimum, repair damage</li> <li>• Remove damaged material</li> <li>• Maintain asbestos thermal system insulation intact</li> </ul>
Damaged friable surface material	Material which has deteriorated or sustained physical injury such that the cohesion is inadequate; it has delaminated so that its bond to the substrate is inadequate; or it is flaked, has suffered physical impact, or is covered with debris.	<ul style="list-style-type: none"> <li>• Encapsulate, enclose, and/or remove</li> </ul>
Significantly damaged friable surface material	Surfacing material is extensively and severely damaged friable in a functional space.	<ul style="list-style-type: none"> <li>• Isolate if needed to protect health</li> <li>• Encapsulate, enclose, and/or remove</li> </ul>
Damaged miscellaneous materials or significantly damaged miscellaneous materials	Material with inadequate cohesion or adhesion properties, as illustrated by flaking, separation in layers, blistering, or crumbling.	<ul style="list-style-type: none"> <li>• Encapsulate, enclose, and/or remove</li> </ul>
	Damage is extensive and severe.	<ul style="list-style-type: none"> <li>• Isolate if needed to protect health</li> <li>• Encapsulate, enclose, and/or remove</li> </ul>
Potential damage	Friable ACBM in area regularly used by building occupants and there is reasonable likelihood that the material will become damaged, deteriorated, or delaminated.	<ul style="list-style-type: none"> <li>• Prepare an Operations &amp; Maintenance Plan</li> <li>• Take preventive measures</li> <li>• Remove as appropriate</li> </ul>
Significant potential damage	Friable ACBM in area regularly used by building occupants where there is reasonable likelihood of damage and where material is subject to continuing disturbance (from air erosion, vibration, accessibility, etc.).	<ul style="list-style-type: none"> <li>• Prepare an Operations &amp; Maintenance Plan</li> <li>• Take preventive measures</li> <li>• Remove</li> </ul>
Any remaining friable ACBM	Any friable ACBM not covered above	<ul style="list-style-type: none"> <li>• Response action not defined</li> <li>• Prepare an Operations &amp; Maintenance Plan, encapsulate, enclose, and/or remove</li> </ul>

Furthermore, ask the AHERA-accredited inspector to provide estimates of the costs and time necessary for AHERA-accredited personnel to remove all or part of the ACM in order to comply with the GSA requirement. AHERA-accredited personnel are not required for work on asbestos-containing roofing or siding that are on the exterior of a building (59 FR 5238.)

### **10.4.3 Identification of Contaminated and Uncontaminated Parcels**

In addition to asbestos within buildings, friable asbestos contamination on the property may be present. Investigate the origin of any fill dirt that has been brought onto the property to ascertain whether the dirt originated from a contaminated site. If any structures have been demolished on the property, find out whether the structures were demolished in place and fill dirt compacted over them because the demolition debris may contain friable asbestos. Check analogous situations for debris from remodeling. Identify any asbestos disposal sites on the property. By this process, you or the AHERA-accredited inspector can make an identification of parcels of land contaminated by friable asbestos as well as parcels of land uncontaminated by friable asbestos.

Assuming that the presence of damaged ACM inside buildings, the storage of 1,000 or more kilograms of friable asbestos for one or more years, or the release or disposal of one or more pounds of friable asbestos into the ground or water signifies contamination, you can identify parcels of contaminated land. You can use this identification to satisfy BLM requirements (see § 10.9). Using the inverse of the same criteria, you can identify parcels of land uncontaminated by friable asbestos to satisfy CERCLA § 120(h)(4) for facilities being closed. The identification of parcels of land uncontaminated by friable asbestos, as with the other hazardous substances, hazardous wastes, and petroleum products, is subject to concurrence by EPA for sites on the National Priorities List or by the appropriate state for all other sites.

EPA's ability to concur with the identification of uncontaminated parcels will depend on the information available concerning the current and historical uses of the parcel, the proximity of the

parcel to sources of contamination requiring response actions, and the nature of the threat, if any, reasonably associated with the type of activity or contamination associated with the parcel (see EPA, 1994).

## **10.5 Relationship to Environmental Baseline Survey**

Be sure that information gathered about the presence of friable asbestos on a facility appears in an environmental baseline survey (see Chapter 12). You may conduct part of or the entire environmental baseline survey yourself. If you conduct your own environmental baseline survey, it is recommended that you follow ASTM E-1528-93 Standard, "Standard Practice for Environmental Site Assessments: Transaction Screen Process." Alternatively, you may have an environmental professional, such as an environmental auditor, conduct the assessment in accordance with ASTM E-1527-94 Standard, "Standard Practice for Environmental Site Assessments: Phase I Environment Site Assessment Process."

## **10.6 Relationship to Occupational Safety and Health Baseline Survey**

Be sure that information gathered about the presence of friable asbestos in a building also appears in the occupational safety and health baseline survey for the property. Workers with responsibilities for building maintenance, repair, alteration, construction, and installation (including electrical, telephone, heating, ventilation, air conditioning, and plumbing lines) are subject to two Occupational Safety and Health Administration (OSHA) standards. One is the OSHA Construction Industry Standard for Asbestos found at 29 CFR 1926.58, and the other is the OSHA Respiratory Protection Standard found at 29 CFR 1910.134.

## **10.7 Relationship to NEPA Documents**

A NEPA document prepared for a proposed real property transfer must address the existence of friable asbestos. Friable asbestos could be an issue if (1) it is the subject of a remediation or removal

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## 10. Asbestos

action to be completed for the real property transfer, (2) there is a change in the status of ACM (e.g., demolition or remodeling) when the property is transferred, or (3) the public or stakeholders express a concern about ACM (for example, during a scoping meeting or as a comment).

### 10.8 Leases and Other Outgrants

You may use the following features as signs of contamination: (1) damaged ACM inside buildings (see Exhibit 10-2), or (2) the release or disposal of one or more pounds of friable asbestos into the ground or water. Using these features, you can designate parcels of contaminated land. Notify the appropriate state official(s) of any lease of DOE real property on which there has been asbestos contamination if the lease encumbers the property beyond the date of termination of operations on the property. Make the notification before entering into the lease and include information on the length of the lease, name of the lessee(s), and the uses allowed by the lease. This notification is required by CERCLA § 120(h)(5).

Although not required, it is a best management practice to notify the lessees, occupants, or tenants of the locations of ACM and make available copies of asbestos surveys, inspection and analysis reports, and asbestos operations and maintenance plans.

### 10.9 Notice of Intention to Relinquish

If the real property being declared excess is withdrawn land, the Notice of Intention to Relinquish to be prepared and submitted to the Bureau of Land Management must include any information on the extent of contamination and measures that have been taken or will be taken for decontamination. As explained in § 1.6.2, contamination is one of the 13 items that must be addressed, although there is no specific standard form for providing the information.

### 10.10 GSA-Specific Requirements

GSA requires that the following information be attached to the Standard Form 118 (Appendix A) for the real property being declared excess: (1) the type, location, and condition of asbestos, (2)

asbestos control measures (e.g., an asbestos operations and maintenance plan), and (3) costs and time required for asbestos abatement. In addition, if asbestos is present on the real property, GSA requires that the disposal agency (itself or DOE, as the case may be) insert into the Invitation for Bids/Offer to Purchase a Notice of the Presence of Asbestos. The exact wording of the Notice, as prescribed in 41 CFR 101-47.304-13, is as follows:

#### *NOTICE OF THE PRESENCE OF ASBESTOS-- WARNING*

- (a) The Purchaser is warned that the property offered for sale contains asbestos-containing materials. Unprotected or unregulated exposures to asbestos in product manufacturing, shipyard, and building construction workplaces have been associated with asbestos-related diseases. Both the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) regulate asbestos because of the potential hazards associated with exposure to airborne asbestos fibers. Both OSHA and EPA have determined that such exposure increases the risk of asbestos-related diseases, which include certain cancers and which can result in disability or death.*
- (b) Bidders (Offerors) are invited, urged, and cautioned to inspect the property to be sold prior to submitting a bid (offer). More particularly, bidders (offerors) are invited, urged, and cautioned to inspect the property as to its asbestos content and condition and any hazardous or environmental conditions relating thereto. The disposal agency will assist bidders (offerors) in obtaining any authorization(s) which may be required in order to carry out any such inspection(s). Bidders (offerors) shall be deemed to have relied solely on their own judgment in assessing the overall condition of all or any portion of the property including, without limitation, any asbestos hazards or concerns.*
- (c) No warranties either expressed or implied are given with regard to the condition of*

*the property including, without limitation, whether the property does or does not contain asbestos or is or is not safe for a particular purpose. The failure of any bidder (offeror) to inspect, or to be fully informed as to the condition of all or any portion of the property offered will not constitute grounds for any claim or demand for adjustment or withdrawal of a bid or offer after its opening or tender.*

*(d) The description of the property set forth in the Invitation for Bids (Offer to Purchase) and any other information provided therein with respect to said property is based on the best information available to the disposal agency and is believed to be correct, but an error or omission, including but not limited to the omission of any information available to the agency having custody over the property and/or any other Federal agency, shall not constitute grounds or reason for nonperformance of the contract of sale, or any claim by the Purchaser against the Government including, without limitation, any claim for allowance, refund, or deduction from the purchase price.*

*(e) The Government assumes no liability for damages for personal injury, illness, disability or death, to the Purchaser, or to the Purchaser's successors, assigns, employees, invitees, or any other person subject to Purchaser's control or direction, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the property which is the subject of this sale, whether the Purchaser, its successors or assigns has or have properly warned or failed properly to warn the individual(s) injured.*

*(f) The Purchaser further agrees that in its use and occupancy of the property it will*

*comply with all Federal, state, and local laws relating to asbestos.*

## **10.11 Requirements for the Contract and Deed**

If 1,000 or more kilograms of friable asbestos have been stored for one or more years, or if one or more pounds of friable asbestos have been disposed of or otherwise released on DOE property, 40 CFR 373.3 and CERCLA § 120(h)(1) and (3) state that you must report the following information in the contract (for sale, lease, or other transfer) and deed for the disposed property:

- (1) Name of the hazardous substance (i.e., friable asbestos) and regulatory synonym (i.e., asbestos); and the Chemical Abstracts Service Registry Number (i.e., 1332-21-4).
- (2) Quantity (in kilograms and pounds) of the friable asbestos stored for one or more years, or known to have been disposed or released on the property.
- (3) Dates on which friable asbestos storage, release, or disposal occurred.
- (4) Description of remedial action (if any).  
[This description is not required by 40 CFR Part 373 but is by CERCLA § 120(h)(3)(A)(i)(III) to be put in the deed only.]
- (5) The following statement: "The information contained in this notice is required under the authority of regulations promulgated under section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. section 9620(h)."  
[This statement is not required by CERCLA § 120(h)(1) or (3) but by 40 CFR 373.3 to be put on the contract (for sale, lease, or other transfer only).]

In addition, you must attach a covenant to the property deed (not required for leases) if the property is not being transferred to a potentially responsible party with respect to the real property.

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The covenant must warrant the following pursuant to CERCLA § 120(h)(3)(A)(ii) and (iii):

- (1) *All remedial action necessary to protect human health and the environment from friable asbestos remaining on the property has been taken before the date of the property transfer. (Note: all remedial action has been considered taken if the construction and installation of an approved remedial design has been completed and the remedy has been demonstrated to EPA to be operating properly and successfully. The carrying out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to EPA to be operating properly and successfully does not preclude the property transfer.)*
- (2) *Any additional remedial action found to be necessary after the date of property transfer shall be conducted by the United States.*
- (3) *Permission granting the United States access to the real property in any case in which remedial or corrective action is found to be necessary after the property transfer.*

See § 14.3.4 for how paragraph (1) above of the covenant statement may be deferred under CERCLA § 120(h)(3)(C).

### 10.12 Checklist

- Is there any asbestos on the real property? (If not, stop here.)
- What is the type, location, and condition (friable, non-friable) of each individual ACM item or homogeneous ACM area for each building or facility?
- Have materials suspected of containing asbestos been sampled and analyzed?
- Have all individual and homogeneous sampling areas suspected or confirmed as ACBM been assessed and assigned one of the seven categories of damage?
- Have the friable asbestos data gathered on the real property been included in the environmental baseline survey?
- If friable asbestos is an issue in an environmental assessment or environmental impact statement, have the friable asbestos data gathered on the real property been included?
- If the real property is being offered for lease, have the appropriate state officials been notified as described in § 10.8?
- If the real property is being offered for lease, license, or permit (see glossary), will the tenants and occupants be informed about the presence and location of friable asbestos and equipment with friable asbestos as a best management practice?
- If the real property being declared excess is withdrawn land, have data on the extent of contamination and decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- If the real property is being declared excess or is a return of withdrawn land rejected by BLM, have the data on the type, location, and condition of asbestos been attached to Standard Form 118?
- If the surplus real property is offered for disposal, has a Notice of the Presence of Asbestos been included in the Invitation for Bids/Offer to Purchase?
- Have the friable asbestos data gathered on the real property and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 10.11?

### 10.13 References

- ASTM, 1994. "Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process," American Society for Testing and Materials Standard E-1527-94, June 1994.
- ASTM, 1993. "Standard Practice for Environmental Site Assessments: Transaction Screen Process," American Society for Testing and Materials Standard E-1528-93, May 1993.
- DOE, 1995. *Regulatory Requirements Affecting the Disposal of Asbestos-Containing Waste*, EH-413-062/1195, U.S. Department of Energy, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, EH-412, November 1995.
- EPA, 1994. "Military Base Closures: Guidance on EPA Concurrence in the Identification of Uncontaminated Parcels Under CERCLA § 120(h)(4)," Memorandum from Elliott P. Laws, Assistant Administrator, Office of Solid Waste and Emergency Response to Waste Management Directors (Regions I-X), Regional Counsels (Regions I-X), and the Federal Facilities Leadership Council, April 19, 1994.
- EPA, 1988. *Asbestos-In-Schools: A Guide to New Federal Requirements for Local Education Agencies*, U.S. Environmental Protection Agency, Office of Toxic Substances, February 1995.
- EPA, 1988. *Asbestos Waste Management Guidance*, EPA/530-SW-85-007, U.S. Environmental Protection Agency, U.S. Environmental Protection Agency, Office of Solid Waste, May 1986.
- EPA, 1985. *Asbestos in Buildings: Simplified Sampling Scheme for Friable Surface Materials*, EPA/5-85-030a, U.S. Environmental Protection Agency, October 1985.

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# 11. ENVIRONMENTAL PERMITS

## 11.1 Introduction

### 11.1.1 Background

In the 1970s, Congress passed or amended a number of environmental protection statutes, beginning with the Clean Air Act (CAA) in 1970 and the Federal Water Pollution Control Act [renamed the Clean Water Act (CWA)] in 1972. For the protection of groundwater, Congress enacted the Safe Drinking Water Act (SDWA) in 1975. With the passage of the Resource Conservation and Recovery Act (RCRA) in 1976, the Federal government had, for the first time, a complete suite of statutes intended to reverse the degradation of the environment caused by discharges to air, water, and soil. Each of these statutes relies heavily on permitting programs to establish minimum national standards for the control of air and water effluents, as well as to govern the treatment, storage, and disposal of solid and hazardous waste. In order to avoid duplicative permitting and regulatory programs (many states had environmental programs preceding Federal involvement), the U.S. Environmental Protection Agency (EPA) has delegated the administration of the CAA, CWA, SDWA, and RCRA regulatory programs to states that adopt, at a minimum, the technical and administrative requirements found in Federal regulations.

It is common for DOE facilities to have environmental permits covering emissions from air pollution sources, water discharges to streams and municipal Publicly-Owned Treatment Works (POTWs), and the treatment, storage, or disposal of solid and hazardous waste. Any time DOE property is transferred, the transfer of environmental permits must be managed in accordance with applicable Federal and state regulations. These regulations vary in detail, depending on the environmental program (air, water, or solid and hazardous waste) and issuing authority (state or Federal). The following sections cover the Federally-mandated requirements that are tied to the various permits a DOE facility may have in force at the time of the real property transfer. This chapter incorporates the material from the EH-41 RCRA Information Brief,

*Transfer of Environmental Permits After the Sale or Transfer of DOE Property.*

### 11.1.2 Types of Environmental Permits

When DOE transfers property, there are several types of environmental permits that have to be modified, transferred, or terminated:

- CAA permits covering air emission sources.
- CWA National Pollutant Discharge Elimination System (NPDES) permits for discharges to surface water.
- CWA Section 404 permits for the management of dredge and fill materials.
- CWA Section 405 permits for the use and disposal of domestic sewage sludge.
- SDWA Underground Injection Control (UIC) permits for discharges to groundwater.
- RCRA treatment, storage, and disposal (TSD) facility permits for the management of hazardous waste.

## 11.2 Drivers for the Requirements

### 11.2.1 Clean Air Act

Originally passed in 1950 to control the dirty, particulate-filled air that plagued many industrial cities (e.g., Pittsburgh), the Clean Air Act of 1970 brought major amendments that established National Ambient Air Quality Standards for sulfur dioxide, ozone, particulates, carbon monoxide, nitrogen dioxide, and lead. It established emission limits for seven hazardous air pollutants: arsenic, asbestos, benzene, beryllium, mercury, radionuclides, and vinyl chloride. In 1990, the Clean Air Act Amendments brought 189 toxic substances under regulation and required the installation of Maximum Achievable Control Technology for certain sources.

The authority to permit pollution sources under the CAA is generally delegated to authorized states that have equivalent, or more stringent, emission

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standards and administrative requirements. All DOE facilities discharging effluents subject to the CAA permitting requirements are required to have either a state- or Federally-issued permit.

### 11.2.2 Clean Water Act

The CWA of 1972 has its origins in the Rivers and Harbors Act of 1899. Although amended several times prior to 1972, it was the CWA that established the discharge limit provisions [Section 301(a)] and water quality standards [Section 301(b) and 302] that provide the foundations for the water pollution control program in place today. Discharge (including stormwater discharge) permits, issued as part of the National Pollution Discharge Elimination System (NPDES), set enforceable limitations on pollutants discharged from point sources (outfalls). Other water-related activities such as dredging and filling (Section 404) and the disposal of sewage treatment plant sludge (Section 405) are regulated through permitting programs that are operated under the authority of the CWA.

Permit programs under the CWA are delegated to authorized states that oversee permitting and enforcement of CWA provisions.

### 11.2.3 Safe Drinking Water Act

Passed in 1975 and amended in 1986, the SDWA covers the protection of groundwater and drinking water sources. The major thrust of the law establishes drinking water standards: primary standards -- covering maximum contamination levels to protect human health, and secondary standards -- governing color, taste, smell, or other physical characteristics. The permit program that most concerns this guidance is the regulation of the injection of toxic chemicals to protect groundwater.

### 11.2.4 Resource Conservation and Recovery Act

Although it addresses the management of all solid waste, RCRA is best known as the law that governs the treatment, storage, and disposal of hazardous waste (Subtitle C). Through a cradle-to-grave management system, RCRA regulates hazardous waste from the moment it is generated until its final disposal. EPA administers RCRA through a detailed set of regulations that include complex permitting requirements for all hazardous waste

treatment, storage, and disposal facilities. Federal RCRA authorities are delegated to qualifying (i.e., authorized) states that have regulations similar to, or more stringent than, those of EPA.

## 11.3 Requirements in Real Property Transfers

### 11.3.1 CAA Permits

Although state programs may differ, the transfer of ownership or operational control of an emissions source requires that the applicable operating permit be transferred using simple administrative permit amendment procedures so long as:

- (1) The permitting agency determines that no other changes in the permit are necessary, and
- (2) A written agreement (containing the specific date for the transfer of permit responsibility, coverage, and liability) between DOE and the new permittee has been submitted to the permitting agency [40 CFR 70.7(d)(1)(iv)].

Using administrative permit amendment procedures, the change requested may be implemented as soon as the request is submitted [40 CFR 70.7(d)(3)(iii)]. The permitting agency is required to take no more than 60 days from the receipt of a request for an amendment to take final action on the request and to submit a copy of the revised permit to the EPA Administrator [40 CFR 70.7(d)(3)(I) and (iii)].

See the text box on the following page for CAA conformity determinations.

### 11.3.2 CWA Permits

An automatic transfer procedure may be utilized when DOE is transferring a NPDES permit issued under the CWA so long as:

- (1) DOE notifies the Director of the state permitting agency at least 30 days in advance of the proposed transfer date;
- (2) The notice includes a written agreement between DOE and the new permittee containing a specific date for transfer of

**CAA Conformity Determinations**

The CAA requires that Federal actions are determined to conform to the host State Implementation Plan (the plan that provides for implementation, maintenance and enforcement of air quality standards). Exempt from a conformity determination are those Federal actions that would result in no emissions increase or an increase in emissions that is clearly negligible. This exemption includes transfers of ownership, interests, and titles in land and facilities, regardless of the form or method of the transfer [40 CFR 51.853(c)(2)(xiv)]. However, it should be noted that if the real property transfer is associated with a proposed project, that proposed project may be subject to a conformity determination. A conformity determination would normally be integrated within NEPA review, and only applies in areas that are not in attainment with air quality standards, and does not apply to actions already subject to air permitting. The conformity provisions of the CAA can be found in 40 CFR Parts 51 and 93.

permit responsibility, coverage, and liability; and

- (3) The Director of the state permitting agency does not notify DOE that the state wishes to modify or revoke and reissue the permit.

If no notice of intent to revoke and reissue the permit is received from the state, the transfer becomes effective on the date specified in the written agreement between DOE and the new permittee [40 CFR 122.61(b)(1)-(3)].

If the Director of the state permitting agency wishes, the NPDES permit transfer may be initiated as a minor permit modification with DOE's consent so long as:

- (1) The Director determines that no other change in the permit is necessary, and
- (2) A written agreement between DOE and the new permittee containing a specific date for transfer of permit responsibility coverage and liability has been submitted to the Director [40 CFR 122.63(d)].

Procedures for transferring dredge and fill permits issued under Section 404 of the CWA are

developed by the Director of the state permitting agency. Abbreviated procedures to modify a permit for a change in ownership or operational control may be used provided the two conditions of the proceeding paragraph have been met [40 CFR 233.36(c)(2)].

Transferring a domestic sewage sludge permit issued under Section 405 of the CWA involves the same requirements as the transfer of a NPDES permit, although some state programs may not provide for minor permit modifications. Should this be the case, the permitting agency may require submission of an updated permit application to transfer the permit to a new owner or operator [40 CFR 505.15(b)(12), 505.15(c)(1), 505.15(d)(2), 505(e)(3)].

**11.3.3 Underground Injection Control (UIC) Permits Issued Under the SDWA**

UIC permits may be transferred to new owners or operators using the exact procedures outlined above for NPDES permit transfers, except that the required notice to the permitting agency must demonstrate that the new permittee is financially responsible and has sufficient resources to close, plug, and abandon the underground injection operation in the manner prescribed by the permitting agency [40 CFR 144.38, 144.39(b)(2), 144.41(d), and 144.52(a)(7)]. Underground injection wells located in States without approved UIC programs are required to have RCRA permits. In such cases, transfer procedures for an interim UIC permit for a hazardous waste injection well are identical to the requirements applicable to the transfer of a RCRA permit [40 CFR 270.1(c)(1), 270.64].

**11.3.4 RCRA Permits**

The transfer of RCRA permits is accomplished by notifying the permitting agency in accordance with 40 CFR 270.40. The permitting agency may require modification of the permit or its revocation and reissuance [40 CFR 270.30(k)(3)].

Modification of a RCRA permit to transfer it to a new owner or operator, or to add an operator, is a Class 1 modification that requires:

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- Getting prior written approval from the permitting agency in accordance with 40 CFR 270.42;
- Submitting a revised permit application no later than 90 days prior to the scheduled change;
- Submitting a written agreement containing a specific date for transfer of permit responsibilities between DOE and the new permittee to the permitting agency; and
- Continuing to comply with the requirements of 40 CFR 264, Subpart H (Financial Requirements) until the new owner or operator has demonstrated to the permitting agency that the new owner or operator is complying with that subpart [40 CFR 270.40(b)]. (Although DOE is exempt from the financial requirements of 40 CFR 264, Subpart H, as are all Federal agencies, DOE must be financially responsible for the site until the new owner or operator has demonstrated to the permitting agency that the permittee is in compliance with 40 CFR 264, Subpart H.)

Revocation and reissuance of a permit allows the permitting agency to incorporate any new requirements that may become necessary under RCRA [40 CFR 270.30(k)(3)]. When the permitting agency decides to revoke and reissue, the entire permit is reopened, subject to revision, and reissued for a new term [40 CFR 270.4].

RCRA facilities operating under interim status that undergo a change in ownership must:

- Submit a revised Part A permit application no later than 90 days prior to the scheduled change, and
- Continue to comply with the requirement of 40 CFR 265, Subpart H (Financial Requirements) until the new owner or operator has demonstrated to the permitting agency that the new owner or operator is complying with that subpart [40 CFR 270.72(a)(4)].

In the event that the new owner or operator is not exempt from the Subpart H financial requirements, the new owner or operator is required to demonstrate compliance with Subpart H financial requirements within 6 months of the change in ownership or operational control of a permitted or interim status TSD facility. DOE may be held liable for the costs of closure, post-closure care, and sudden and nonsudden accidental occurrences until the new owner or operator can make the required demonstration. [40 CFR 264.143, 264.145, and 264.147 for permitted facilities, and 265.143, 265.145, and 265.147 for interim status facilities]. For that reason, the financial viability of a new owner or operator should be of particular concern to DOE.

### 11.4 Implementation of Permit Transfer

If a new owner or operator plans to continue operations at the facility being transferred in the same manner as if DOE owned and operated the facility, the transfer process should be as described in Section 11.3 for each type of permit. However, there are probably few cases where a change in ownership will not lead to major changes in facility operation.

It is a best management practice for DOE to evaluate the operations planned by the new owner or operator before adopting the assumption that a simple notice to the regulators will effect a permit transfer. Where the DOE facility will be put to different use by the new owner or operator, it should be assumed that more involved permitting activities will be required (i.e., revocation and reissuance). Each permit that is revoked to be modified and reissued will undergo a process that includes a public comment period -- a process certainly more involved than a simple administrative change. Even if there are no objections to the permit transfer, the reissued permit may contain additional or more severe regulatory requirements (e.g., reductions in allowable discharges through NPDES outfalls). At best, these more involved permit modifications may delay a transaction, or at worst, if permitting contingencies are included in the contract, they may end the transaction because the new owner cannot or chooses not to meet the additional or more severe

regulatory requirements imposed in the proposed permit.

In many cases the new owner or operator will not continue operating all (or, perhaps, any) of the facilities that require environmental permits. Cessation of operation requires that DOE notify the appropriate regulatory agency that permitted activities will cease and that, where applicable, closure plans will be executed.

### 11.5 Relationship to the Environmental Baseline Survey

List in the Environmental Baseline Survey (discussed in Chapter 12) all environmental permits that are in effect at the DOE facility along with the activities that they cover. Also list all discharge limitations and other applicable permit requirements for reference purposes.

### 11.6 Relationship to NEPA Documents

A draft EIS prepared for a proposed land transfer must include a list of all Federal permits, licenses, and other entitlements that must be obtained in implementing the proposal (40 CFR 1502.25(b)) (discussed in Chapter 13). A NEPA document prepared for a proposed real property transfer should also discuss discharge limitations and permit conditions for facilities under DOE ownership as compared to the new uses to which the facility will be put upon transfer. Environmental impacts due to changes in discharge volumes and constituents are of major concern to stakeholders in the NEPA process, as are changes in the types and volumes of hazardous waste generated and managed by the new owner or operator.

### 11.7 Checklist

- If the subject facility has a CAA permit that will be transferred to the new owner or operator, has:
  - The permitting agency been notified by DOE that a transfer is anticipated?
  - A written agreement (containing a specific date for transfer of the permit

responsibility, coverage, and liability) between DOE and the new permittee been included with the notification?

- If it is necessary for the subject facility to transfer a NPDES permit for continued operations, has:
  - The permitting agency been notified by DOE at least 30 days prior to the proposed transfer date?
  - A written agreement (containing a specific date for transfer of the permit responsibility, coverage, and liability) between DOE and the new permittee been included with the notification?
- In some states, the transfer may constitute a minor permit modification. If the subject facility is in such a state, has a notice been provided to the permitting agency that includes a written agreement (containing a specific date for transfer of the permit responsibility, coverage, and liability) between DOE and the new permittee?
- If a RCRA permit is to be transferred, has:
  - A revised permit application been submitted no later than 90 days prior to the scheduled change?
  - A written agreement (containing a specific date for transfer of permit responsibilities) between DOE and the new permittee been submitted?
- If the subject facility has a UIC permit that must be transferred to allow continued operation, have the exact same procedures outlined above for NPDES permit transfers been followed for the UIC permit?
- In addition to following the NPDES procedures for a UIC permit, does the required notice to the permitting agency demonstrate the new permittee's financial responsibility and resources to close, plug, and abandon the underground injection operation in the manner prescribed by the permitting agency?

## **11. Environmental Permits**

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### **11.8 References**

DOE, 1995. *Transfer of Environmental Permits After the Sale or Transfer of DOE Property*, RCRA Information Brief, EH-413-061/1195, U.S. Department of Energy, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, EH-413, November 1995.

# 12. ENVIRONMENTAL BASELINE SURVEYS

## 12.1 Introduction

In 1992, the Community Environmental Response Facilitation Act (CERFA) amended CERCLA to require Federal agencies and departments to identify property that does not contain contamination from the storage, release, or disposal of hazardous substances or petroleum products or their derivatives, prior to the termination of Federal activities. CERFA lists the sources of information that must be reviewed to determine if a property is uncontaminated.

Congress passed CERFA to facilitate the identification of real property offering the greatest opportunity for reuse and redevelopment at each facility where operations are terminating. Congress' goal was to mitigate the adverse economic effects of the reconfiguration and reduction in size of the Defense complex. The CERFA amendments to CERCLA are located in CERCLA Sections 120(h)(3) to 120(h)(5).

Department of Defense elements (the Departments of the Army, Navy and Air Force) have developed standard methodologies for fulfilling these CERCLA requirements and for deciding on the suitability of military bases (or portions of bases) for transfer to other Federal government entities or for sale or lease. The foundation of this methodology is an environmental baseline survey (EBS). DOD elements regularly perform EBSs to support all real property transactions, including property acquisitions

Department of Defense requirements for the preparation of EBSs vary considerably by service. This chapter focuses on Navy EBS requirements. Air Force requirements are generally more specific and detailed, while Army requirements are generally less specific and detailed.

While the CERCLA requirements described above are applicable to DOE, there has been no guidance on how to prepare an EBS report to fulfill CERCLA requirements applicable to real property transfer. EBSs are defined and described below.

## 12.2 Definitions

DOD distinguishes between two types of EBSs. A **base-wide EBS** is designed to be a factual representation of the environmental conditions and to provide information on the environmental risks for all property within an installation. The environmental "baseline" of a base-wide EBS is blind to any specific or proposed real property transaction. As such, the base-wide EBS does not provide specific conclusions and recommendations on the future use of the property.

A base-wide EBS is also used to identify:

- Parcels of a base that may be determined to be uncontaminated within the meaning of CERCLA 120(h)(4); or
- Portions or parcels of a base that, although contaminated within the meaning of CERCLA 120(h)(4), are in such condition that DOD may issue deeds on the basis that "all remedial action necessary to protect human health and the environment has been taken."

A **site-specific EBS** is designed to address data gaps in a base-wide EBS regarding a specific parcel of land. It is usually performed when a specific parcel of land is being considered for transfer. While a base-wide EBS is blind to any specific or proposed real property transaction, the purpose of performing a site-specific EBS is usually related to a proposed property transaction or reuse option.

## 12.3 Purposes/Advantages of an EBS

The purpose of performing an EBS is to document the environmental condition of a property. Such documentation can be used for a number of different purposes, including:

- Provide a basis for determining if property is suitable for transfer, lease, or assignment;
- Serve as a foundation study for installation closure;

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## 12. Environmental Baseline Surveys

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- Satisfy legal requirements including:
  - Notification requirements under Sections 120(h)(1) and (3) of CERCLA,
  - Uncontaminated parcel identification requirements of Section 120(h)(4) of CERCLA, and
  - State or local real property transfer requirements.

DOD elements have developed guidance specifying standard methodologies and formats for EBSs. The purpose of using standard formats and methodologies is to enable policymakers to evaluate or categorize properties in relation to each other.

### 12.4 EBS Process

The EBS process is based on the requirements of CERCLA Sections 120(h)(1) "Notice," 120(h)(3), "Contents of Certain Deeds," and 120(h)(4), "Identification of Uncontaminated Property." As mentioned in Chapter 6, these requirements identify sources of information that must be reviewed concerning the current and previous uses of the property. In general, the EBS process relies on three types of information sources: records review, site reconnaissance, and interviews.

Exhibit 12-1 compares the legislative language of CERCLA 120(h)(3) and 120(h)(4)(A) with Navy guidance interpreting this language and describing the EBS process. As shown on the exhibit, the Navy has added requirements beyond the legislative language. Most of the additional requirements specify which sources of information must be reviewed to satisfy the notification requirements of CERCLA Sections 120(h)(1) and 120(h)(3) and the uncontaminated parcel identification requirements of Section 120(h)(4).

Once the EBS is completed, there may be areas that remain unevaluated or require additional evaluation. Under these circumstances, DOD may perform a Phase II EBS. A Phase II EBS focuses on field investigations, sampling and analysis (including data validation), and risk assessment.

### 12.5 EBS Presentation/Documentation

It is customary to present the data in the EBS document in a concise form, using matrices, tables, figures, and maps wherever possible. Navy guidance on performing an EBS specifies a format for EBS presentation. Exhibit 12-2 presents this format and describes the contents of each EBS section.

The choice of an organizational format for the EBS for your property depends on the types of environmental information. Your EBS organizational format does not have to follow the same format as exemplified in Exhibit 12-2. For example, most DOE facilities do not have housing, unlike military bases; therefore, a chapter on lead paint in housing may not be relevant and may be omitted. On the other hand, unexploded ordnance may be present and should be discussed.

Nonetheless, all of the information that you gathered on the basis of Chapters 2-11 should be presented. If there are no floodplains or wetlands on the property, it is sufficient to make a statement to that effect. Note that no section is devoted to environmental permits. You may either choose to add a section devoted to environmental permits or to discuss environmental permits in the separate sections to which they are relevant. For example, you may discuss Clean Air Act permits in the "Air" section and UST permits in the "Storage Tanks and Pipelines" section.

Different services use different property categorization schemes. The Navy categorization scheme, which is comprised of seven categories, is presented in Exhibit 12-3. The Navy would generally perform a Phase II EBS to be able to move properties from Category 7 (unevaluated areas) to one of the first four categories.

The Army property categorization scheme is comprised of three categories. It is presented in Exhibit 12-4 for comparison.

**Exhibit 12-1. Comparison of CERCLA § 120 Information Requirements and Navy Guidance on Fulfilling These Requirements**

Type of Requirement	CERCLA Language/Citation	Navy Guidance
<p>Obtain information on hazardous substances to place in deeds</p>	<p>For each property on which any hazardous substance was stored for one year or more, known to have been released, or disposed of, each deed shall contain (to the extent that such information is available on the basis of a complete search of agency files): notice of the type and quantity of such hazardous substances; notice of the time at which such storage, release, or disposal took place; and a description of the remedial action taken if any.</p> <p>CERCLA 120(h)(3)(A)</p>	<p>Identify all hazardous substances/petroleum products stored for one year or more, released, or disposed of on subject property. List actual or approximate types and quantities and the time or times when storage, release into the environment or structures, or disposal of hazardous substances/petroleum products occurred on the property, to such extent that information is available.</p> <p>Consider existing data on contaminants in air, soil, ground and surface water, soil gas and vapor, leachate, sludge, and sediment.</p> <p>The records search requirements listed in all of the boxes below specify which records should be searched to obtain information on hazardous substances/petroleum products and on remedial action taken.</p>
<p>Search government records for information on contamination</p>	<p>Perform a detailed search of Federal government records pertaining to the property.</p> <p>CERCLA 120(h)(4)(A)(i)</p>	<p>Review base surveys regarding asbestos, PCBs, lead, radon, USTs and piping systems, SWMUs, air pollution inventories, environmental compliance audits, and bioenvironmental engineering and annual industrial hygiene surveys as well as environmental engineering workplace surveys.</p> <p>Review all remediation/restoration studies, or other documentation produced in accordance with procedures being carried out at the property under CERCLA or the Solid Waste Disposal Act.</p> <p>Review any applicable Federal, State, or local agency reports; notices of violation or noncompliance; corrective action agreements; compliance orders; RCRA Facility Assessments; or other similar records.</p> <p>Review reasonably obtainable State and local governmental records that reflect the prior uses of the base.</p> <p>Review permits pertaining to an environmentally regulated activity (e.g., air quality permits, NPDES permits, RCRA Part B permits).</p> <p>Consider existing data on contaminants in air, soil, ground and surface water, soil gas and vapor, leachate, sludge, and sediment.</p>

**12. Environmental Baseline Surveys**

**Exhibit 12-1. Comparison of CERCLA § 120 Information Requirements and Navy Guidance on Fulfilling These Requirements (Continued)**

Type of Requirement	CERCLA Language/Citation	Navy Guidance
Search chain of title documents for information on contamination	Review recorded chain of title documents regarding the real property.  CERCLA 120(h)(4)(A)(ii)	Review all recorded chain of title, deed, other real property records, utility systems, or other available documents to ascertain prior uses of the real property which may have involved hazardous substances or otherwise contaminated the property or created environmental or safety risks.
Review aerial photographs for information on prior uses of the property	Review aerial photographs that may reflect prior uses of the real property and that are reasonably obtainable.  CERCLA 120(h)(4)(A)(iii)	Perform a review of reasonably obtainable photographs of the property.
Perform a visual inspection of the property to obtain information on possible contamination	Perform a visual inspection of the real property and any buildings, structures, equipment, pipe, pipeline, or other improvements on the real property, and a visual inspection of property immediately adjacent to the real property.  CERCLA 120(h)(4)(A)(iv)	Perform visual and physical walk-through inspections of the real property and of immediately adjacent properties to include any buildings, structures, equipment, pipe, pipelines, or other improvements to determine or confirm the presence of environmentally hazardous conditions or concerns (unusual odors, stained soils, stressed vegetation, leachate seeps, or other indications of potential contamination or risky conditions from a safety standpoint.) Any such indications of concern discovered should be followed up and resolved within the scope of the effort involved. Complete and walk-through inspections shall be done on every part of the base during a base-wide EBS effort.
Perform a physical inspection of adjacent property to obtain information on possible contamination migration	Perform a physical inspection of property adjacent to the real property, to the extent permitted by owners or operators of such property.  CERCLA 120(h)(4)(A)(v)	Perform a physical inspection of the property adjacent to the real property, to the extent permitted by owners and operators of such property. Adjacent properties are considered to be, but are not limited to, those that are contiguous to the subject property and normally within a quarter mile radius. The survey should be addressed to those portions of the properties relatively near the installation that could pose significant environmental concern and/or have significant impact on the results of the EBS.

### Exhibit 12-1. Comparison of CERCLA § 120 Information Requirements and Navy Guidance on Fulfilling These Requirements (Continued)

Type of Requirement	CERCLA Language/Citation	Navy Guidance
Review records on adjacent property to obtain information on contamination	<p>Review reasonably obtainable Federal, State, and local government records of each adjacent facility where there has been a release of any hazardous substance or any petroleum product or its derivatives, including aviation fuel and motor oil, on the real property.</p> <p>CERCLA 120(h)(4)(A)(vi)</p>	<p>Review all reasonably obtainable Federal, State, and local government records of each adjacent property where there has been a release of any hazardous substance or petroleum product or its derivatives, including aviation fuel and motor oil, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product or its derivatives, including aviation fuel or motor oil, on subject real property.</p> <p>Review reasonably obtainable State and local governmental records that reflect the prior uses of adjacent real property.</p>
Interview employees to obtain information on property uses, hazardous substances, etc.	<p>Interview current or former employees involved in operations on the real property.</p> <p>CERCLA 120(h)(4)(A)(vii)</p>	<p>Interview current and/or former employees involved in operations on the real property.</p> <p>Interview Federal, State, and local regulators where appropriate.</p>
Identify uncontaminated property based on sampling, if appropriate	<p>Identification of uncontaminated property shall also be based on sampling, if appropriate</p> <p>CERCLA 120(h)(4)(A)(viii)</p>	<p>Navy guidance on the preparation of a base-wide EBS does not address when it is appropriate to perform new sampling.</p>

Source: CERCLA Section 120 and Southdiv (Navy) Guidance on Conducting a Base Wide Environmental Baseline Survey (EBS), a Site-Specific EBS, and Format for EBS Report Preparation, April 7, 1994.

**12. Environmental Baseline Surveys**

**Exhibit 12-2. Base-Wide EBS Report Format**

<b>EBS Section and Title</b>	<b>Contents of the Section</b>
Executive Summary	Describes the purpose of the EBS, its use, methodology, and a summary of its findings
1.0 Purpose of the EBS	Describes why the Navy must determine the environmental condition of the property
1.1 Boundaries of Property and Scope of Survey	Describes and defines the boundaries of the property including adjacent properties being considered in the EBS  Includes a map of the area under consideration, the number and a general description of facilities, and information on the general use (e.g., administrative, industrial) of these facilities
2.0 Survey Methodology	Describes the methods used to obtain the information to document the environmental and safety condition of the property  (This section is comprised of the information in the Navy Guidance column of Exhibit 12-1.)
2.1 Approach and Rationale	Describes the approach used to collect the information (e.g., standardized checklists, forms, procedures, inspections, etc.)
2.1.1 List and Description of Documents Reviewed	Provides a complete listing of documents reviewed including computerized files, photographs, and maps  Documents are numbered and referred to in the text of the EBS by number
2.1.2 Inspections of Properties Conducted and Personnel Contacted	Lists the properties that received visual and physical walk-through site inspections, including adjacent properties, in a table  Lists personnel who were interviewed about current and former operations  Describes content of personnel interviews or provides text of standard interview questions
3.0 Summary of Data for On-Base Properties	Summarizes the records search and visual and physical walkthrough site inspections of the on-base properties.  Properties are categorized as uncontaminated in accordance with the CERCLA 120(h)(4) requirements, or given one of six additional characterizations (see Exhibit 12-3)
3.1 History and Current Usage	Provides a synopsis of the history of the installation and the types and levels of industrial activities that have occurred on the property
3.2 Environmental Setting	Describes the overall environmental condition of the installation in terms of the number of remediation/restoration program sites, USTs, soils, air, water, and utilities, etc.
3.2.1 Stormwater Runoff Patterns	Discusses the general physical make-up of the installation supplemented by a map identifying major drainage patterns and stormwater conveyances

**Exhibit 12-2. Base-Wide EBS Report Format (Continued)**

EBS Section and Title	Contents of the Section
<p>3.2.2 Hazardous Materials and Waste Management</p>	<p>Identifies and documents the collection, storage, and disposal of all solid and hazardous wastes that were in existence on the installation.</p> <p>Compiles and catalogues the types, quantities, and times when storage, release, or disposal of hazardous waste took place on the property, to the extent that information is available</p> <p>Identifies the custodian and location of hazardous waste manifests processed for hazardous waste disposal</p>
<p>3.2.3 CERCLA-Related Contamination (Installation Restoration Program)</p>	<p>Summarizes the status of remediation/restoration program sites</p>
<p>3.2.4 Storage Tanks and Pipelines</p>	<p>Provides a detailed inventory and status of all aboveground and underground storage tanks and pipelines on the installation</p> <p>Includes a list identifying location, size, contents, and status of each tank and pipeline</p>
<p>3.2.5 Wastewater Treatment and Disposal</p>	<p>Describes the type and use of the wastewater collection system (including sewer lines) on the installation</p> <p>Includes location of treatment facilities, disposal methods, outfall locations, use of septic systems, etc.</p>
<p>3.2.6 Lead in Drinking Water</p>	<p>Discusses surveys and results for lead in drinking water</p>
<p>3.2.7 Oil Water Separator</p>	<p>Provides a detailed inventory of and historical account for all oil-water separators on the installation</p> <p>Contains a detailed list identifying location, size, contents and status</p>
<p>3.2.8 Asbestos</p>	<p>Discusses asbestos survey results and conditions and abatement work completed on the installation</p>
<p>3.2.9 Air</p>	<p>Discusses the status of the air monitoring program and identifies any air permits held by the installation</p>
<p>3.2.10 Lead-Based Paint Surveys and Other Sources of Lead</p>	<p>Discusses the results of lead-based paint surveys, other sources of lead contamination, and mitigation actions taken</p>

**Exhibit 12-2. Base-Wide EBS Report Format (Continued)**

EBS Section and Title	Contents of the Section
3.2.11 PCBs	Provides a detailed inventory of PCB-containing equipment  Includes a list identifying location, size and status of, and sampling and analysis results for PCB-containing equipment
3.2.12 Pesticides	Identifies and documents storage and use of all pesticides that were in use on the installation  Includes a list that compiles and catalogs the operation permits, types, quantities, and time when storage, release, or disposal of pesticides took place on the property, to the extent that information is available
3.2.13 Medical Waste	Identifies and documents storage of all medical wastes on the installation  Includes a list that compiles and catalogs the types and quantities of medical waste, and the time when storage, release, or disposal of medical waste took place on the property, to the extent that information is available
3.2.14 Ordnance	Documents where ordnance was used, stored, or disposed of on the installation
3.2.15 Radioactive Materials and Wastes	Discusses the use, storage, and disposal of radioactive (ionizing and non-ionizing) materials on the installation
3.2.16 Radon	Discusses the results of any radon surveys conducted and mitigation actions taken
3.2.17 Groundwater	Discusses the aquifers and uses for groundwater and provides a summary of groundwater contamination
3.3 Natural and Cultural Resources	Documents any known historical structures or archeological sites, Native American concerns, and any natural resource considerations (wetlands, endangered species, etc.)
3.4 Identification of Uncontaminated Properties	Identifies "uncontaminated" properties, that is, properties where there is no known or suspected environmental contamination as defined by CERCLA 120(h)(4)  These are Category 1 properties on Exhibit 12-3
3.5 All Other Properties	Identifies properties in Categories 2 through 7 (see Exhibit 12-3)  Presents a summary of properties by category type and provides a justification for putting the property into a particular category  Addresses CERCLA 120(h)(1) and (3) disclosure requirements  Presents information used to document the basis for follow-on work, including site-specific EBS efforts

**Exhibit 12-2. Base-Wide EBS Report Format (Continued)**

EBS Section and Title	Contents of the Section
4.0 Summary of Data for Adjacent Properties	Summarizes the records search, visual site inspections, and physical inspections performed on off-site properties
4.1 History and Current Usage	Provides a synopsis of the use history of the adjacent property and the type and level of industrial and other activities, etc., that have occurred, based on records, visual inspections, physical examinations of piles and debris, and interviews
4.2 Environmental Setting	Provides an assessment of the overall environmental condition of the adjacent property, to the extent practicable
4.3 Adjacent Properties with No Known or Suspected Releases	Identifies adjacent properties where there has been no known release of any hazardous substances or any petroleum product or its derivatives, including aviation fuel and motor oil
4.4 Adjacent Properties with Known or Suspected Releases	Identifies adjacent properties where there has been a release or suspected release of any hazardous substance or a petroleum product or its derivatives, including aviation fuel and motor oil, that has threatened or is likely to threaten on-base property.  To the extent practicable, documents the type, quantity, and extent of contamination, the time frame in which it occurred, and any corrective actions taken
5.0 Conclusions and Recommended Courses of Action	Summarizes environmental concerns raised throughout the EBS based on an evaluation of possible environmental risks  If appropriate, concludes that a parcel (or parcels) is uncontaminated and ready for disposition after regulatory concurrence
5.1 Facility Matrix	Provides a summary of each building/facility in matrix format  Summarizes information for each facility including: facility name/number, facility description, square footage, year constructed, and information on hazardous materials/wastes stored, asbestos, radon, lead-based paint, USTs, and above-ground storage tanks
5.2 Property Categorization	Provides a map of the installation showing the results of the EBS property characterization  Property is categorized in accordance with the categorization scheme presented on Exhibit 12-3
5.3 Resource Map	Provides a map displaying data (e.g., UST locations, areas where hazardous materials were stored or used, monitoring wells) by facility and property location
6.0 Certification of EBS	Contains certification statements and signatures  Lists individuals who performed and reviewed the survey materials and findings

Source: Southdiv (Navy) Guidance on Conducting a Base Wide Environmental Baseline Survey (EBS), a Site-Specific EBS, and Format for EBS Report Preparation, April 7, 1994.

## 12. Environmental Baseline Surveys

### Exhibit 12-3. Navy EBS Property Categorization Scheme

Property Category Definition	Color on Facility Map
1. Areas where no storage, release, or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas)	White
2. Areas where only storage of hazardous materials, hazardous substances, or petroleum products has occurred (but no release, disposal, or migration from adjacent areas has occurred)	Blue
3. Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action	Light Green
4. Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken	Dark Green
5. Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, removal and/or remedial actions are under way, but all required remedial actions have not yet been taken	Yellow
6. Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but required response actions have not yet been implemented	Red
7. Areas that are unevaluated or require additional evaluation	Gray

Source: Southdiv (Navy) Guidance on Conducting a Base Wide Environmental Baseline Survey (EBS), a Site-Specific EBS, and Format for EBS Report Preparation, April 7, 1994.

### Exhibit 12-4. Army EBS Property Categorization Scheme

Category	Definition
Type I Property	Property where little potential exists for environmental contamination or disruption from past, present, or proposed activities. Typically, this includes sites in locations such as housing, administrative, or recreational areas where no hazardous materials were known to be stored or used. However, because of the potential for environmental contamination at these properties from such things as leaking underground storage tanks, few properties should be classified as Type I.
Type II Property	Property where some potential exists for environmental contamination or disruption from past, present, or proposed activities. This potential may be due to the past historical usage of the property or to its proximity to critical areas such as a wildlife habitat or a sole-source aquifer. When any doubt exists about a Type I property, it should be redesignated as a Type II property.
Type III Property	Property with known environmental contamination or disruption from past or present activities.

Source: Environmental Quality, Army Regulation 200-1, Appendix B, Environmental Baseline Survey (EBS) Protocol.

The choice of the property categorization scheme for your site depends on the level of detail of the information you have about the extent of the contamination. Choose the Navy categorization scheme if your information is sufficiently detailed to lend itself to distinguishing between seven levels. Otherwise, choose the Army categorization scheme. Alternatively, you may come up with your own categorization scheme provided that the scheme is justified by the types of parcels that exist on your site and are in accordance with prudent management policies and practices for land reuse.

## 12.6 EBS Conclusions

EBS conclusions are different for base-wide and site-specific EBSs. For a base-wide EBS, the conclusions focus on the:

- Location of offsite areas of environmental concern;
- Past hazardous substance/petroleum products practices;
- Current hazardous substance/petroleum products practices; and
- Environmental condition of the base as shown on the facility matrix and property categorization map.

If applicable, base-wide EBS conclusions also identify parcels that are "uncontaminated" based on the CERCLA 120(h)(4) definition. Base-wide EBS conclusions would also identify data gaps.

Site-specific EBS conclusions generally present:

- A decision regarding whether the parcel in question requires a notification to the lessee or transferee regarding hazardous substances on the parcel, and the recommended content of that notice;
- An evaluation of the suitability of the parcel for the intended purpose (e.g., lease, transfer, or sale);
- An evaluation of the suitability of the parcel for reuse; and

- A listing of any specific recommended restrictions on the use of the parcel.

## 12.7 Relationship to NEPA Documents

The EBS conclusions and description of the real property proposed for transfer should be consistent with the description of the affected environment in an NEPA document. The NEPA document may be the most recent site-wide EA or EIS. Alternatively, the NEPA document may be an EA or EIS for the proposed transfer of the real property (see Chapter 13).

There is no need for every detail in the contents of an EBS to coexist in the description of the affected environment in an NEPA document because the EBS and NEPA document serve different purposes and have different emphases. Generally speaking, an EBS is expected to be much more thorough in both scope and depth in describing the conditions (especially with respect to contamination) of a site, as well as historical uses, than a NEPA document. Thus, it is acceptable for an EBS to discuss completely the historical uses of a site but for the NEPA document to limit the discussion to the immediate past use of the site.

What is most important is that the facts about the site conditions in both documents be congruent. For example, if an EBS describes a leaking PCB Transformer on the property, the NEPA document (certainly, one prepared for the transfer of the property) should not say that there are no PCB transformers on the property.

## 12.8 Checklist

- Has a determination been made as to the type of EBS to be performed: a base-wide or site-specific EBS?
- Has the property that is the subject of an EBS been divided into sections to facilitate identification of contaminated and uncontaminated parcels?
- To the extent practicable, have all the needed environmental data been gathered for each parcel in accordance with the real

## 12. Environmental Baseline Surveys

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property transfer requirements of Chapters 2-11?

- Have all the required information sources with respect to reporting of hazardous substance activity (i.e., storage, release, and disposal) and to identifying contamination in each parcel been searched or queried? (Refer to Exhibits 6-3 and 12-1 for the different types of information sources that must be searched.)
- Have all the data gathered for each parcel been included under the appropriate topics in the EBS for the property? (If a particular topic is not applicable because of the absence of certain features, then make a statement to that effect, e.g., there are no floodplains/wetlands).
- If the EBS is a base-wide EBS, have the data gaps for specific sites on the property been identified?
- Has the format in Exhibit 12-2 or a similar format been followed for the EBS?
- Has the format in Exhibit 12-3 or 12-4, or a similar format, been followed for categorization of the property?
- Have conclusions addressing the issues (depending on whether the EBS is base-wide or site-specific) discussed in § 12.6 been drawn?

### 12.9 References

HQDA, 1988. "Environmental Quality," Army Regulation 200-1, Appendix B, Environmental Baseline Survey (EBS) Protocol, (revised November 1, 1990 by policy letter from ENVR-EH, Headquarters, U.S. Department of the Army).

Southdiv, 1994. "Southdiv Guidance on Conducting a Base Wide Environmental Baseline Survey (EBS), a Site-Specific EBS, and Format for EBS Report Preparation," April 7, 1994.

# 13. NEPA REVIEW

## 13.1 Introduction

The National Environmental Policy Act (NEPA) of 1969 requires that Federal agencies perform an evaluation of the impact of each proposed major Federal action on the quality of the environment before undertaking the action. The Council on Environmental Quality (CEQ) issued regulations to implement NEPA across the Federal Government (40 CFR Parts 1500-1508). CEQ provides guidance on various aspects of NEPA, including "Forty Most Asked Questions Concerning CEQ's NEPA Regulations," published on March 23, 1981 in 46 FR 18026.

Each Federal agency is responsible for implementing NEPA within the agency. After consulting with CEQ, DOE issued its own regulations for implementing NEPA at 10 CFR Part 1021. For each DOE proposal, a determination must be made whether to apply a categorical exclusion (CX), or to prepare an environmental assessment (EA) or environmental impact statement (EIS).

The *Secretarial Policy on NEPA* of June 1994 re-emphasizes that the NEPA process must be integrated as early as possible with the planning process for all proposals, including real property transfers. The NEPA document, if required, serves as a vehicle for informing the decisionmaker(s) and the public about the environmental issues associated with the proposed action. It identifies the reasonable alternatives analyzed (including the no-action alternative and alternatives outside DOE's jurisdiction) and mitigating measures considered. Also, the NEPA process incorporates opportunities for public participation. The action, in this case the transfer of real property, cannot occur until the successful completion of the NEPA review process.

Within DOE, leases are subject to a NEPA review (see § 13.3.1). Furthermore, transfers of personal property, as well as real property, are subject to NEPA review within DOE (see 61 FR 36228 (1996)).

## 13.2 Drivers for the Requirement

NEPA requires that Federal agencies assess and document the environmental impact of their proposed actions. The DOE requirements and responsibilities are identified in 10 CFR Part 1021 and DOE Order 451.1, "National Environmental Policy Act Compliance Program." In addition, DOE Policy 430.1 states that land and facility use planning is intended to complement, utilize, link, support, and be fully integrated with NEPA (as well as the many other separate processes required by law and regulation).

## 13.3 Considering Real Property Use in NEPA Reviews

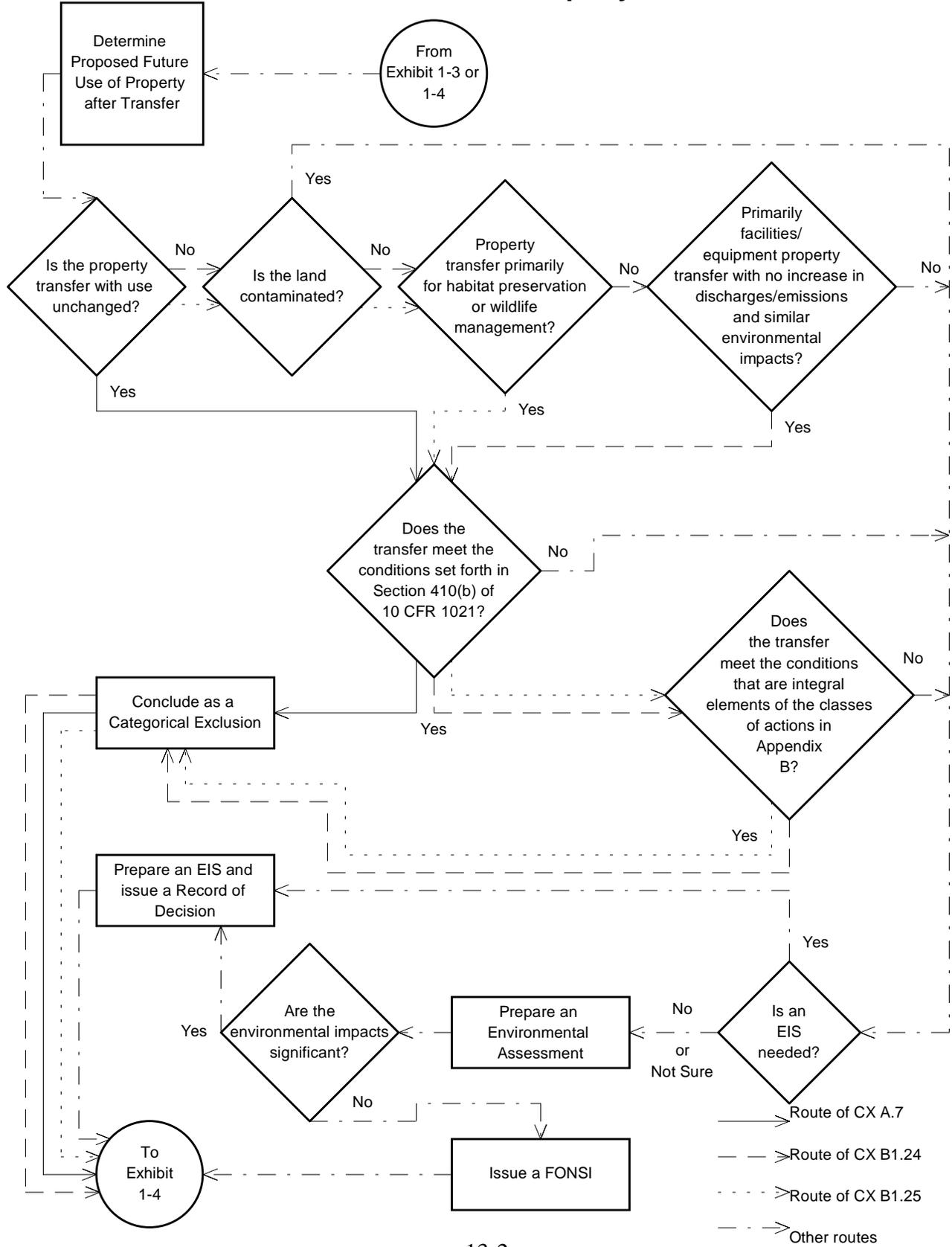
Determining the level of NEPA review required depends on the potential environmental impacts associated with the proposed use of the property (i.e., the incremental change in impact, if any). Therefore, determine the use (as specifically as possible) of the real property before carrying out a NEPA review. Future use plans for DOE sites are summarized in *Charting the Course: The Future Use Report*. The environmental information gathered about the property (from Chapters 2 to 11) as shown in Exhibit 1-3 should be an integral part of the NEPA document prepared for a proposed real property transfer.

Environmental information should be gathered about the property as early as possible in order to allow adequate time for analysis. A flow chart for the NEPA process for proposed real property transfers appears in Exhibit 13-1.

### 13.3.1 Real Property Transfers with Use Unchanged

Real property transfers with use unchanged are normally categorically excluded from further NEPA review under Appendix A to Subpart D of 10 CFR Part 1021. Real property transfers are explicitly defined to include leases. "Unchanged" is clarified in 61 FR 36228 as signifying that the "impacts

# Exhibit 13-1 NEPA Reviews for Real Property Transfers



would remain essentially the same after the transfer as before." The proposed real property transfer would be categorically excluded provided that all four following conditions [10 CFR 1021.410(b)(2) & (3)] are met:

- (1) There are no extraordinary circumstances related to the proposal (real property transfer) that may affect the significance of the environmental effects of the proposal (see Exhibit 13-1). Examples of extraordinary circumstances include scientific controversy about the environmental effects, uncertain effects or effects involving unique or unknown risks, or unresolved conflicts concerning alternative uses of available resources on the real property.
- (2) The real property transfer is not connected to other actions with potentially significant impacts (see Exhibit 13-1). Actions are connected [40 CFR 1508.25(a)(1)] if they:
  - Automatically trigger other actions that may require EISs,
  - Cannot proceed unless other actions are taken previously or simultaneously, or
  - Are interdependent parts of a larger action and depend on the larger action for their justification.
- (3) The real property transfer is not related to other proposed actions with cumulatively significant impacts (see Exhibit 13-1). {Note that all related proposed actions with cumulatively significant impacts should be discussed together in the same EA or EIS [40 CFR 1508.25(a)(2)]}.
- (4) The real property transfer is not part of a DOE proposed action for which an EIS, programmatic EIS, or Record of Decision (see Exhibit 13-1) is being prepared unless it qualifies as an interim action under 40 CFR 1506.1 and 10 CFR 1021.211.

If a proposed action consisting of a real property transfer with use unchanged does not meet the above conditions, an EA or EIS must be prepared. Consult the NEPA Compliance Officer or subsidiary Field Organization supporting your site in determining whether an EA or EIS should be prepared (see § 13.3.3)

### **13.3.2 Real Property Transfers with Use Changed**

Real property transfers with use changed can qualify for a CX in either of two ways: (1) the environmental impacts of the new use of the property (primarily facilities/equipment) are similar to the DOE use of the property and there are no increases in discharges, emissions or wastes, or (2) the new use of real property, primarily land, is for habitat preservation or wildlife management (see Exhibit 13-1). The former fits into CX classification B1.24 and the latter into CX classification B1.25 under Appendix B to Subpart D to 10 CFR Part 1021. Both CXs B1.24 and B1.25 apply only to uncontaminated facilities and land. Uncontaminated means the lack of "potential for release of substances at a level, or in a form, that would pose a threat to public health or the environment."

CX B1.24 contains two conditions that must be met:

- (1) Although the use of a facility/equipment may change, the environmental impacts of the new, reasonably foreseeable use, after the real property transfer, must be generally similar to the former use.
- (2) There must be no decreases in environmental quality or increases in volumes, concentration, or discharge ratios of wastes, air emissions, or water effluents.

If a judgment cannot be made about the use of this CX without environmental analysis, at least an environmental assessment must be prepared (see Exhibit 13-1).

CX B1.25, which provides for real property transfers primarily of land where the new use is for habitat preservation or wildlife management, does not contain these two conditions because the

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impacts are expected to be favorable to the environment and no discharges are anticipated (see Exhibit 13-1).

In addition, for a real property transfer to qualify for CX B1.24 or CX B1.25, it must meet the same four conditions listed above in § 13.3.1 and must meet the conditions that are integral elements of the classes of actions in Appendix B to Subpart D of 10 CFR Part 1021 (see Exhibit 13-1). One of the conditions that are integral elements of the classes of action in Appendix B is that the real property transfer not adversely affect an environmentally sensitive resource. Environmentally sensitive resources are discussed in Chapters 2 through 5. They include, but are not limited to, floodplains/wetlands, critical habitats, wildlife refuges, wilderness areas, wild and scenic rivers, historic properties, sacred sites, and Native American traditional subsistence use areas.

If the real property transfer with use changed does not fit any of the classes of proposed actions in Subpart D, Appendices A and B or does not meet the integral elements, then an EA or EIS must be prepared (see Exhibit 13-1).

### 13.3.3 Role of the NEPA Compliance Officer

The NEPA Compliance Officer supporting the site has the authority to make CX determinations (see § 13.6) and to recommend whether an EA or EIS should be prepared. CXs need not be documented [see DOE Order 451.1 § 5(d)(2)]. The NEPA Compliance Officer is also responsible for notifying EH-42 of a determination to prepare an EA or EIS.

## 13.4 EA Considerations for a Real Property Transfer

The requirements for preparing an EA are found at 40 CFR 1508.9. An EA has three defined functions:

- To provide sufficient evidence and analysis for determining whether the impacts of a proposed action are significant, thus necessitating the preparation of an EIS;
- To comply with NEPA when an EIS is not necessary; and

- To facilitate preparation of an EIS when one is necessary.

The EA is a concise document and usually should not contain long descriptions or detailed data that would be included in an EIS. The EA should consist of a brief discussion of the need for the real property transfer, description of the environment (affected and involved), alternatives to the transfer, the environmental impacts of the proposed transfer, and mitigation measures. In the EA, list the agencies and persons consulted (especially, U.S. Fish and Wildlife Service, state natural resource conservation agencies, State Historic Preservation Officers, and potentially affected Indian Tribes). While there are no page limits, CEQ (see 46 FR 18037) has advised agencies to keep an EA to no more than 10 to 15 pages.

EH-42 has prepared guidance for preparing EAs and EISs (see *Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements*). In an EA, the focus should be on potentially significant environmental issues and alternatives, and on the discussion of impacts in proportion to their significance (i.e., the sliding scale approach). For example, a discussion of some or all environmentally sensitive resources may be appropriate, including impacts on floodplains/wetlands (§2.4.1), cultural resources and historic properties (§4.5), and threatened and endangered species and their critical habitat (§3.4.1). EH-42 has also produced the *Environmental Assessment Checklist* (Appendix D) to aid in both preparing and reviewing EAs. The checklist consists of two parts:

### Examples of EAs Prepared for Real Property Transfers

Two EAs have been prepared and approved for DOE real property transfers: "EA for the Commercialization of the Mound Plant" and "EA for the Commercialization of the Pinellas Plant." Both EAs were prepared in 1994. The proposed form of real property transfer in both EAs was leasing. Besides the proposed action of mixed-use leasing in accordance with the relevant future-use plan, the alternatives of no-action and leasing restricted to existing plant capabilities and uses were considered.

general and supplemental topics. The general topics apply to all EAs, while the supplemental topics apply only to those EAs for which a topic is pertinent. At the conclusion of the EA process, DOE either issues a Finding of No Significant Impact or a Notice of Intent to prepare an EIS.

### 13.5 Finding of No Significant Impacts (FONSI)

In a FONSI, briefly explain the reasons why the real property transfer will not have a significant effect on the environment and, therefore, why an EIS will not be prepared. Identify which factors were weighted most heavily in this finding.

You must make all EAs and FONSI available to the public. For additional information concerning requirements for distribution of NEPA documents see 10 CFR 1021.320-322 and EH-42 guidance on public participation, "Effective Public Participation Under NEPA," (December 1994).

### 13.6 Approvals

Under DOE Order 451.1, Secretarial officers and Heads of Field Organizations approve EAs, FONSI, and Floodplain Statement of Findings (see § 2.3.3). Under certain conditions, a Head of a Field Organization may re-delegate approval authority to a Head of a subsidiary Field Organization. However, the head of a subsidiary Field Organization may not make further re-delegation. The authority to make CX determinations is allowed by the NEPA Compliance Officer of the field organization [see DOE Order 451.1 § 5(a), (c), and (d)(2)].

### 13.7 Relationship to EBS

The description of the affected environment of a site in an NEPA document should be consistent with the EBS conclusions and description of the real property proposed for transfer.

There is no need for every detail in the description of the affected environment in an NEPA document to appear in the description of the site conditions in an EBS because the NEPA document and EBS serve different purposes and have different emphases. However, what is important is that the

facts about the site conditions in both documents be congruent. For example, if an NEPA document describes the habitats for several endangered species on the property, the EBS should not say that there are no endangered species in the area.

It is acceptable for an NEPA document to characterize completely the natural environment (flora and fauna) on and around a site but for an EBS to summarily touch on these topics while focusing on the physical conditions (especially with respect to contamination) of a site.

### 13.8 References

- DOE, 1996. *Charting the Course: The Future Use Report*, DOE/EM-0283, U.S. Department of Energy, Office of Environmental Management, April 1996.
- DOE, 1996. *National Environmental Policy Act Implementing Procedures, 10 CFR Part 1021*, July 1996, as amended December 1996.
- DOE, 1996. *Policy 430.1, Land and Facility Use Planning*, September 1996.
- DOE, 1995. *Order 451.1, National Environmental Policy Program*, September 1995.
- DOE, 1994. *Environmental Assessment Checklist*, U.S. Department of Energy, Office of NEPA Oversight<sup>1</sup>, August 1994.
- DOE, 1994. *NEPA Compliance Guide, Vol. II*, U.S. Department of Energy, Office of NEPA Oversight<sup>1</sup>, September 1994.
- DOE, 1994. *Effective Public Participation under the National Environmental Policy Act*, U.S. Department of Energy, Office of NEPA Oversight<sup>1</sup>, December 1994.
- DOE, 1993. *Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements*, U.S. Department of Energy, Office of NEPA Oversight<sup>1</sup>, May 1993.

<sup>1</sup>Renamed Office of NEPA Policy and Assistance.

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CEQ, 1981. *Council on Environmental Quality Questions and Answers on National Environmental Policy Act Regulations ("Forty Most Asked Questions")*, 46 FR 18026, March 1981.

CEQ, 1978, as amended. *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*, 40 CFR Parts 1500-1508.

# 14. CONCLUSION

## 14.1 Introduction

This final chapter summarizes the environmental requirements associated with (1) real property transfers without change of ownership and (2) real property transfers with a change of ownership. Exhibit 14-1 is a compilation of all the citations (statute, Presidential Executive Order, regulation, or DOE Order) for all environmental requirements for real property transfers (regardless of the type of transfer) for all environmental subject areas. The BLM regulations are not shown in Exhibit 14-1 because there is only one citation, namely, 43 CFR 2372.1. Exhibit 14-2 is a chart recommending how the environmentally sensitive resources discussed in Chapters 2-5 should be treated for each of the two general types of real property transfer: no change in ownership and change in ownership. Note that Exhibit 14-2 does not apply to the return of withdrawn land to the public domain. Exhibit 14-3 summarizes the environmental requirements discussed in Chapters 2-13 to be fulfilled for the two general types of real property transfer: no change in ownership and change in ownership. Transfers involving no change of ownership are focused on leases in Exhibit 14-3.

## 14.2 Real Property Transfers without Change of Ownership

Real property transfers without a change of ownership encompass the return of withdrawn land to the public domain and outgrants. Outgrants include easements, leases, licenses, and permits. Of all outgrants, for that matter of all real property transfers, the most frequent is expected to be the lease. Also, CERCLA imposes a special provision for leases (see Exhibit 14-4).

In particular, CERCLA § 120(h)(5) requires that DOE notify the appropriate state official of any leases that will encumber DOE real property beyond the date of termination of operations if any hazardous substance or petroleum product was stored, released, or disposed of on the real property.

In such cases, DOE must notify the state before entering into the lease.

In addition, Section 6.10 discussed CERCLA § 120(h)(1) (as implemented by 40 CFR Part 373) requiring a notification if hazardous substances exceeding specified thresholds were stored, disposed of, or released on the real property. This notification, which must include information on the types and quantities of such hazardous substances, should appear in the contract for the outgrant (e.g., lease) of the real property. Besides the types and quantities of hazardous substances, the dates on which the hazardous substances were stored, released, or disposed of on the real property must be included in the notification. Finally, 40 CFR Part 373 mandates that the hazardous substance notification in the contract be accompanied by the following statement: "The information contained in this notice is required under the authority of regulations promulgated under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42. U.S.C. Section 9620(h)."

## 14.3 Real Property Transfers with Change of Ownership

### 14.3.1 Real Property Disposal Process

Real property transfers with a change of ownership include donations, exchanges, sales, and other disposals. As mentioned in § 1.4.3, DOE may directly dispose of real property under certain statutes (see Exhibit 1-4) otherwise, GSA disposes of the excess real property (see Exhibits 1-4 and 14-5). The hierarchy of priority for transfers is as follows: another Federal agency, State or local government, and private party. GSA does a screening of real property reported as excess to determine if it meets the needs of other Federal agencies (see Exhibit 14-5). If the real property is needed by another Federal agency, the real property transfer takes place when the receiving agency pays fair market value for the real property [41 CFR

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## 14. Conclusion

101.67-203-7(f)(2)]. If it is waived from such screening by GSA and has not been designated for utilization by another Federal agency, then GSA declares the real property as surplus. GSA then notifies DOE of its determination.

State, regional, and local public agencies (and certain nonprofit institutions) then have the right of first refusal of the surplus real property (see Exhibit 14-5). In fact, the disposing agency must prepare a list of such public agencies and notify these agencies of the availability of the surplus real property for procurement. Such agencies must submit an application to procure the real property for a specified proposed use within a pre-determined reasonable time period. The use must be consistent with official development plans. After a time period during which no public agency has expressed an interest to procure the real property, the disposing agency may publicly advertise an invitation for buyers to make bids/offers for the surplus real property (see Exhibit 14-5).

### **14.3.2 Requirements for Invitation for Bids/Offers**

In any Invitation for Bids/Offers, the disposing agency must provide a notice regarding asbestos (see Chapter 10), if present, and a notice regarding hazardous substances (see Chapters 6, 7, 8, and 9), if they were or are present

### **14.3.3 Requirements for the Contract and Deed**

When the real property is processed for transfer from DOE to the new owner (see Exhibit 14-6), a contract (for the sale or transfer) and a deed must be prepared. Certain statements concerning hazardous substances must be incorporated in both the contract and the deed in accordance with CERCLA § 120(h) (see Chapter 6). Even on contracts and deeds that convey real property from one Federal agency to another Federal agency, the information statement and covenant concerning hazardous substances must be included (55 FR 14208).

The final step in the real property transfer process (Exhibit 14-6) is to notify the regulatory authorities

of the change in ownership. Notification procedures are discussed in § 7.12, § 8.13, § 9.13, and Chapter 11.

### **14.3.4 Deferral of the Covenant Statement**

The Fiscal Year 1997 Defense Authorization Act enacted September 23, 1996 added CERCLA § 120(h)(3)(C) to allow a deferral of the following paragraph in a covenant statement required by CERCLA § 120(h)(3)(A)(ii)(I) to be placed on a deed:

*(1) All remedial action necessary to protect human health and the environment with respect to any hazardous substances remaining on the property has been taken before the date of the transfer.*

The above paragraph in the required covenant statement may be deferred under the following conditions:

- The appropriate official makes the deferral after determining that the real property is suitable for transfer,
- Response action assurances are provided in the deed or other agreement proposed to govern the transfer,
- At the conclusion of response actions, DOE executes and delivers a warranty that response actions have been taken. The warranty is considered to satisfy the requirement for the covenant statement specified in Section 120(h)(3)(A)(ii)(I).

First, the appropriate official for making the deferral depends on whether the Federal facility to be transferred is on the National Priorities List. If on the list, the EPA Administrator, with the concurrence of the Governor of the state in which the real property is located, makes the deferral. If not on the list, the Governor of the state in which the real property is located makes the deferral.

The appropriate official determines whether the real property is suitable for transfer based on fulfillment of all the following conditions:

- (1) The real property is suitable for the use intended by the transferee, and the intended use is consistent with the protection of human health and the environment. (For example, a site cleanup to a level at which ingestion of a handful of dirt would cause acute illness in a child would not be suitable for a playground.)
- (2) The Federal agency (i.e., DOE) requesting the deferral has published, in a newspaper of general circulation in the vicinity of the real property, a notice of the following:
  - Proposed transfer, and
  - Opportunity for the public to submit, within a period of not less than 30 days, written comments on the suitability of the real property for transfer.
- (3) The deferral and real property transfer will not substantially delay any necessary response action at the real property.
- (4) The deed or other agreement governing the real property transfer contains the following clauses:
  - Necessary restrictions on the use of the real property to ensure the protection of human health and the environment (e.g., the maintenance of an institutional barrier, such as a cap or fence).
  - Restrictions on the use necessary to ensure that the required remedial investigations, response actions, and oversight activities will not be disrupted.
  - Assurance that response action will be taken along with the schedules for investigation and completion of all

necessary response action as approved by the appropriate regulatory agency.

- Submission of a DOE budget request to the Office of Budget and Management that adequately addresses schedules for investigation and completion of all necessary response actions for the property, subject to Congressional authorizations and appropriations.

Second, response actions that are in progress or that have yet to take place are assured in the deed or other agreement governing the transfer.

Third, when all response actions (necessary to protect human health and the environment with respect to any substance remaining on the real property by the date of the real property transfer) have been taken, DOE shall execute and deliver to the transferee the above required covenant statement.

**Exhibit 14-1. Table of Citations of Environmental Requirements for Real Property Transfers**

Environmental Subject Area	Statute or Presidential Executive Order (E.O.)	Implementing Regulations	Applicable GSA Regulations
Floodplains/Wetlands	E.O.s 11988 and 11990	10 CFR Part 1022	41 CFR 101-47.202-2(b)(6)
Natural Resources	Endangered Species Act Migratory Bird Treaty Act North American Wetlands Conservation Act § 9 Wild & Scenic Rivers Act	50 CFR Parts 402 & 424	None
Cultural Resources	American Indian Religious Freedom Act National Historic Preservation Act E.O. 13007	DOE Order 1230.2 36 CFR Part 800	41 CFR 101-47.202-2(b)(5) & (8)
Socioeconomics	E.O. 12898 National Defense Authorization Act of 1993 § 3161	DOE Order 4330.5	None
Hazardous Substances, Hazardous Waste, and Petroleum Products	CERCLA § 120(h)(1), (3), (4), & (5) RCRA § 3001	40 CFR Part 302 40 CFR Part 373	41 CFR 101-47.202-2(b)(10), 41 CFR 101-47.202-7 & 304-14

**Exhibit 14-1. Table of Citations of Environmental Requirements for Real Property Transfers  
(Continued)**

<b>Environmental Subject Area</b>	<b>Statute or Presidential Executive Order (E.O.)</b>	<b>Implementing Regulations</b>	<b>Applicable GSA Regulations</b>
Underground Storage Tanks	CERCLA § 120(h)(1), (3), (4) & (5) RCRA Subtitle I	40 CFR Part 373 40 CFR Part 280	None; if tank contents consist of a hazardous substance, see above.
Radioactive Substances & Contamination	Atomic Energy Act CERCLA § 120(h)(1), (3), (4) & (5) Uranium Mill Tailings Radiation Control Act	40 CFR Part 373 40 CFR 192 DOE Order 5400.5	41 CFR 101-47.202-2(b)(10), 41 CFR 101-47.202-7, & 304-14
Polychlorinated Biphenyls (PCBs)	CERCLA § 120(h)(1), (3), (4) & (5) TSCA	40 CFR Part 373 40 CFR Part 761	41 CFR 101-47.202-2(b)(10) & (c)(3), 41 CFR 101-47.202-7, & 304-14
Asbestos	CERCLA § 120(h)(1), (3), (4) & (5) AHERA ASHARA § 15 TSCA § 202 (10), § 206, § 207	40 CFR Part 373 40 CFR Part 763 (Asbestos Model Accreditation Plan)	41 CFR 101-47.202-2(b)(9), 41 CFR 101-47.202-7, & 304-13
Clean Air Act, Clean Water Act, RCRA, & SDWA Permits	Clean Air Act, Title V Clean Water Act § 301, 302, 404, & 405 RCRA § 3005 Safe Drinking Water Act Part C	40 CFR Part 70 40 CFR Parts 122, 233, & 505 40 CFR Parts 264, 265, & 270 40 CFR Part 144	None
NEPA Review	National Environmental Policy Act	10 CFR Part 1021 DOE Order 451.1	None

**Exhibit 14-2. Recommendations for Treating Environmentally Sensitive Resources in Real Property Transfers**

Environmental Resource	Type of Real Property Transfer	
	No Change in Ownership <sup>1</sup>	Change in Ownership
Floodplains/Wetlands	Exclude parcels with such resources from leases & other outgrants. If there is compelling reason to include such parcels in real property transfers, impose restrictions on disturbances, improvements, and other land uses. Protect the access of Native Americans to and physical integrity of sacred sites. Protect confidentiality of archeological and sacred sites.	Exclude parcels with such resources from all transfers unless: (1) new owner is another Federal agency, (2) new owner is an Indian Tribe (receiving Indian-related sites only), (3) use by new owner is compatible, or (4) new owner has a compelling need. Examples of compatible uses: wetland converted to park, habitat preserved as a wildlife refuge, and donation of an archeological site to a museum. Compelling needs must be decided on a case-by-case basis. In addition, restrictions on disturbances, improvements, & other land uses may be required on the deeds.  Note that loss of Federal or Tribal ownership could result in the loss of criminal and civil jurisdiction over the protection of archeological sites and buried Native American human remains and funerary objects.
Natural Resources (e.g., habitats of endangered & threatened species)		
Cultural Resources (other than historic buildings)		
Cultural Resources (historic buildings only)	NHPA § 111 encourages the lease or exchange of historic buildings provided the Advisory Council on Historic Preservation is consulted. The terms and conditions for all historic building transfers should stipulate that the lessee or new owner (1) prevents deterioration and (2) abides by <i>Secretary's Standards and Guidelines for Historic Preservation Projects</i> .	
Socioeconomics (Native American traditional subsistence use areas)	Exclude parcels with Native American traditional subsistence use areas from all real property transfers except to tribes. If there is compelling reason for such real property transfers, consult with potentially affected Native Americans.	

<sup>1</sup> Does not apply to the return of withdrawn land to the public domain.

### Exhibit 14-3. Summary of How to Fulfill Environmental Requirements

Environmental Subject Area	Type of Real Property Transfer	
	Leases	Change in Ownership
Floodplain/Wetlands	Conduct a floodplains/wetlands determination and assessment. Include the determination and assessment in an environmental assessment (EA) or environmental impact statement (EIS) if either is required. A real property transfer with an adverse effect on a floodplain or wetland will require an EA as a minimum. If an EIS is not prepared, there must be a public notification and review/comment period. If floodplains are affected, a statement of findings must be published. In the conveyance (lease, deed, etc.), reference those uses that are restricted under identified Federal, state, or local floodplain/wetland regulations and attach other restrictions, as appropriate.	
Natural Resources	Determine if there are any (1) listed or proposed species, (2) listed or proposed critical habitats, or (3) environments of migratory birds. If so, informally consult with U.S. Fish and Wildlife Service (and state counterpart agency). Any adverse effect on an environmentally-sensitive natural resource requires an environmental assessment as the minimum level for a NEPA review. Inform prospective lessee or new owner that a biological assessment may be required for all listed species before any major construction activity may begin.	
Cultural Resources (historic buildings)	Consult with Advisory Council on Historic Preservation.	Apply the Section 106 process. Consult with the State Historic Preservation Officer and, if necessary, Advisory Council on Historic Preservation. A Memorandum of Understanding may be necessary. An adverse effect requires an EA as a minimum.
Cultural Resources (sacred sites)	Consult with potentially affected Native Americans. A real property transfer with an adverse effect requires an EA as a minimum. Evaluate impact on environmental justice.	
Socioeconomics (Native traditional subsistence use areas)		
Socioeconomics (other than Native Americans)	Evaluate impact on environmental justice. Conduct a cost-benefit analysis (if required by a NEPA review). Prepare a Human Resource Plan (see § 5.4.2).	

**Exhibit 14-3. Summary of How to Fulfill Environmental Requirements  
(Continued)**

Environmental Subject Area	Type of Real Property Transfer	
	Leases	Change in Ownership
Hazardous Substances, Hazardous Waste, and Petroleum Products	Notify the appropriate State official(s) of any lease of DOE real property on which hazardous substances have been stored beyond one year, disposed of, or released if the lease encumbers the property beyond the date of termination of operations on the property. Make the notification before entering into the lease and include information on the length of the lease, name of the lessee(s), and the uses allowed by the lease.	(1) Enter on the sale contract and deed the types and quantities of hazardous substances stored, released, or disposed of on the property in excess of specified thresholds, and (2) add on only the deed the covenant statement.
Underground Storage Tanks	Enter on the lease the types and quantities of hazardous substances stored, released, or disposed of on the property in excess of specified thresholds.	(1) Enter on the sale contract and deed the types and quantities of hazardous substances stored in USTs, released from USTs, or disposed of on the property in excess of specified thresholds, and (2) add on only the deed the covenant statement.
Radioactive Substances and Contamination	Same as above. Furthermore, residual radioactive material must not exceed the generic guidelines in Exhibit 8-1.	Conduct a radiological survey.  Residual radioactive material must not exceed generic guidelines in Exhibit 8-1.  (1) Enter on the sale contract and deed the types and quantities of radioactive substances stored, released, or disposed of on the property in excess of specified thresholds, and (2) add on only the deed the covenant statement.

### Exhibit 14-3. Summary of How to Fulfill Environmental Requirements (Continued)

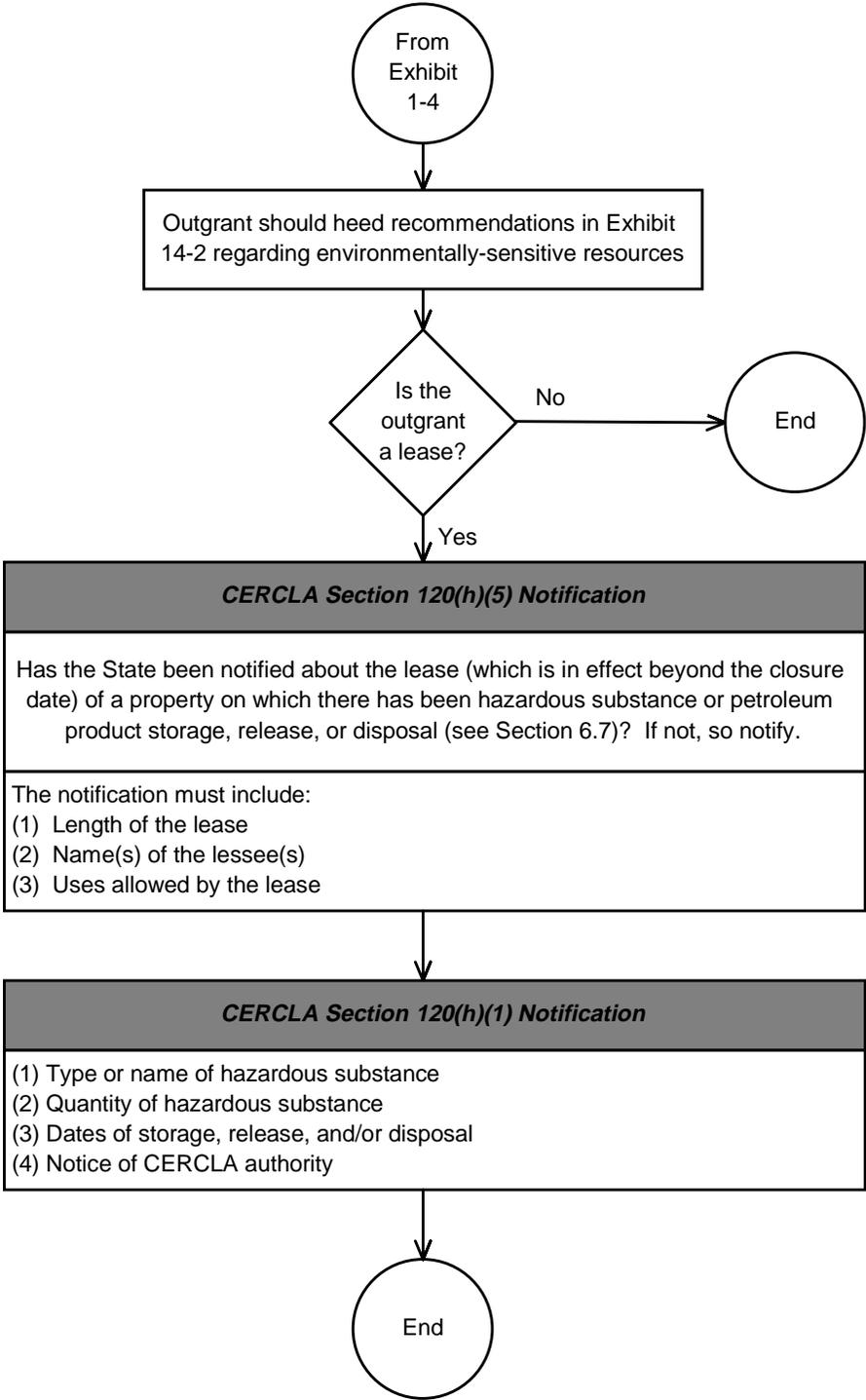
Environmental Subject Area	Type of Real Property Transfer	
	Leases	Change in Ownership
Polychlorinated Biphenyls	<p>Notify the appropriate State official(s) of any lease of DOE real property on which hazardous substances or petroleum products have been stored beyond one year, disposed of, or released if the lease encumbers the property beyond the date of termination of operations on the property. Make the notification before entering into the lease and include information on the length of the lease, name of the lessee(s), and the uses allowed by the lease.</p> <p>Conduct an inspection to ascertain the status of compliance of PCBs and PCB Articles with 40 CFR Part 761. Bring into compliance any situations found to be out of compliance.</p> <p>Enter on the lease the types and quantities of PCBs stored, released, or disposed of on the real property in excess of specified thresholds.</p> <p>As a best management practice, notify tenants and lessees of locations of PCB Articles (transformers, capacitors, switchgear, etc.)</p>	<p>Conduct an inspection to ascertain the status of compliance of PCBs and PCB Articles with 40 CFR Part 761. Bring into compliance any situations found to be out of compliance.</p> <p>(1) Enter on the sale contract and deed the types and quantities of PCBs stored, released, or disposed of on the real property in excess of specified thresholds, and (2) add on only the deed the covenant statement.</p>
Asbestos	<p>Enter on the lease the types and quantities of friable asbestos stored, released, or disposed of on the property in excess of specified thresholds.</p> <p>As a best management practice, notify tenants and lessees of locations asbestos-containing materials. If available, provide a copy of the asbestos operations and maintenance plan.</p>	<p>Conduct an inspection to ascertain the status of compliance of PCBs and PCB Articles with 40 CFR Part 761. Bring into compliance any situations found to be out of compliance.</p> <p>(1) Enter on the sale contract and deed the types and quantities of PCBs stored, released, or disposed of on the real property in excess of specified thresholds, and (2) add on only the deed the covenant statement.</p>

**Exhibit 14-3. Summary of How to Fulfill Environmental Requirements  
(Continued)**

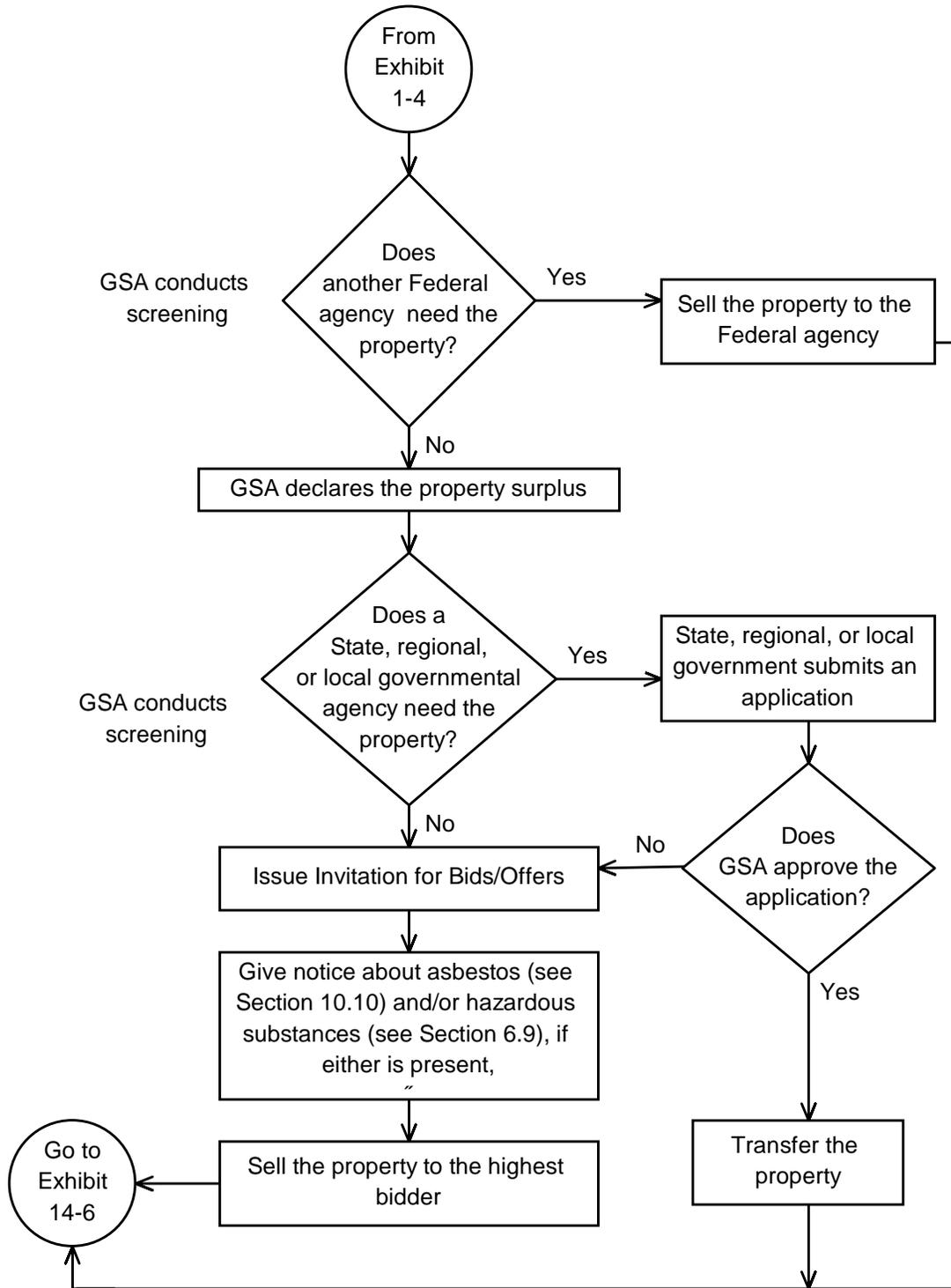
Environmental Subject Area	Type of Real Property Transfer	
	Leases	Change in Ownership
Clean Air Act, Clean Water Act, RCRA, SWDA Permits	Notify the regulatory authority concerning transfer of environmental permits. Generally such permits are not transferrable without modification or revocation and reissuance of the permit. The regulatory authority asks for (1) evidence that the new owner/operator is able to meet certain criteria, such as responsibilities for financial liability, and (2) a written agreement (with specific date of transfer of responsibility, coverage, and liability) between DOE and new owner or operator.	
NEPA Review	Determine if use of the property changes. Real property transfers with use unchanged are generally CXs. Real property transfers with use changed but having similar environmental impacts can qualify for CXs. Real property transfers with use changed to that of habitat preservation and wildlife management also qualify for CXs. Otherwise, conduct an environmental assessment.	

# Exhibit 14-4

## Final Procedures for DOE Real Property Transfers Without Change in Ownership

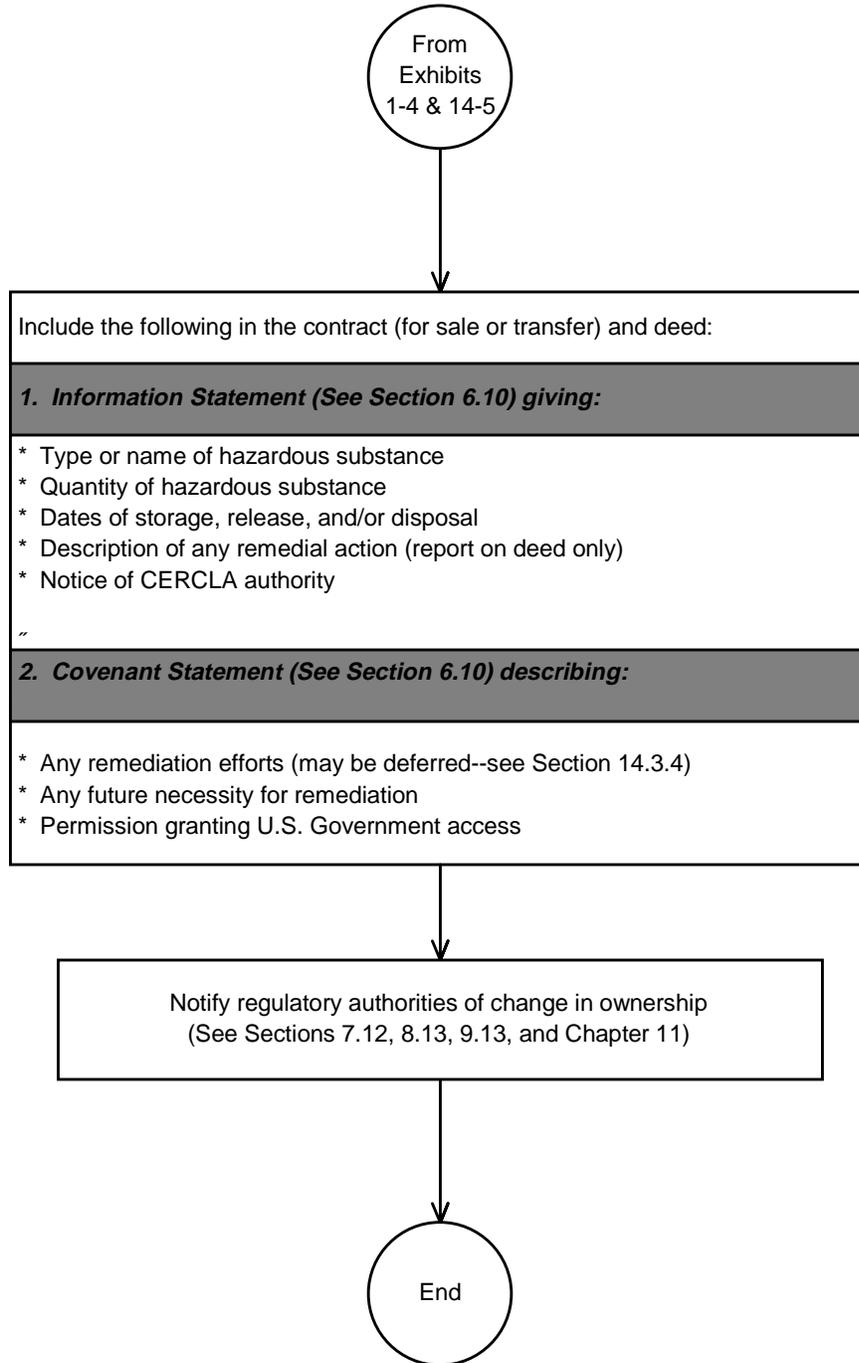


## Exhibit 14-5 Final Procedures for DOE Real Property Transfers With Change in Ownership



# Exhibit 14-6

## Final Procedures for DOE Real Property Transfers: Contract and Deed Requirements



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# ABBREVIATIONS, ACRONYMS, AND GLOSSARY

**Absorbed dose** -- the energy imparted to matter by ionizing radiation per unit mass of irradiated material at the place of interest in that material. The unit is rad or gray (1 rad = 0.01 gray).

**ACBM** -- asbestos-containing building material.

**A CHP** -- see Advisory Council on Historic Preservation.

**ACM** -- asbestos-containing material; a material with one percent or more asbestos.

**Acquired land** -- land originally purchased by DOE or its predecessors. In contrast, see "other land" and "withdrawn land."

**Advisory Council on Historic Preservation** -- the Federal agency responsible for promulgating regulations for the protection and preservation of historic properties (see separately).

**AEC** -- see Atomic Energy Commission.

**AHERA** -- see Asbestos Hazard Emergency Response Act.

**ALARA** -- see As Low As Reasonably Achievable.

**Alpha emitter** -- an emitter of alpha particles, which are the heaviest and most highly ionizing types of radiation. Alpha particles can travel only a few centimeters in air at less than 1/10 the speed of light and can be stopped by a piece of paper or the skin's surface. They give up all their energy when colliding and are the most biologically damaging when inhaled or ingested.

**As Low As Reasonably Achievable (ALARA)** -- a phrase (acronym) used to describe an approach to radiation protection to control or manage exposures (both individual and collective to the work force and the general public) and releases of radioactive material to the environment as low as social, technical, economic, practical,

and public policy considerations permit. ALARA is not a dose limit but rather a process that has as its objective the attainment of dose levels as far below the applicable limits as practicable.

**Asbestos Hazard Emergency Response Act** -- enacted in 1986 by Congress, amending TSCA (see separately), to regulate the inspection of all schools for the presence of asbestos, implementation of response actions, and establishment of operations and maintenance and training programs.

**Asbestos School Hazard Abatement Reauthorization Act** -- enacted in 1990 by Congress, amending TSCA (see separately), to extend AHERA (see separately) regulations on training and accreditation to persons performing asbestos work on public and commercial buildings.

**ASHARA** -- see Asbestos School Hazard Abatement Reauthorization Act.

**ASTM** -- American Society for Testing and Materials; a private organization based in Philadelphia, Pennsylvania that establishes standards.

**Atomic Energy Commission** -- a predecessor agency to DOE.

**Beta emitter** -- an emitter of beta particles. Beta particles are much lighter than alpha particles and less ionizing but can travel several meters in air at about one half the speed of light. They can pass through a sheet of paper but may be stopped by glass. Beta radiation can cause skin burns but is more harmful when deposited internally from inhalation or ingestion.

**BLM** -- see Bureau of Land Management.

## Abbreviations, Acronyms, and Glossary

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**BOC** -- Bureau of Census; an agency of the U.S. Department of Commerce that produces the *Statistical Abstract of the U.S.*

**Bureau of Land Management** -- an agency of the U.S. Department of the Interior responsible for the management of public domain lands (see separately) under the Federal Land Policy and Management Act.

**CAA** -- see Clean Air Act

**Categorical exclusion** -- a category of actions which do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an EA or EIS is required (40 CFR 1508.4). (See Appendices A and B to Subpart D of 10 CFR Part 021 for acceptable categorical exclusions.)

**CEQ** -- see Council on Environmental Quality.

**CERCLA** -- see Comprehensive Environmental Response, Compensation, and Liability Act (also known as "Superfund").

**CERFA** -- see Community Environmental Response Facilitation Act .

**CFR** -- see Code of Federal Regulations.

**Change in service** (of USTs) -- A method of closing a tank so as to allow the tank to be used to store fluids that are not hazardous substances or petroleum products.

**Clean Air Act** -- an act of Congress originally passed in 1950 to control the dirty, particulate-filled air that plagued many industrial cities. The Clean Air Act of 1970 established National Ambient Air Quality Standards and National Emission Standards for Hazardous Air Pollutants.

**Clean Water Act** -- Enacted by Congress to supersede the Federal Water Pollution Control Act in 1972. The Act established discharge limit provisions and water quality standards that provide the foundation for the water pollution control program today.

**Code of Federal Regulations** -- the codification of rules and regulations that have been promulgated by Federal agencies to implement statutory mandates.

**Committed Effective Dose Equivalent** -- the sum of the predicted total dose equivalent to tissue or organ (over a 50-year period after a known internal intake of a radionuclide into the body), each multiplied by the appropriate weighing factor. The units are rem or sievert.

**Community Environmental Response**

**Facilitation Act** -- enacted by Congress in 1992 to amend CERCLA Section 120(h) for identifying parcels of uncontaminated land on Federal real property to be reused by communities and for notifying states of leases of Federal real property.

**Comprehensive Environmental Response, Compensation, and Liability Act**

(CERCLA)("Superfund") -- enacted by Congress in 1980 to provide for the cleanup of sites contaminated with hazardous waste; for response and removal actions in the event of a spill or release of a hazardous substance or petroleum product; and for the reporting of hazardous substances stored, disposed of, or released on Federal facilities.

**Contaminated** -- the quality ascribed to a site that occurs when a substance which, after release into the environment (air, water, or ground) of the site and upon direct or indirect exposure, threatens the safety or health of living organisms. (See Chapter 6 for more explanation.)

**Council on Environmental Quality** -- an office within the Executive Office of the President, created by the National Environmental Policy Act (NEPA) to appraise and make recommendations on the implementation of NEPA, develop and recommend national policies to improve environmental quality, and prepare an annual national environmental quality report.

**Critical habitat** -- an area on which are found physical or biological features that (1) are essential to the conservation of an endangered or threatened species, and (2) may require special management considerations or protection. Critical habitats are listed in 50 CFR Parts 17 and 226.

In addition, DOE NEPA implementing regulations (10 CFR 1021, Subpart D, Appendix B) require that the same considerations given for Federally-listed endangered and threatened species be given for state-listed endangered and threatened species.

**CX** -- see categorical exclusion.

**CWA** -- see Clean Water Act.

**Deed** -- a document transferring title to real estate. Deeds are usually under seal and must be recorded.

**Disposal** (of hazardous substances) -- discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous substance into or on any land or water so that such hazardous substance or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwater (40 CFR 373.4).

**Disposal** (of real property) -- permanent or temporary transfer of DOE control and custody of real property to a third party, who has the right to control, use, or relinquish control and custody of the property.

**EA** -- see environmental assessment.

**Easement** -- the right to use land belonging to another for a specific purpose, with the owner retaining title. For example, such use may be for a road, railroad, pipeline, sidewalk, or utility line. The owner's use is restricted to activities that will not interfere with the right of another to use the easement.

**EBS** -- see environmental baseline survey.

**Effective Dose Equivalent** -- the summation of the products of the dose equivalent received by specified tissues of the body and a tissue-specific weighting factor. This sum is a risk-equivalent value and can be used to estimate the health-effects risk of the exposed individual. The tissue-specific weighting factor represents the fraction of the total health risk resulting from uniform whole-body irradiation that would be contributed by that particular tissue. The effective dose equivalent includes the committed effective dose equivalent (see separately) from internal deposition of radionuclides and the effective dose equivalent due to penetrating radiation from sources external to the body. The units are rem or sievert.

**EH** -- DOE Office of Environment, Safety, and Health.

**EIS** -- see environmental impact statement.

**EM** -- DOE Office of Environmental Management.

**Encumbrance** -- a claim against the property (such as a compliance agreement, easement, lease, mortgage, treaty, or Tribal agreement) which could prevent transfer of ownership. However, a property may be transferred or sold subject to an outstanding claim.

**Environmental assessment** -- a concise public document that serves to briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or issue a Finding of No Significant Impact. It includes a brief discussion of the need for the proposal, alternatives, the environmental impacts of the proposal and alternatives, and a listing of the persons and agencies consulted (40 CFR 1508.9).

## **Abbreviations, Acronyms, and Glossary**

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**Environmental baseline survey** -- an environmental site assessment, originally conducted by a prospective buyer to judge the suitability of a piece of land and liability associated with possession. Now also conducted by a seller to establish the marketability of a piece of land and limit the liability associated with disposal of the land.

**Environmental impact statement** -- the detailed written statement required by NEPA to address the environmental impacts of a "major Federal action significantly affecting the quality of the human environment" (see 40 CFR 1508.11).

**Environmentally sensitive resource** -- examples include a floodplain/wetland, a threatened or endangered species or their habitat, refuge or portion of a flyway for migratory birds, historic property (see separately), sacred site where religious rites or ceremonies are performed, area inhabited by sacred animals or plants, area that includes a Wild and Scenic River designation, ecologically pristine area, or Native traditional subsistence use area.

**E.O.** -- Presidential Executive Order.

**EPA** -- see U.S. Environmental Protection Agency.

**Excess real property** -- real property that has been screened and determined to be no longer required for DOE's needs (also see surplus real property.)

**Facilities Information Management System** -- an interactive complex-wide database operated by FM-20 for providing easy access to information on DOE-owned, DOE-leased, GSA-assigned, and Contractor-leased land, buildings, trailers, structures, and facilities.

**Federal Register** -- a periodical published by the National Archives and Records Administration for the dissemination of official public notices (such as advance notices of proposed rulemaking, interim rules, final rules) of the Federal government.

**FIMS** -- see Facilities Information Management System.

**Finding of No Significant Impact** -- a brief document presenting the reasons why an action will not have a significant effect on the human environment and for which an EIS therefore will not be prepared (40 CFR 1508.13).

**FONSI** -- see Finding of No Significant Impact.

**FM** -- DOE Office of Field Management.

### **Formerly Utilized Sites Remedial Action**

**Program** -- a program to clean up privately owned facilities that were contaminated as a result of past nuclear weapons research and production. Many of these facilities did work for the Manhattan Project.

**FR** -- see Federal Register.

**friable** -- material (usually in the context of asbestos) that can be crumbled with hand pressure (and therefore, in the case of asbestos, is likely to release fibers).

**FUSRAP** -- see Formerly Utilized Sites Remedial Action Program.

**Gamma emitter** -- an emitter of gamma rays. Gamma rays are waves of electromagnetic energy that travel at the speed of light and are very penetrating. Thick walls of concrete or lead are required for shielding against gamma radiation. Gamma radiation is extremely biologically harmful because of its ability to penetrate deep within the body from an external source.

**General Services Administration** -- the agency in the Executive Branch assigned with the responsibility within the Federal government for most property disposals.

**GSA** -- see General Services Administration.

**Hazardous and Solid Waste Amendments** -- enacted 1984 by Congress to amend RCRA. The significant amendments included the Land Disposal Restrictions and the addition of Subtitle I to regulate underground storage tanks.

**Hazardous substances** -- those substances defined as hazardous under CERCLA § 101 (14), which appear in 40 CFR Part 302, Table 302.4. In the context of underground storage tanks, hazardous substances are defined as those listed in 40 CFR 300.5.

**Hazardous wastes** -- a subset of hazardous substances regulated under RCRA and defined in the implementing regulations at 40 CFR 261 Subparts C and D. A hazardous waste may be one that is either identified as exhibiting a hazardous characteristic (Subpart C) or is listed (Subpart D).

**Historic property** -- a building, structure, or site that is already on or is eligible for inclusion on the National Register of Historic Places. Archeological sites and resources can be included.

**HSWA** -- see Hazardous and Solid Waste Amendments.

**ICRP** -- see International Commission on Radiological Protection.

**International Commission on Radiological Protection** -- the international organization that sets guidelines to protect workers and the public against radiation.

**Lease** -- an agreement which gives exclusive possessory interest in the property for a specified time in exchange for payment of rent to the owner.

**License** (for real property) -- a privilege granted to a private party to use or pass over real property for a specific purpose.

**Lower secondary voltage network PCB Transformer** -- a transformer with the following characteristics: a secondary coil rated with a capacity of less than 480 volts, connected in an electrical distribution network, and having a dielectric fluid with a concentration of 500 ppm or more of PCBs. (Also, see PCB Transformer.)

**National Environmental Policy Act** -- enacted by Congress in 1969 to establish a national policy for the environment and to create the Council on Environmental Quality (see separately).

**National Historic Preservation Act** -- enacted by Congress in 1966 to establish the Advisory Council on Historic Preservation, the National Register of Historic Places (see separately), and mandates for Federal agencies to protect and preserve historic properties (see separately).

**National Pollutant Discharge Elimination System**  
-- the permitting program under the Clean Water Act for controlling discharges to surface water.

**National Register of Historic Places** -- a register maintained and operated by the National Park Service, U.S. Department of the Interior, for tracking buildings, structures, and sites that are noteworthy for their historic or archeological value in accordance with the National Historic Preservation Act (see separately).

**NEPA** -- see National Environmental Policy Act.

**NEPA document** -- includes an environmental assessment, environmental impact statement (see each separately), Notice of Intent, Finding of No Significant Impact, Record of Decision, or any other document prepared pursuant to a requirement of NEPA or the CEQ Regulation. However, it is used in this guidance document to refer to an environmental assessment or environmental impact statement.

**NHPA** -- see National Historic Preservation Act.

## **Abbreviations, Acronyms, and Glossary**

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**NPDES** -- see National Pollution Discharge Elimination System.

**NRC** -- see Nuclear Regulatory Commission.

**NRHP** -- see National Register of Historic Places.

**Nuclear Regulatory Commission** -- the Federal agency that licenses the use of nuclear material and equipment and regulates the safety of nuclear materials and equipment.

**Occupational Safety and Health Administration** -- the part of the U.S. Department of Labor that is responsible for regulating and enforcing worker safety and health standards.

**OSHA** -- see Occupational Safety and Health Administration.

**Other land** -- land that DOE has received through a grant or other vehicle. Approximately 11% of DOE real property is other land.

**Outgrant** -- a property transfer without change of ownership. It provides the right to another to use a property. Examples include easement, lease, license, and permit (see each separately).

**PCB Transformer** -- an electrical transformer with a dielectric fluid containing 500 ppm or more of PCBs (also see lower secondary voltage network PCB Transformer).

**PCBs** -- polychlorinated biphenyls.

**Permit** (for real property) -- a temporary right of use (exclusive or nonexclusive) of real property, usually granted to another Federal agency.

**Personal property** -- generally means movable items, which are not permanently affixed or an integral part of the real property. Archeological artifacts that have been excavated would be considered personal property while artifacts that are still buried are part of the real property (see separately).

**Petroleum products or their derivatives** -- neither defined by CERCLA nor CERFA. However, a practical definition of the term can be adopted from the RCRA implementing regulations. Under the 40 CFR 280.12 definition for a regulated substance, it is "petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60° Fahrenheit and 14.7 pounds per square inch absolute)." Examples are gasoline, diesel, and aviation fuel.

**POTW** -- see publicly owned treatment works.

**Program Secretarial Officer** -- a senior DOE outlay program official, including the Assistant Secretaries for Defense Programs, Energy Efficiency and Renewable Energy, Environmental Management, Fossil Energy, and Nuclear Energy; and the Directors of Civilian Radioactive Waste Management and Energy Research.

**Public domain land** -- land that the United States acquired from another nation by treaty, conquest, or purchase, ownership of which has never left the United States. These lands are generally administered by the Department of the Interior (see also withdrawn land).

**Publicly owned treatment works** -- a waste treatment works owned by a state, tribal, or local government, usually designed to treat domestic sewage or wastewater.

**R** -- see roentgen.

**Rad** -- see radiation absorbed dose.

**Radiation absorbed dose** -- the unit of measurement for the physical absorption of radiation.

**RCRA** -- see Resource Conservation and Recovery Act.

**Real property or real estate** -- land plus anything permanently affixed to the land, including buildings, fences, and the infrastructure and fixtures attached to the building (e.g., plumbing, installed cabinets). Fixtures not attached to the building are known as personal property (e.g., furniture, computers).

**Real property transfer** -- see text box in § 1.2.3.

**Rem** -- see Roentgen equivalent man.

**Reportable quantity** -- a threshold quantity, specified in 40 CFR 302.4 Table 302.4, which if released, spilled, or disposed of, triggers CERCLA reporting requirements.

**Resource Conservation and Recovery Act** -- enacted by Congress in 1976 to govern primarily the treatment, storage, and disposal of hazardous waste from "cradle to grave."

**Roentgen** -- the unit of radiation exposure in air.

**Roentgen equivalent man (Rem)** -- the unit of measurement of the absorbed dose (see separately) from radiation based on biological effects. It is related to the total energy absorbed per unit quantity of tissue or rad (see separately).

**RQ** -- see reportable quantity.

**Sacred object** -- objects that are movable and used in Native American religious rites and ceremonies. Examples include masks, offerings, articles of clothing, and utensils. Such objects are considered personal property and beyond the scope of this guidance document.

**Sacred site** -- habitats of sacred plants and animals and places of Native American religious rites and ceremonies. Sacred sites can include petroglyphs, pictographs, rock carvings, and rock formations that are fixed in the land.

**Safe Drinking Water Act** -- an act passed by Congress in 1975 to protect groundwater and other sources of drinking water. The act

established drinking water standards: primary standards covering maximum concentration levels to protect human health and the environment and secondary standards governing color, taste, smell, and other physical characteristics. The Underground Injection Control (see separately) permit program is one element of the SDWA.

**SDWA** -- see Safe Drinking Water Act.

**Secular equilibrium** -- the condition in which the activities (the mean number of decays per unit time of a radionuclide) of a parent and daughter in a radioactive decay chain are (very nearly) equal. For example, as soon as radon atoms are formed from the decay of radium, they start to decay at a characterized rate. At first, production will exceed decay, and the amount of radon will increase. However, the number of decays will increase, and eventually a state will be reached where decay equals production. This state is known as secular equilibrium.

**SF** -- see Standard Form.

**SFMP** -- see Surplus Facilities Management Program.

**SHPO** -- see State Historic Preservation Officer

**Standard Form** -- a government standard form (e.g., GSA Standard Form 118).

**State Historic Preservation Officer** -- an official of a state, state-designated agency, or state historical society responsible for advising and assisting Federal and state agencies in carrying out their historic preservation responsibilities, conducting surveys of historic properties, maintaining inventories of such properties, developing and implementing statewide historic preservation plans, and administering historic preservation funds.

**Storage** (of hazardous substance) -- holding of hazardous substances for a temporary period, at the end of which the hazardous substance is either used, neutralized, disposed of, or stored elsewhere.

## **Abbreviations, Acronyms, and Glossary**

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**Surplus Facilities Management Program** -- a DOE program to manage the more than 5100 facilities identified as surplus to the mission of nuclear weapons production and other related activities. Many of these facilities became contaminated with radioactivity or hazardous chemicals as a result of the activities that occurred within or around them.

**Surplus real property** -- excess real property (see separately) that has been screened and determined not to be needed by the Federal government.

**Transfer** (of property) -- see § 1.2.3.

**Transuranic** -- an element (e.g., neptunium) beyond uranium in the periodic table. All transuranic elements are man-made.

**TSCA** -- see Toxic Substances Control Act.

**TSD** -- see treatment, storage, or disposal facility.

**Toxic Substances Control Act** -- enacted by Congress in 1976, to regulate PCBs and amended to regulate asbestos.

**Treatment, storage, or disposal facility** -- a hazardous waste facility regulated under the Resource Conservation and Recovery Act (see separately).

**UIC** -- see Underground Injection Control.

**UMTRA** -- see Uranium Mill Tailings Remedial Action.

**Underground Injection Control** -- a permitting program established under the Safe Drinking Water Act (see separately) to regulate the operation, closure, plugging, and abandonment of underground injection wells.

**Underground storage tank** -- a regulated underground storage tank, as used in this document. A regulated underground storage tank is a tank that is 10% or more beneath the surface and contains a petroleum product or a hazardous substance listed in 40 CFR 300.5.

**Uranium Mill Tailing Remedial Action** -- a program to reduce the hazards posed to the public from uranium mill tailings (sand-like material left over from the separation of uranium from its ore). The program was created by the Uranium Mill Tailings Radiation Control Act of 1978.

**U.S. Environmental Protection Agency** -- the agency in the Executive Branch of the Federal government for enforcing laws and promulgating regulations protecting the environment.

**UST** -- see underground storage tank.

**Withdrawn land** -- public domain land that has been reserved for use by a Federal agency for a specific purpose. Approximately 62% of DOE real property is withdrawn from the public domain.

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**APPENDIX A:  
GSA STANDARD FORM 118**

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# REPORT OF EXCESS REAL PROPERTY

1. HOLDING AGENCY NO.	DATE RECEIVED <i>(GSA use only)</i>
2. DATE OF REPORT	GSA CONTROL NO. <i>(GSA use only)</i>

3. TO <i>(Furnish address of GSA regional offices)</i> General Services Administration	4. FROM <i>(Name and address of holding agency)</i>
5. NAME AND ADDRESS OF REPRESENTATIVE TO BE CONTACTED	6. NAME AND ADDRESS OF CUSTODIAN
7. PROPERTY IDENTIFICATION	8. PROPERTY ADDRESS <i>(Give full location)</i>

### 9. SPACE DATA

### 10. LAND

USE	NUMBER OF BUILDINGS (1)	FLOOR AREA <i>(Sq. ft./M<sup>2</sup>)</i> (2)	NUMBER OF FLOORS (3)	FLOOR LOAD CAPACITY (4)	CLEAR HEADROOM (5)	<i>(From SF 118B)</i>	ACRE/HECTARE OR SQ. FT./M <sup>2</sup>
A. OFFICE						A. FEE	
B. STORAGE						B. LEASED	
C. OTHER <i>(See 9F)</i>						C. OTHER	
D. TOTAL <i>(From SF 118A)</i>						D. TOTAL	
E. GOV'T INTEREST:			F. SPECIFY "OTHER" USE ENTERED IN C ABOVE				
(1) OWNER							
(2) TENANT							

### 11. COST TO GOVERNMENT

### 12. LEASEHOLD(S) DATA *(Use separate sheet if necessary)*

ITEM	SCHEDULE	COST	A. TOTAL ANNUAL RENTAL	\$
A. BUILDINGS, STRUCTURES, UTILITIES, AND MISCELLANEOUS FACILITIES	A <i>(Col. d)</i>	\$	B. ANNUAL RENT PER SQ. FT./M <sup>2</sup> OR ACRE/HECTARE	\$
B. LAND	B <i>(Col. f)</i>		C. DATE LEASE EXPIRES	
C. RELATED PERSONAL PROPERTY	C <i>(Col. h)</i>		D. NOTICE REQUIRED FOR RENEWAL	
D. TOTAL <i>(Sum of 11A, 11B, and 11C)</i>		\$	E. TERMINAL DATE OF RENEWAL RIGHTS	
E. ANNUAL PROTECTION AND MAINTENANCE COST <i>(Government-owned or leased)</i>			F. ANNUAL RENEWAL RENT PER SQ. FT./M <sup>2</sup> OR ACRE/HA.	\$
			G. TERMINATION RIGHTS <i>(in days)</i>	
			LESSOR	GOVERNMENT

13. DISPOSITION OF PROCEEDS	14. TYPE OF CONSTRUCTION
15. HOLDING AGENCY USE	16. RANGE OF POSSIBLE USES

17. NAMES AND ADDRESSES OF INTERESTED FEDERAL AGENCIES AND OTHER INTERESTED PARTIES

18. REMARKS

19. REPORT AUTHORIZED BY	NAME	SIGNATURE
	TITLE	

**BUILDINGS, STRUCTURES, UTILITIES,  
 AND MISCELLANEOUS FACILITIES**

3. ANNUAL RENTAL

SCHEDULE A - SUPPLEMENT TO REPORT OF EXCESS REAL PROPERTY

LINE NO.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
		HOLDING AGENCY BUILDING NO.	DESCRIPTION	COST	OUTSIDE DIMENSIONS	FLOOR AREA (Sq. ft./M <sup>2</sup> )	NO. OF FLOORS	CLEAR HEAD-ROOM	FLOOR LOAD RANGE	RESTRICTIONS ON USE OR TRANSFER OF GOVERNMENT INTEREST
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
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28										
29										
30										
31										
32										
33										
34										
			TOTAL							

**LAND**

SCHEDULE B - SUPPLEMENT TO REPORT OF EXCESS REAL PROPERTY

LINE NO.	TRACT NO. (b)	NAME OF FORMER OWNER OR LESSOR AND ADDRESS (c)	TRACT ACQUIRED Acres/Hectares or sq. ft./m <sup>2</sup> (d)	EXCESS REAL PROPERTY			TYPE OF ACQUISITION (h)	RESTRICTIONS ON USE OR TRANSFER OF GOVERNMENT INTEREST (i)
				ACRES/ HECTARES OR SQ. FT./M <sup>2</sup> (e)	COST (f)	ANNUAL RENTAL (g)		
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
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28								
29								
30								
31								
32								
33								
34								
<b>TOTAL</b>								

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**APPENDIX B:  
MODEL DOCUMENTS FOR  
FLOODPLAINS/WETLANDS NOTICES**

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[6450.01]

DEPARTMENT OF ENERGY

Notice of [Floodplain] [Wetlands] [Floodplain and Wetlands]  
Involvement<sup>1</sup> for [insert project name]

AGENCY: Department of Energy (DOE)

ACTION: Notice of [Floodplain] [Wetlands] [Floodplain and Wetlands]  
Involvement

SUMMARY: DOE proposes to [describe the proposed action briefly] in  
[floodplain] [wetlands] [floodplain and wetlands] located in XYZ  
County, XYZ State. In accordance with 10 CFR Part 1022, DOE will  
prepare a [floodplain] [wetlands] [floodplain and wetlands]  
assessment and will perform this proposed action in a manner so as  
to avoid or minimize potential harm to or within the affected  
[floodplain] [wetlands] [floodplain and wetlands].

DATE: Comments are due to the address below  
no later than [insert 15 days after publication].

ADDRESS: Comments should be addressed to [address].

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<sup>1</sup> [1] Use the appropriate formulation depending upon  
whether only floodplains, only wetlands, or both  
floodplains and wetlands are involved in the  
proposed action.

FOR FURTHER INFORMATION ON THIS PROPOSED ACTION, CONTACT:

[Program Contact]  
[Address]  
[Phone]  
[FAX]

FOR FURTHER INFORMATION ON GENERAL DOE FLOODPLAIN/WETLANDS  
ENVIRONMENTAL REVIEW REQUIREMENTS, CONTACT:

Carol M. Borgstrom, Director  
Office of NEPA Oversight, EH-42  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, D.C. 20585  
(202) 586-4600 or (800) 472-2756

SUPPLEMENTARY INFORMATION

[Describe the proposed action and location with respect to the floodplain.]

In accordance with DOE regulations for compliance with floodplain and wetlands environmental review requirements (10 CFR Part 1022), DOE will prepare a [floodplain] [wetlands] [floodplain and wetlands] assessment for this proposed DOE action. [If a floodplain is involved, add one of the following three statements:

Alternative 1 (to be used if no environmental assessment (EA) or environmental impact statement (EIS) is being prepared)<sup>2</sup>

After DOE issues the assessment, a Floodplain Statement of Findings will be published in the Federal Register.

Alternative 2 (to be used if an EA is being prepared)

The assessment will be included in the environmental assessment (EA) being prepared for the proposed project in accordance with the requirements of the National Environmental Policy Act. A Floodplain Statement of

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<sup>2</sup> Note that the Federal Register Notice of Intent (NOI) to Prepare an EIS may be used as the vehicle for notifying the public of floodplain/wetlands involvement in lieu of publishing a separate Notice of Floodplain/Wetlands Involvement.

Findings will be included in any Finding of No Significant Impact that is issued following the completion of the EA.

Alternative 3 (to be used if an EIS is being prepared)

The assessment and Floodplain Statement of Findings will be included in the environmental impact statement being prepared for the proposed project in accordance with the National Environmental Policy Act.

Issued in \_\_\_\_\_ on \_\_\_\_\_.

\_\_\_\_\_  
Program Office Official

Reminder to users of this example: With respect to wetlands actions (not located in a floodplain), DOE shall take no action prior to fifteen days after publication of this notice.

[6450.01]

DEPARTMENT OF ENERGY

Floodplain Statement of Findings for [insert project name]

AGENCY: Department of Energy (DOE)

ACTION: Floodplain Statement of Findings

SUMMARY: This is a Floodplain Statement of Findings for [insert project name] prepared in accordance with 10 CFR Part 1022. DOE proposes to [describe the proposed action briefly] in a floodplain located in XYZ County, XYZ State. DOE prepared a [floodplain] [wetlands] [floodplain and wetlands] assessment describing the effects, alternatives, and measures designed to avoid or minimize potential harm to or within the affected floodplain. DOE will allow 15 days of public review after publication of the Statement of Findings before implementing the proposed action.

FOR FURTHER INFORMATION, CONTACT:

[Program Contact]  
[Address]  
[Phone]  
[FAX]

FOR FURTHER INFORMATION ON GENERAL DOE FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS, CONTACT:

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SUPPLEMENTAL INFORMATION:

This is a Floodplain Statement of Findings for [insert project name] prepared in accordance with 10 CFR Part 1022. A Notice of [floodplain] [wetlands] [floodplain and wetlands] Involvement was published in the Federal Register on [insert date of publication and Federal Register citation] and a [floodplain] [floodplain and wetlands] assessment was incorporated in the [Environmental Assessment] [Draft Environmental Impact Statement]. DOE is proposing to [describe the proposed action briefly] in the [identify the floodplain] (see the map). The action is proposed to be located in the floodplain because [explain why]. Alternatives to the proposed action are [list alternatives considered]. The proposed action [does] [does not] conform to applicable State or local floodplain protection standards. [Explain if action does not conform to standards.]

[Describe the steps to be taken to avoid or minimize potential harm to or within the affected floodplain.]

DOE will allow 15 days of public review after publication of the statement of findings prior to implementing the proposed action.

Issued in \_\_\_\_\_ on \_\_\_\_\_.

\_\_\_\_\_  
Program Office Official

[6450.01]

DEPARTMENT OF ENERGY

Finding of No Significant Impact and Floodplain Statement of Findings for [insert project name]

AGENCY: Department of Energy

ACTION: Finding of No Significant Impact and Floodplain Statement of Findings

[Add the following to the FONSI.]

FLOODPLAIN STATEMENT OF FINDINGS

This is a Floodplain Statement of Findings prepared in accordance with 10 CFR Part 1022. A Notice of [Floodplain] [Floodplain and Wetlands] Involvement was published in the Federal Register on [insert date of publication] and a [floodplain] [floodplain and wetlands] assessment was incorporated in the Environmental Assessment. DOE is proposing to [describe the proposed action briefly] in the [identify the floodplain] (see map). The proposed action is to be located in the floodplain because [explain why]. Alternatives to the proposed action are [list alternatives considered]. The proposed action [conforms] [does not conform] to applicable State or local floodplain protection standards. [Explain if action does not conform to standards.]

[Describe the steps to be taken to avoid or minimize potential harm to or within the affected floodplain.]

DOE will allow 15 days of public review after publication of the Statement of Findings before implementing the proposed action.

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**APPENDIX C:  
CONSOLIDATED CHECKLIST OF  
ENVIRONMENTAL REQUIREMENTS  
FOR REAL PROPERTY TRANSFERS**

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**Floodplains and Wetlands**

- Has a determination as described in § 2.4.1 been made as to whether the real property lies within or contains any wetlands or floodplains? (If there are no floodplains/wetlands involved, stop here.)
- Have considerations (such as not transferring the real property, excluding the floodplain/wetland from the transfer, or imposing restrictions on use of the floodplain/wetland) to protect and preserve the floodplain/wetland been made?
- Has an assessment for the floodplain/wetland been prepared as described in § 2.4.2?
- Have the required public notice and public comment/review procedures been implemented?
- If an EA or EIS is not prepared and the property being transferred involves a floodplain for which a floodplain determination and assessment have been completed, has a Statement of Findings been published?
- Have data on floodplains/wetlands been included in the environmental site assessment or environmental baseline survey?
- Have the floodplains/wetlands determinations, assessments, and Statements of Findings been included in the EA or EIS (if one is prepared)?
- If the real property is offered for an outgrant of an easement, lease, license, or permit (see glossary), have the floodplains/wetlands been identified, appropriate restrictions been incorporated, and the responsibility for obtaining the necessary permits been specified in the conveyance?
- If the real property being declared excess is withdrawn land, have data on floodplains/wetlands, any changes or disturbances to floodplains/wetlands, and

any terms and conditions deemed necessary to be incorporated in any further disposition of the land to protect the public interest in floodplains/wetlands been included in the Notice of Intention to Relinquish submitted to the BLM?

- If the real property is being declared excess, have data on floodplains/wetlands been included in the SF 118?

**Natural Resources**

- Has the U.S. Fish and Wildlife Service (and State fish and wildlife counterpart) been contacted for (1) a list of listed or proposed species that are endangered or threatened, (2) a list of critical and proposed critical habitats, and (3) a list of migratory birds with flyways in the area of the property?
- Has an informal consultation been held with the U.S. Fish and Wildlife Service (and State fish and wildlife counterpart) regarding the impacts of the real property transfer on listed or proposed species, critical or proposed critical habitats, and migratory bird environments in the area?
- Has an attempt been made to identify any portions of the property that may lie in Wild and Scenic Rivers Act designated areas?
- Has an attempt been made to identify any other environmentally sensitive natural resources on the real property?
- Has information about listed or proposed threatened or endangered species and their habitats, environments of migratory birds, Wild and Scenic Rivers Act designated areas, and other environmentally sensitive natural resources been included in the environmental baseline survey?
- Has information about Federally-listed or -proposed species, State-listed species, and the habitats of threatened and endangered species; environments of migratory birds; Wild and Scenic Rivers Act designated areas; and other environmentally sensitive

natural resources been included in an EA or EIS, if either document is required?

- Has information about Federally-listed or -proposed species, State-listed species, and the habitats of threatened and endangered species; environments of migratory birds; Wild and Scenic Rivers Act designated areas; and other environmentally sensitive natural resources been included in the Notice of Intention to Relinquish for excess property that is withdrawn land being returned to the public domain?
- Has consideration been given to excluding habitats of endangered and threatened species, environments of migratory birds, Wild and Scenic Rivers Act designated areas, and other environmentally sensitive natural resources from leases, other outgrants, sale, or other disposition of the real property (unless the use is compatible with protecting and preserving the natural resource)?
- If there are either (1) listed or proposed threatened or endangered species in the area or (2) listed or proposed critical habitats on the real property and the lessee or new owner is planning major construction activity, has the lessee or new owner been informed about the potential need for a biological assessment and a formal consultation with the U.S. Fish and Wildlife Service?

***Cultural Resources***

- Have all cultural resources, including historic properties and burial grounds, sacred sites, and access routes to sacred sites, been identified? (If there are no cultural resources involved, stop here.)
- Have the impacts of real property transfer on all identified cultural resources been assessed as described in § 4.4.2 and § 4.4.3?
- If burial grounds, sacred sites, and access routes to sacred sites have been identified on the property, have the potentially affected Indian tribes, Native Alaskan villages, and

Native Hawaiian organizations been consulted?

- From the consultation, have the appropriate measures necessary to protect and preserve Native American religious rights and practices, the physical integrity of sacred sites, and access to such sites been determined?
- Have considerations been made, such as:  
(1) not transferring the real property;  
(2) excluding from the transfer archeological sites, burial grounds, sacred sites, and access routes to sacred sites; or (3) imposing restrictions so as to protect and preserve archeological sites or lands with sacred sites, access routes to sacred sites, and the physical integrity of sacred sites?
- If the real property is being declared excess, have data on these historic properties, burial grounds, sacred sites, and access to sacred sites been included in the environmental site assessment or environmental baseline survey?
- If an environmental assessment or environmental impact statement is being prepared in association with a real property transfer, have data on these historic properties, burial grounds, sacred sites, and access to sacred sites been included?
- If historic buildings are offered for lease, license, or permit (see glossary), has there been consultation with the ACHP and have the appropriate restrictions been incorporated to protect the buildings in the conveyance?
- If the real property being declared excess is withdrawn land, have (1) data on historic properties, burial grounds, sacred sites, and access routes to sacred sites; (2) any changes or disturbances to these cultural resources; and (3) any terms and conditions deemed necessary to be incorporated in any further disposition of the land to protect these cultural resources been included in the

Notice of Intention to Relinquish to be submitted to the Bureau of Land Management?

- If the real property being declared excess is acquired land or withdrawn land rejected by the Bureau of Land Management, have data on historic properties been included as an attachment to Standard Form 118?
- If the property is offered for sale, have the parcels with cultural resources been excluded from the sale? If there is compelling reason to include these resources in the sale, have sufficient restrictions been placed in the deed to protect and preserve historic properties, burial grounds, sacred sites, and access routes to sacred sites?
- Have confidentiality provisions been attached to all data concerning burial grounds, sacred sites, and access routes to sacred sites as well as identities of Native traditional religious leaders?

***Socioeconomic Impacts***

- Has the real property been used by Native Americans for subsistence consumption of fish or wildlife? If so, have the parcels identified as Native traditional subsistence use areas been set aside for continuation of such use and excluded from any real property transfer?
- Has a Human Resources Plan been prepared as described in § 5.4.2?
- Has a cost-benefit analysis been conducted that compares the total one-time closing cost with recurring, annual savings over a 20-year time frame?

***Hazardous Substances, Hazardous Wastes, and Petroleum Product***

- Have there been any hazardous substances, hazardous wastes, or petroleum products (or their derivatives) on the real property? (If not, stop here.)

- Have the data gathered on the real property concerning hazardous substances, hazardous wastes, and petroleum products (or their derivatives) been included in the environmental site assessment or environmental baseline survey?
- If hazardous substances, hazardous wastes, or petroleum products (or their derivatives) are an issue in an environmental assessment or environmental impact statement for a real property transfer, have the data gathered on the real property concerning hazardous substances, hazardous wastes, and petroleum products been included?
- If the real property is being offered for lease, have the appropriate State officials been notified as described in § 6.7?
- If the real property being declared excess is withdrawn land, have data on the extent of contamination and decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- Have the data gathered on the real property being declared as surplus concerning hazardous substances, hazardous wastes, and petroleum products been included in the Invitation for Bids/Offers described in § 6.9?
- Have the data gathered on the real property concerning hazardous substances, hazardous wastes, and petroleum products and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 6.10?
- If underground storage tanks could be present (or you are not sure), go to Chapter 7.
- If radioactive substances or contamination could be present (or you are not sure), go to Chapter 8.

## Appendix C

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- If polychlorinated biphenyls could be present (or you are not sure), go to Chapter 9.
- If asbestos could be present (or you are not sure), go to Chapter 10.

### *Underground Storage Tanks (USTs)*

- Are there any USTs on the real property? (If not, stop here.)
- Have the data gathered concerning USTs on the real property being declared as excess been included in the environmental site assessment or environmental baseline survey?
- Have the data on USTs been included in the occupational safety and health baseline assessment as possible confined space hazards?
- If USTs are an issue in an environmental assessment or environmental impact statement, have the data concerning USTs gathered on the real property been included?
- If the real property is being offered for lease, have the appropriate state officials been notified as described in § 7.8?
- If the real property being declared excess is withdrawn land, have data on the extent of UST contamination and UST decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- Have the data gathered on the real property being declared as surplus concerning USTs been included in the Invitation for Bids/Offers described in § 7.10?
- Have the data gathered on the real property concerning USTs and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 7.11?

- If USTs have been closed or changed in service and ownership changes, has the regulatory authority having jurisdiction been notified and have the excavation zone assessment records been properly addressed as described in § 7.12?

### *Radioactive Substances and Contamination*

- Are there any radionuclides or radioactive contamination on the real property? (If not, stop here.)
- Has all radioactive surface contamination been cleaned up to levels specified in "Generic Guidelines for Residual Radioactive Material" (which is shown in Exhibit 8-1 in this chapter) in DOE Order 5400.5?
- Have the radionuclide data gathered on the real property being declared as excess been included in the environmental site assessment or environmental baseline survey?
- Have the radionuclide data gathered on the real property being declared as excess been included in the occupational safety and health baseline survey?
- If radioactive materials or contamination had been present, has information on cleanup and assurance of compliance with requirements on residual radioactive materials been included in an environmental assessment or environmental impact statement for a real property transfer?
- If the real property is being offered for lease, have the appropriate State officials been notified as described in § 8.9?
- If the real property is being offered for lease, license, or permit (see glossary), will the tenants and occupants be informed about the presence and location of equipment with radioactive substances as a best management practice?

- If the real property being declared excess is withdrawn land, have data on the extent of radioactive contamination and decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- Have the radionuclide data gathered on the real property being declared as surplus been included in the Invitation for Bids/Offers described in § 8.11?
- Have the radionuclide data gathered on the real property and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or transfer) and deed as described in § 8.12?
- Has the appropriate NRC Regional Administrator been notified of any changes in ownership affecting the status of an NRC license?
- included in the occupational safety and health baseline survey?
- If PCBs are an issue in an environmental assessment or environmental impact statement, have the PCB data gathered on the real property been included?
- If the real property is being offered for lease, have the appropriate State officials been notified as described in § 9.9?
- If the real property is being offered for lease, license, or permit (see glossary), will the tenants and occupants be informed about the presence and location of PCBs and PCB Articles as a best management practice?
- If the real property being declared excess is withdrawn land, have data on the extent of PCB contamination and PCB decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?

***Polychlorinated Biphenyls (PCBs)***

- Have there been any PCBs or is there any equipment with PCBs on the real property? (If not, stop here.)
- Is the PCB material or equipment in compliance with the applicable regulations in 40 CFR Part 761 for the TSCA PCB category for that material or equipment?
- If not in compliance, what does it take to bring it into compliance?
- Have the PCB data gathered on the real property being declared as surplus been included in the Invitation for Bids/Offers described in § 9.11?
- Have the PCB data gathered on the real property and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 9.12?
- Has the appropriate EPA Regional Administrator been notified of any changes in ownership affecting the status of PCBs, PCB activities, and unprotected, lower secondary voltage network PCB Transformers in or near commercial buildings?
- Has the fire department or fire brigade that would normally be called upon for the initial response to a fire involving a PCB Transformer been notified of any change in ownership concerning the equipment?
- Has a Certification for Compliance with 40 CFR Part 761 been completed and included in the submission package described in § 9.5 for real property being declared as excess?
- Have the PCB data gathered on the real property being declared as excess been included in the environmental site assessment or environmental baseline survey?
- Have the PCB data gathered on the real property being declared as excess been

## Appendix C

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### *Asbestos*

- Is there any asbestos on the real property? (If not, stop here.)
- What is the type, location, and condition (friable, non-friable) of each individual ACM item or homogeneous ACM area for each building or facility?
- Have materials suspected of containing asbestos been sampled and analyzed?
- Have all individual and homogeneous sampling areas suspected or confirmed as ACBM been assessed and assigned one of the seven categories of damage?
- Have the friable asbestos data gathered on the real property been included in the environmental baseline survey?
- If friable asbestos is an issue in an environmental assessment or environmental impact statement, have the friable asbestos data gathered on the real property been included?
- If the real property is being offered for lease, have the appropriate state officials been notified as described in § 10.8?
- If the real property is being offered for lease, license, or permit (see glossary), will the tenants and occupants be informed about the presence and location of friable asbestos and equipment with friable asbestos as a best management practice?
- If the real property being declared excess is withdrawn land, have data on the extent of contamination and decontamination measures been included in the Notice of Intention to Relinquish to the Bureau of Land Management?
- If the real property is being declared excess or is a return of withdrawn land rejected by BLM, have the data on the type, location, and condition of asbestos been attached to Standard Form 118?
- If the surplus real property is offered for disposal, has a Notice of the Presence of Asbestos been included in the Invitation for Bids/Offer to Purchase?
- Have the friable asbestos data gathered on the real property and the 40 CFR 373.3 information statement and the covenant been included in the contract (for sale, lease, or other transfer) and deed as described in § 10.11?

### *Environmental Permits*

- If the subject facility has a CAA permit that will be transferred to the new owner or operator, has:
  - The permitting agency been notified by DOE that a transfer is anticipated?
  - A written agreement (containing a specific date for transfer of the permit responsibility, coverage, and liability) between DOE and the new permittee been included with the notification?
- If it is necessary for the subject facility to transfer a NPDES permit for continued operations, has:
  - The permitting agency been notified by DOE at least 30 days prior to the proposed transfer date?
  - A written agreement (containing a specific date for transfer of the permit responsibility, coverage, and liability) between DOE and the new permittee been included with the notification?
- In some states, the transfer may constitute a minor permit modification. If the subject facility is in such a state, has a notice been provided to the permitting agency that includes a written agreement (containing a specific date for transfer of the permit responsibility, coverage, and liability) between DOE and the new permittee?

- If a RCRA permit is to be transferred, has:
  - A revised permit application been submitted no later than 90 days prior to the scheduled change?
  - A written agreement (containing a specific date for transfer of permit responsibilities) between DOE and the new permittee been submitted?
- If the subject facility has a UIC permit that must be transferred to allow continued operation, have the exact same procedures outlined above for NPDES permit transfers been followed for the UIC permit?
- In addition to following the NPDES procedures for a UIC permit, does the required notice to the permitting agency demonstrate the new permittee's financial responsibility and resources to close, plug, and abandon the underground injection operation in the manner prescribed by the permitting agency?
- Have all the data gathered for each parcel been included under the appropriate topics in the EBS for the property? (If a particular topic is not applicable because of the absence of certain features, then make a statement to that effect, e.g., there are no floodplains/wetlands).
- If the EBS is a base-wide EBS, have the data gaps for specific sites on the property been identified?
- Has the format in Exhibit 12-2 or a similar format been followed for the EBS?
- Has the format in Exhibit 12-3 or 12-4, or a similar format, been followed for categorization of the property?
- Have conclusions addressing the issues (depending on whether the EBS is base-wide or site-specific) discussed in § 12.6 been drawn?

***Environmental Baseline Surveys***

- Has a determination been made as to the type of EBS to be performed: a base-wide or site-specific EBS?
- Has the property that is the subject of an EBS been divided into sections to facilitate identification of contaminated and uncontaminated parcels?
- To the extent practicable, have all the needed environmental data been gathered for each parcel in accordance with the real property transfer requirements of Chapters 2-11?
- Have all the required information sources with respect to reporting of hazardous substance activity (i.e., storage, release, and disposal) and to identifying contamination in each parcel been searched or queried? (Refer to Exhibits 6-3 and 12-1 for the different types of information sources that must be searched.)

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**APPENDIX D:  
NEPA ENVIRONMENTAL  
ASSESSMENT CHECKLIST**

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## DOE Environmental Assessment Checklist

**Document Title:**

**Reviewed By:**

**Document Number:**

**Office/Phone:**

**Document Date:**

**Date:**

Attached is a checklist to aid in preparing and reviewing DOE Environmental Assessments (EAs), prepared pursuant to the National Environmental Policy Act (NEPA). Like any checklist, it has both value and limits.

On one hand, a checklist may help EA preparers and reviewers to:

- avoid overlooking required or recommended items;
- identify needed analyses and discussions;
- provide a record of an internal review.

On the other hand, NEPA analysis does not reduce to a single formula or checklist. Each DOE proposal presents unique circumstances and potential impacts. This checklist should be applied carefully because:

- no checklist can be universally comprehensive or complete;
- it does not substitute for the original laws, regulations, and guidance;
- it alone cannot ensure that the EA will be adequate under, and in full compliance with, NEPA and associated federal laws and regulations;
- addressing generic items on a checklist alone may not lead to a sufficiently rigorous analysis of potential impacts of a proposed action;
- checklist items are not always of equal importance or weight (e.g., if threatened and endangered species are not addressed, an EA is generally inadequate; however, omitting beneficial impacts usually is not critical).

In short, a checklist should not be relied upon as the only way to build quality into a DOE EA. It does not replace good judgment.

Finally, this EA checklist is not intended to promote the rote generation of standardized documentation. It is not meant to encourage an ethic of minimal compliance with environmental, safety, and health standards. It cannot measure whether resources are appropriately allocated, or the extent to which DOE decisionmakers use NEPA information in decisions and whether those decisions improve protection of environmental quality. In the long run, the focus should be on the ultimate "product" of the NEPA process: high quality decisions and sound environmental stewardship.

## DOE ENVIRONMENTAL ASSESSMENT CHECKLIST

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
<b>1.1.0 SUMMARY (Optional in DOE EAs)</b>					
1.1.1 Does the summary address the entire EA [Recommendations, p.3]?†					
1.1.2 Is the summary consistent with information in the document [Recommendations, p.3]?					
1.1.3 Does the summary highlight key differences among the alternatives [Recommendations, p.3]?					
1.1.4 Does the summary describe:					
the underlying purpose and need for agency action?					
the proposed action?					
each of the alternatives?					
the principal environmental issues and results [Recommendations, p.3]?					
<b>1.2.0 PURPOSE AND NEED FOR ACTION</b>					
1.2.1 Does the statement of purpose and need define the need for <u>DOE</u> action [40 CFR 1508.9]?					
1.2.2 Does the statement of purpose and need relate to the broad requirement or desire for agency action, and not to the need for one specific proposal [Recommendations, p.4]?					
1.2.3 Is the statement of purpose and need written so that it does not inappropriately narrow the range of reasonable alternatives [Recommendations, p.5]?					
1.2.4 Does the statement of purpose and need identify the problem or opportunity to which the agency is responding [Recommendations, p.5]?					

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† ["Recommendations"] refers to guidance entitled "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements" (issued by the Assistant Secretary for Environment, Safety and Health, May 1993).

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
<b>1.3.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES</b>					
1.3.1 Is the proposed action described in sufficient detail so that potential impacts can be identified? Are all phases described (e.g., construction, operation, maintenance and decommissioning) [Recommendations, p.7]?					
1.3.2 Are environmental releases associated with the proposed action quantified, including both the rates and durations [Recommendations, p.7]?					
1.3.3 As appropriate, are mitigation measures included in the description of the proposed action [Recommendations, p.8]?					
1.3.4 Is the project description written broadly enough to encompass future modifications [Recommendations, p.8]?					
1.3.5 Does the proposed action exclude elements that are more appropriate to the statement of purpose and need [Recommendations, p.8]?					
1.3.6 Is the proposed action described in terms of the <u>DOE</u> action to be taken (even a private action that has been federalized) [Recommendations, p.8]?					
1.3.7 Does the EA address a range of reasonable alternatives that satisfy the agency's purpose and need, including reasonable alternatives outside DOE's jurisdiction [Recommendations, p.9]?					
1.3.8 If there are alternatives that appear obvious or have been identified by the public, but are not analyzed, does the EA explain why they were excluded [Recommendations, p.9]?					
1.3.9 Does the EA include the no action alternative [10 CFR 1021.321(c)]?					
1.3.10 Is the no action alternative described in sufficient detail so that its scope is clear and potential impacts can be identified [Recommendations, p.11]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.3.11 Does the no action alternative include a discussion of the legal ramifications of no action, if appropriate [Recommendations, p.11]?					
1.3.12 Does the EA take into account relationships between the proposed action and other actions to be taken by the agency in order to avoid improper segmentation [Recommendations, p.12]?					
1.3.13 Does the proposed action comply with CEQ regulations for interim actions [40 CFR 1506.1]?					
<b>1.4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT</b>					
<p>1.4.1 Does the EA <u>identify either the presence or absence</u> of the following within the area potentially affected by the proposed action and alternatives:</p> <p style="padding-left: 40px;">floodplains [EO 11988; 10 CFR 1022]?</p> <p style="padding-left: 40px;">wetlands [EO 11990; 10 CFR 1022; 40 CFR 1508.27(b)(3)]?</p> <p style="padding-left: 40px;">threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species [16 USC 1531; 40 CFR 1508.27(b)(3)]?</p> <p style="padding-left: 40px;">prime or unique farmland [7 USC 4201; 7 CFR 658; 40 CFR 1508.27(b)(3)]?</p> <p style="padding-left: 40px;">state or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance?</p> <p style="padding-left: 40px;">wild and scenic rivers [16 USC 1271; 40 CFR 1508.27(b)(3)]?</p> <p style="padding-left: 40px;">natural resources (e.g., timber, range, soils, minerals, fish, wildlife, water bodies, aquifers)?</p> <p style="padding-left: 40px;">property of historic, archaeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks) [16 USC 470; 36 CFR 800; 40 CFR 1508.27(b)(3)]?</p>					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
Native Americans' concerns [16 USC 470; 42 USC 1996]?					
minority and low-income populations (including a description of their use and consumption of environmental resources) [EO 12898]?					
1.4.2 Does the description of the affected environment provide the necessary information to support the impact analysis, including cumulative impact analysis [Recommendations, p.14]?					
1.4.3 Does the EA appropriately use incorporation by reference? Is/are the incorporated document(s) up-to-date?					
1.4.4 If this EA adopts, in whole or in part, a NEPA document prepared by another federal agency, has DOE independently evaluated the information?					
<b>1.5.0 ENVIRONMENTAL EFFECTS</b>					
<p>1.5.1 Does the EA identify the <u>potential effects</u> (including cumulative effects) to the following, as identified in question 1.4.1:</p> <p>floodplains [EO 11988; 10 CFR 1022]?</p> <p>wetlands [EO 11990; 10 CFR 1022; 40 CFR 1508.27(b)(3)]?</p> <p>threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species [16 USC 1531; 40 CFR 1508.27(b)(3)]?</p> <p>prime or unique farmland [7 USC 4201; 7 CFR 658; 40 CFR 1508.27(b)(3)]?</p> <p>state or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance?</p> <p>wild and scenic rivers [16 USC 1271; 40 CFR 1508.27(b)(3)]?</p> <p>natural resources (e.g., timber, range, soils, minerals, fish, wildlife, water bodies, aquifers)?</p>					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
property of historic, archaeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks) [16 USC 470; 36 CFR 800; 40 CFR 1508.27(b)(3)]?					
Native Americans' concerns [16 USC 470; 42 USC 1996]?					
minority and low-income populations [EO 12898]?					
<p>1.5.2 Does the EA analyze the proposed action:</p> <p>for both short-term and long-term effects [40 CFR 1508.27(a)]?</p> <p>for both beneficial and adverse impacts [40 CFR 1508.27(b)(1)]?</p> <p>for effects on public health and safety [40 CFR 1508.27(b)(2)]?</p> <p>for disproportionately high and adverse human health or environmental effects on minority and low-income communities [EO 12898]?</p>					
1.5.3 Do the discussions of environmental impacts include (as appropriate) human health effects, effects of accidents, and transportation effects [Recommendations, p.18]?					
1.5.4 As appropriate, does the EA address the degree to which the possible effects on the human environment may be highly uncertain or involve unique or unknown risks [40 CFR 1508.27(b)(5)]?					
1.5.5 Do the discussions of environmental impacts identify possible indirect and cumulative impacts [Recommendations, Sec. 6.1]?					
1.5.6 Does the EA quantify environmental impacts where possible [Recommendations, p.18]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.5.7 Are all potentially non-trivial impacts identified? Are impacts analyzed using a graded approach -- i.e., proportional to their potential significance [Recommendations, p.16 and 17]?					
1.5.8 Does the EA identify all reasonably foreseeable impacts [40 CFR 1508.8]?					
1.5.9 If information related to potential impacts is incomplete or unavailable, does the EA indicate that such information is lacking [40 CFR 1502.22]?					
1.5.10 Are sufficient data and references presented to allow review of the validity of analysis methods and results [Recommendations, p.19]?					
<b>1.6.0 OVERALL CONSIDERATIONS/INCORPORATION OF NEPA VALUES</b>					
1.6.1 Because conclusions of overall significance will be made in a FONSI or determination to prepare an EIS, are the words "significant" and "insignificant" absent from conclusory statements in the EA [Recommendations, p.38]?					
1.6.2 Do the conclusions regarding potential impacts follow from the information and analyses presented in the EA [Recommendations, p.30]?					
1.6.3 Does the EA avoid the implication that compliance with regulatory requirements demonstrates the absence of significant environmental effects [Recommendations, p.20]?					
1.6.4 Are mitigation measures appropriate to the potential impacts identified in the EA [40 CFR 1500.2(f)]?					
1.6.5 Does the EA show that the agency "has taken a 'hard look' at environmental consequences" [Kleppe v. Sierra Club, 427 US 390, 410 (1976)]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
<b>1.7.0 PROCEDURAL CONSIDERATIONS</b>					
1.7.1 Were host states and tribes and, when applicable, the public notified of DOE's determination to prepare the EA [10 CFR 1021.301; Policy Statement, Sec. V]?** Does the EA address issues known to be of concern to the states, tribes, and public ?					
1.7.2 Has the EA been made available to the agencies, states, tribes, and the public [10 CFR 1021.301]?					
1.7.3 Have stakeholders including the public been involved to the extent practicable during the preparation of the EA [CEQ (46 FR 18037); 40 CFR 1506.6; 40 CFR 1501.4(b); 10 CFR 1021.301]? Has DOE proactively sought the involvement of minority and low-income communities in the review and preparation process [EO 12898]?					
1.7.4 Have comments from host states and tribes and, when applicable, the public been addressed [10 CFR 1021.301; Policy Statement, Sec. V]?					
1.7.5 Is a Floodplain/Wetlands Assessment required and if so, has one been completed? If required, has a Public Notice been published in the Federal Register [10 CFR 1022.14(b)]?					
1.7.6 Does the EA demonstrate adequate consultation with appropriate agencies to ensure compliance with sensitive resource laws and regulations? Are letters of consultation (e.g., SHPO, USFWS) appended [16 USC 1531; 36 CFR 800; Recommendations, p.15]?					
1.7.7 Does the EA include a listing of agencies and persons consulted [40 CFR 1508.9(b)]?					
<b>1.8.0 FORMAT, GENERAL DOCUMENT QUALITY, USER-FRIENDLINESS</b>					
1.8.1 Is the EA written precisely and concisely, using plain language, and without jargon [10 CFR 1021.301(b); Recommendations, p.36]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
1.8.2 Is DOE listed as the preparer on the title page of the EA [Recommendations, p.32]?					
1.8.3 Is the metric system of units used (with English units in parentheses) to the extent possible [Recommendations, p.35]?					
1.8.4 If scientific notation is used, is an explanation provided [Recommendations, p.35]?					
1.8.5 Are technical terms defined where necessary [10 CFR 1021.301(b); Recommendations, p.36]?					
1.8.6 Are the units consistent throughout the document [Recommendations, p.35]?					
1.8.7 If regulatory terms are used, are they consistent with their regulatory definitions [Recommendations, p.37]?					
1.8.8 Are visual aids used whenever possible to simplify the EA?					
1.8.9 Are abbreviations and acronyms defined the first time they are used?					
1.8.10 Is the use of abbreviations minimized to the extent practical?					
1.8.11 Do the appendices support the content and conclusions contained in the main body of the EA? Is information in the appendix consistent with information in the main body of the EA [Recommendations, p.33]?					
1.8.12 Is information in tables and figures consistent with information in the text and appendices [Recommendations, p.33]?					
<b>1.9.0 KEY TO SUPPLEMENTAL TOPICAL QUESTIONS</b>					
1.9.1 Does the proposed action present potential for impacts on water resources or water quality?			If yes, complete questions in Section 2.1.0.		
1.9.2 Does the proposed action present potential for impacts related to geology or soils?			If yes, complete questions in Section 2.2.0.		
1.9.3 Does the proposed action present potential for impacts on air quality?			If yes, complete questions in Section 2.3.0.		

<b>List 1: General</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Page</b>	<b>Adequacy Evaluation and Comments</b>
1.9.4 Does the proposed action present potential for impacts on wildlife or habitat?					If yes, complete questions in Section 2.4.0.
1.9.5 Does the proposed action present potential for effects on human health?					If yes, complete questions in Section 2.5.0.
1.9.6 Does the proposed action involve transportation?					If yes, complete questions in Section 2.6.0.
1.9.7 Does the proposed action involve waste management?					If yes, complete questions in Section 2.7.0.
1.9.8 Does the proposed action present potential for impacts on socioeconomic conditions?					If yes, complete questions in Section 2.8.0.
1.9.9 Does the proposed action present potential for impacts to historic, archaeological, or other cultural sites or properties?					If yes, complete questions in Section 2.9.0.

<b>List 2: Supplemental Topics</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Page</b>	<b>Adequacy Evaluation and Comments</b>
<b>2.1.0 WATER RESOURCES AND WATER QUALITY</b>					
2.1.1 Does the EA identify potential effects of the proposed action and alternatives on surface water quantity and quality under both normal operations and accident conditions?					
2.1.2 Does the EA evaluate whether the proposed action or alternatives would be subject to:					
water quality or effluent standards?					
National Interim Primary Drinking Water Regulations?					
National Secondary Drinking Water Regulations?					
2.1.3 Does the EA state whether the proposed action or alternatives:					
would include work in, under, over, or having an effect on navigable water of the United States?					
would include the discharge of dredged or fill material into waters of the United States?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
would include the deposit of fill material or an excavation that alters or modifies the course, location, condition, or capacity of any navigable waters of the United States?					
would require a Rivers and Harbors Act Section 10 permit or a Clean Water Act (Section 402 or Section 404) permit?					
2.1.4 Does the EA identify potential effects of the proposed action and alternatives on groundwater quantity and quality (including aquifers) under both normal operations and accident conditions?					
2.1.5 Does the EA consider whether the proposed action or alternatives may affect any municipal or private drinking water supplies?					
<b>2.2.0 GEOLOGY AND SOILS</b>					
2.2.1 Does the EA describe and quantify the land area proposed to be altered, excavated, or otherwise disturbed? Is this description consistent with other sections (e.g., land use, habitat area)?					
2.2.2 Are issues related to seismicity sufficiently characterized, quantified, and analyzed?					
2.2.3 If the action involves disturbance of surface soils, are erosion control measures addressed?					
<b>2.3.0 AIR QUALITY</b>					
2.3.1 Does the EA identify potential effects of the proposed action on ambient air quality under both normal and accident conditions?					
2.3.2 Are potential emissions quantified to the extent practicable (amount and rate of release)?					
2.3.3 Does the EA evaluate potential effects to human health and the environment from exposure to radiation and hazardous chemicals in emissions?					
2.3.4 Does the EA evaluate whether the proposed action and alternatives would:					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
be in compliance with the National Ambient Air Quality Standards?					
be in compliance with the State Implementation Plan?					
potentially affect any area designated as Class I under the Clean Air Act?					
be subject to New Source Performance Standards?					
be subject to National Emissions Standards for Hazardous Air Pollutants?					
be subject to emissions limitations in an Air Quality Control Region?					
<b>2.4.0 WILDLIFE AND HABITAT</b>					
2.4.1 If the EA identifies potential effects of the proposed action and alternatives on threatened or endangered species and/or critical habitat, has consultation with the USFWS or NMFS been concluded? Does the EA address <u>candidate</u> species?					
2.4.2 Are <u>state</u> -listed species identified, and if so, are results of state consultation documented?					
2.4.3 Are potential effects (including cumulative effects) analyzed for fish and wildlife other than threatened and endangered species and for habitats other than critical habitat?					
2.4.4 Does the EA analyze the impacts of the proposed action on the biodiversity of the affected ecosystem, including genetic diversity and species diversity?					
2.4.5 Are habitat types identified and estimates provided by type for the amount of habitat lost or adversely affected?					
<b>2.5.0 HUMAN HEALTH EFFECTS</b>					
2.5.1 Have the susceptible populations been identified -- i.e., involved workers, noninvolved workers, and the public (including minority and low-income communities, as appropriate) [Recommendations, p.21]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments																																																																								
2.5.2 Does the EA establish the period of exposure (e.g., 30 years or 70 years) for exposed workers and the public [Recommendations, p.21]?																																																																													
2.5.3 Does the EA identify all potential routes of exposure [Recommendations, p.21]?																																																																													
2.5.4 When providing quantitative estimates of impacts, does the EA use current dose-to-risk conversion factors that have been adopted by cognizant health and environmental agencies [Recommendations, p.22]?																																																																													
2.5.5 When providing quantitative estimates of health effects due to radiation exposure, are collective effects expressed in estimated numbers of fatal cancers, and are maximum individual effects expressed as the estimated maximum probability of death of an individual [Recommendations, p.22]?																																																																													
2.5.6 Does the EA describe assumptions used in the health effects analysis and the basis for health effects calculations [Recommendations, p.22]?																																																																													
2.5.7 As appropriate, does the EA analyze radiological impacts under <u>normal operating conditions</u> for: <table border="0" style="margin-left: 20px;"> <tr> <td>Involved workers</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Collective dose?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Maximum individual?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Latent cancer fatalities?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Uninvolved workers</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Collective dose?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Maximum individual?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Latent cancer fatalities?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Public</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Collective dose?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Maximum individual?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Latent cancer fatalities?</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Involved workers						Collective dose?						Maximum individual?						Latent cancer fatalities?						Uninvolved workers						Collective dose?						Maximum individual?						Latent cancer fatalities?						Public						Collective dose?						Maximum individual?						Latent cancer fatalities?										
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List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
2.5.8 Does the EA identify a spectrum of potential accident scenarios that could occur over the life of the proposed action [Recommendations, p.27]?					
2.5.9 As appropriate, does the EA analyze radiological impacts under <u>accident conditions</u> for:					
Involved workers Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
Uninvolved workers Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
Public Collective dose?					
Maximum individual?					
Latent cancer fatalities?					
2.5.10 Are non-radiological impacts (e.g., chemical exposures) addressed for both routine and accident conditions [Recommendations, p.25]?					
<b>2.6.0 TRANSPORTATION</b>					
2.6.1 If transport of hazardous or radioactive waste or materials is part of the proposed action, or if transport is a major factor, are the potential effects analyzed (including <u>to</u> a site, on-site, and <u>from</u> a site) [Recommendations, p.25]?					
2.6.2 Does the EA analyze all reasonably foreseeable transportation links (e.g., overland transport, port transfer, marine transport, global commons) [Recommendations, p.26; EO 12114]?					
2.6.3 Does the EA avoid relying exclusively on statements that transportation will be in accordance with all applicable state and federal regulations and requirements [Recommendations, p.26]?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
2.6.4 Does the EA address both routine transportation as well as reasonably foreseeable accidents [Recommendations, p.26]?					
2.6.5 Are the estimation methods used for assessing radiological impacts of transportation defensible [Recommendations, p.26]?					
2.6.6 Does the EA address the annual, total, and cumulative impacts of all DOE and non-DOE transportation on specific routes associated with the proposed action [Recommendations, p.26]?					
<b>2.7.0 WASTE MANAGEMENT AND WASTE MINIMIZATION</b>					
2.7.1 Are pollution prevention and waste minimization practices applied in the proposed action and alternatives (e.g., is pollution prevented or reduced at the source when feasible; would waste products be recycled when feasible; are by-products that cannot be prevented or recycled treated in an environmentally safe manner when feasible; is disposal only used as a last resort)?					
2.7.2 If waste would be generated, does the EA examine the human health effects and environmental impacts of managing that waste, including waste generated during decontaminating and decommissioning?					
2.7.3 Are waste materials characterized by type and estimated quantity, where possible?					
2.7.4 Does the EA identify RCRA/CERCLA issues related to the proposed action and alternatives?					
2.7.5 Does the EA establish whether the proposed action and alternatives would be in compliance with federal or state laws and guidelines affecting the generation, transportation, treatment, storage, or disposal of hazardous and other waste?					

List 1: General	Yes	No	N/A	Page	Adequacy Evaluation and Comments
<b>2.8.0 SOCIOECONOMIC CONSIDERATIONS</b>					
2.8.1 Does the EA consider potential effects on land use patterns, consistency with applicable land use plans, and compatibility of nearby uses?					
2.8.2 Does the EA consider possible changes in the local population due to the proposed action?					
2.8.3 Does the EA consider potential economic impacts, such as effects on jobs and housing, particularly in regard to disproportionate adverse effects on minority and low-income communities?					
2.8.4 Does the EA consider potential effects on public water and wastewater services, stormwater management, community services, and utilities?					
2.8.5 Does the EA evaluate potential noise effects of the proposed action and the application of community noise level standards?					
<b>2.9.0 CULTURAL RESOURCES</b>					
2.9.1 Was the SHPO consulted?					
2.9.2 Was an archaeological survey conducted?					
2.9.3 Does the EA include a provision for mitigation in the event unanticipated archaeological materials are encountered?					