

FACILITY SURVEY & TRANSFER

Facility Survey & Transfer

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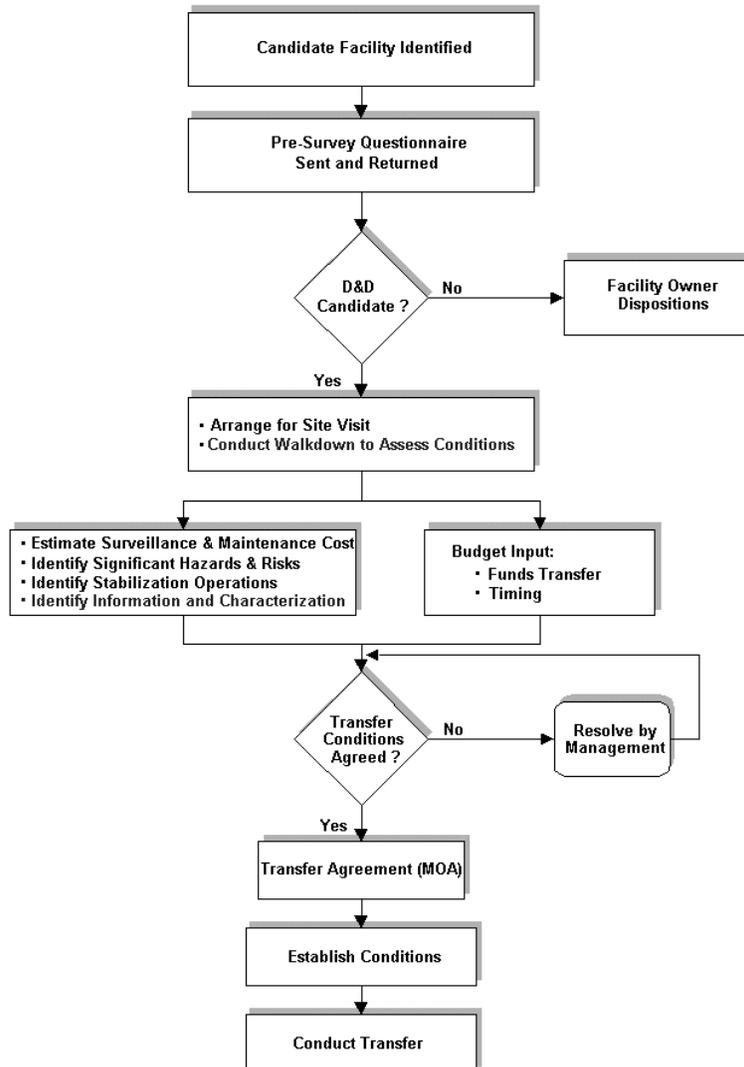
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Overview

As DOE facilities become excess, many that are radioactively and/or chemically contaminated will become candidate for transfer to DOE-EM for deactivation and decommissioning. Requirements and guidance for such transfers are contained in:

- DOE Order 430.1B Chg. 2, **REAL PROPERTY & ASSET MANAGEMENT**
- DOE Guide 430.1-5, **TRANSITION IMPLEMENTATION GUIDE**

The transfer process is illustrated in the Transfer Process figure. The purpose here is to provide examples of methods and activities used for transferring facilities from a transition status to a deactivation status.



A significant portion of these examples deal with facility surveys and walkdowns that are conducted to achieve several **objectives**. These are to:

- Gain an understanding of the overall physical condition, risks, hazards, and liabilities of the facility.
- Identify stabilization actions and other activities that should be conducted prior to and after the transfer.
- Gain a sense of the magnitude and extent of the post-transfer S&M program and the subsequent deactivation.
- Validate and/or estimate the cost of S&M after transfer, but before deactivation.
- Suggest the long-term EM management risk and path forward for the facility.

Transfer Activities Checklist

The transfer activities checklist that follows covers these functions, although not specifically as shown in the Transfer Process figure above.

The following is a checklist of activities to be conducted by either or both the transferring program and EM to coordinate the transfer of a facility.

#	Subject	Notes
1.	Decision to Proceed, Planning	The facility is declared excess and a request for transfer is received by EM. A schedule of activities is identified using this checklist. Interface contacts are identified in transferring and disposition organization.
2.	Physical Boundaries/Transfer Scope	Identify all structures, outbuildings, tanks, etc. that should be in the scope of the transfer. Identify any issues of separation of systems that serve other facilities that are not to be transferred.
3.	Conduct a Facility Survey	Determine status of structures and systems; use the methods and examples that follow as appropriate.
4.	Cost Evaluation	Break down the current S&M budget into task listings and evaluate for sufficiency of S&M after transfer.
5.	Budget	Identify budget and target for S&M to be transferred.
6.	Staffing	Identify staff that know the plant and would be important to continuity for deactivation or decommissioning. Where possible, arrange for re-assignment.
7.	Identify actions to be tracked prior to transfer as well as other commitments that will be assumed by EM	Generate a list. For example; State Regulatory commitments, DNFSB commitments, others.
8.	Permits, Licenses, Agreements, Safety Analysis, Stakeholder Commitments, etc.	Identify and coordinate with commitments that will be assumed by EM after transfer. For example, regulatory agreements.
9.	Nuclear & Fissionable Materials Inventory	Obtain a listing. Remove consistent with LCAM and record the results.
10.	Toxic, Hazardous and Radioactive materials	Obtain a listing. Remove based on justifiable criteria, consistent with LCAM, and record results.
11.	Characterization	Summarize the radiological and hazardous chemical contamination conditions that exist. Propose a level of cleanup, based on justifiable criteria.
12.	Authorization Basis	Report the status, list the defining documents, and identify the S&M requirements to maintain the safety envelope. Update or revise as appropriate for completion of stabilization activities.
13.	Safe Shutdown Implementation Plan (if applicable)	Verify safe shutdown needs. Address the configuration and contamination conditions that should be established prior to transfer.
14.	Property Assets	Construct a list of excess assets limited to those of significant value. Identify which property should transfer, which should stay.

15.	Schedule Integration	Develop a conceptual level schedule that integrates initiation of deactivation with completion of operations and stabilization.
16.	Pre-Transfer Operations	For stabilization and hazard elimination, agree and conduct as a condition of transfer.
17.	Formal documents for conducting the transfer	Draft, negotiate, revise, and finalize transfer memoranda and agreements as decided.

Pre-Survey Information Request

The following information request can be used to obtain information of interest prior to conduct of a survey and walkdown. This will assist the facility staff in preparing for the survey and also will make for a more efficient survey if the information requested is available prior to a visit.

QUESTIONNAIRE COVER SHEET

INFORMATION PROVIDED BY: Date Completed_____

Name:_____ Phone:_____

Title:_____ E-Mail: _____

Address:

GENERAL FACILITY INFORMATION

Facility name/number: _____

Site location: _____

Area name/number: _____

Facility Status ACTIVE (In Use) INACTIVE (Standby) D&D (Excess)
(circle):

Of Occupants _____

Current Facility Use:	Prior Facility Use (if different):
Identify the current and previous Authorization Basis Documents. Provide a copy of the current document.	Funding & Budget Information:
Facility Hazard Classification: (i.e., Nuclear Cat 2 or 3, Radiological, etc.)	Identify or provide budget documents:
Fissile Material Quantity: _____ >Minimum Critical Mass (MCM)	Current Year Funding:
_____ 1/3 MCM<x<MCM	Total
_____ 3%MCM<x<1/3 MCM	Operations
_____ <3%MCM	Surv. & Maint.
Identify the primary radionuclides of concern:	Capital
	Forecast Budget (Next FY):
	Total

Identify the primary hazardous materials of concern:	Operations
	Surv. & Maint.
	Capital

POINT OF CONTACT

Please complete the following tables. The tables will be used for the site visit as Points of Contact or to contact individual subject matter experts (SME) for the specific subject area of interest. SMEs are individuals that possess either current or past knowledge in the facility’s operations, management etc. These people should be readily available for interviews or round table discussions or as participants during the facility walkdown.

FIELD OFFICE AND FACILITY REPRESENTATIVES				
Representing	Name	Phone	FAX	Email address
Field Office				
Field Office Facility Representative				
Facility Contractor				

SUBJECT MATTER EXPERTS (SME)			
SUBJECT AREA	SME NAME	PHONE NUMBER	E-MAIL ADDRESS
Facility Structure			
Process Systems			
Infrastructure And Support Systems			
Nuclear Safety & Materials			
Hazardous Materials			
Radioactive Contamination And Waste			
Facility Characterization			
Surveillance And Maintenance			
Environmental Compliance			
Quality Assurance			

1. Facility Structure

Purpose: To determine scope and investment needed to mitigate radioactive or hazardous material migration, animal intrusion or inleakage potential.

Questions/Lines of Inquiry

Structural integrity (walls, foundation, roof)

- Has there been a recent evaluation of the structures? If so, provide the document.
- Is there evidence of contamination migration through the structures?

- Structural tightness for leakage (walls, foundation, roof, doors, windows, screens).
- Has water or animal intrusion been a problem since completion of the last mission?
- Does the condition of these items require special winterization control?

Condition of hot cells

- What are the structural conditions of hot cells?
- What are the contamination levels?

Condition of pools and sumps

- Is there evidence of leaks from pools/sumps?
- What is the contamination level?
- Is shine or "bath tub ring" a dose problem?

General overall condition and life expectancy

- Is the facility beyond its design life? If so how by how much?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Seismic evaluation.
- Inspection reports.
- Maintenance History.
- Exterior Buildings Drawing, Sketch, or Photo, Key Building Floor Plans.

2. Process Systems

Purpose: To determine scope and investment needed to use systems for cleanout runs, to stabilize them for residual contained material, or to isolate, abandon or require removal prior to facility transfer.

Questions/Lines of Inquiry

Active Systems - Identify the current active systems. This should include all safety systems.

Contaminated Systems - Identify systems with known contamination. Information should include the inventory to the extent known.

Abandoned Systems - Identify abandoned systems and their condition.

Cleaned Systems - Identify systems that were previously cleaned/blanked and provide documentation (references) that identifies the as-left system condition.

Types of Documents of Interest During a Site Visit (to the extent they exist)

Condition or status reports, especially as-left conditions.

As-Built or essential drawings.

Safety Equipment List.

Technical Manual.

Winterization requirements and information.

Confined Space List.

3. Infrastructure and Support Systems

Purpose: To determine scope and investment needed to upgrade systems to maintain a min-safe facility condition, or to retire systems to reduce hazards.

Questions/Lines of Inquiry

Utilities

- What is the current cost of utilities?
- Are the utilities necessary to ensure the safety of the facility?
- What is the interface with utility providers?

Fire System

- What is the current cost of fire systems/support?
- Is the fire system necessary to ensure the safety of the facility?
- Is this documented in a Fire Hazard Analysis?
- What is the interface with fire systems support personnel?

Other Safety Systems (i.e., NOX Monitors, Eye washes, safety showers)

- What other systems are currently operating?
- What are the drivers for these systems (i.e., SAR, other documents)?

Radiation Monitors - What is the current radiation monitoring in the facility?

Cranes and Hoists and other specialty equipment - Identify any of these systems and their purpose/need for current facility mission and for "cleanout."

Elevators - Are the inspections and certifications current?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Maintenance History files
- Floor plans and Essential drawing lists
- As-Built drawings

4. Nuclear Safety & Materials

Purpose: Address the question of need for material stabilization or transfer prior to deactivation or decommissioning, and associated costs.

Questions/Lines of Inquiry

Does the facility store or maintain accountable (Category I, II, III, IV) Special Nuclear Material (SNM)?

What materials were processes/handled in the facility? What is their current inventory? Materials such as:

Nuclear materials (thorium, uranium, plutonium)

Nuclear fuel (new fuel, spent fuel, etc)

Deuterium and tritium

Sealed sources

Are there plans or actions to remove any of the material?

Are the authorization basis documents current (annual updates)? And DOE approved?

Are there current criticality safety documents?

Is there an active criticality alarm system?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- DNFSB 94-1 reports and status.
- Pu Vulnerability Assessments.
- Criticality Specifications/Evaluations.
- Inventory reports or data sheets.
- Accountability status.
- Studies for disposition, either by processing within the facility, disposal, or transfer for processing or storage.
- Disposition plans.
- Security Plans and Agreements.

5. Hazardous Material

Purpose: Address the question of need for removal of hazardous material.

Questions/Lines of Inquiry

Identify the hazardous material inventory and potential residues including:

Process chemicals (solvents, acids, caustics, etc.)

Worker Hazards (asbestos, beryllium, magnesium, chlorine, etc.)

Environmentally hazardous (lead, PCBs, freon, paints, cleaning chemicals, etc.)

Fuels or explosive, incendiaries (diesel oil, gasoline, etc.)

Other (Pesticides, herbicides, etc.)

Are there plans or actions to remove any of the material?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Survey reports or other characterization summaries
- Lists of materials (including locations)
- Chemical Vulnerability Assessments
- Results of any stabilization efforts
- Emergency or Contingency Plans
- Major reportable incidents, such as those reported in ORPS, in the facility's life cycle (radiological, chemical, industrial, etc.)
- Related plans or project descriptions

6. Radioactive Contamination and Waste

Purpose: Address the question of need for fixing contamination, or decontamination, and waste removal.

Questions/Lines of Inquiry

Where is there radioactive material, radiation and contamination, what type is it, what is the amount?

Are there areas in the facility where there radioactive contamination has been covered with a fixative in the past to prevent spread? If so, where are the records?

Is there radioactive contamination exterior to buildings? If so, what is it and where are the records?

How much and what kinds of radioactive/hazardous waste is currently in the facility?

Are there plans or actions to decontaminate?

Are there plans or actions to remove hazardous waste?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Contamination and Dose survey reports or other characterization summaries.

- Inventory of loose and packaged waste within the facility.
- Historical reports of contamination while the facility was in use.
- Major reportable incidents, such as those reported in ORPS, in the facility's life cycle (radiological, chemical, industrial, etc.).
- Related plans or project descriptions.
- ALARA/Dose assessments.

7. Environmental Compliance

Purpose: To understand current environmental requirements, permits and regulatory commitments.

Questions/Lines of Inquiry

Does the facility have key baseline environmental documentation i.e., RCRA, CERCLA, NEPA, FEMP, NOC, Permits, Compliance plans?

Does the facility have an environmental historical file or operating record that contains air emission, filtration (HEPAs) records, and liquid effluent discharge information? Does it include hazardous material or chemical spill information?

Are there potential fugitive emissions sources?

What (if any) are the facility liquid discharges? Are any of these unmonitored?

Identify any open drains. Are they in contaminated areas? Do they discharge to process, storm or sanitary systems?

Identify how run-off is controlled and how storm water is managed?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Effluent and Hazardous material reports
- Characterization reports or plans
- Inspection reports

8. Characterization Information

Purpose: Address the question of need for inspection, sampling, repairing or removal of hazardous material prior to facility transfer.

Questions/Lines of Inquiry

How well is the facility characterized?

Is the quantity and form of both radiological and non-radiological material (Chemical) well understood for all areas of the facility? If so, what is the basis for the information?

What information is based on process knowledge and what information has been verified (sampling, NDA, etc.)?

Where is data archived for radiological and material information?

Are there site maps showing waste sites or contaminated areas external to the facility?

Are there hazardous material inventories in addition to chemical identified above (Beryllium, Asbestos, biological, PCB's, etc.)?

Is the facility characterized for industrial hazards such as confined spaces, noise, heights, etc.?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Characterization reports or plans
- Inspection reports
- Health and Safety Plan
- Industrial Safety inspections and confined space list

Other Site Visit Related Information of Interest	
Radioactive and Nuclear Material	Industrial
Nuclear Material Inventory	Hazardous Material Inventory
Radionuclide Characterization	Confined Space Listings
Vulnerability Assessments	Biological Assessment
Surveys, Mapping, Postings	Hazard Assessments
Work Place Air Sampling	Vulnerability Assessments
Logs	Surveys, Mapping, Postings
Removal Plan	Logs
	Removal Plans
	Work Place Air Sampling
	Health and Safety Plan

9. Surveillance and Maintenance

Purpose: To understand current inspection and maintenance routine and possible need to increase, or potential to decrease.

In the following, "surveillance" refers to inspections and monitoring activities.

Questions/Lines of Inquiry

What surveillances are conducted and what is their frequency?

What maintenance procedures are conducted and their frequency?

What is the direct costs or level of effort (equivalent FTE's) for surveillance and maintenance, including health physics surveys?

What is the administrative burden (overhead) on these direct costs?

Where are there closed spaces in the facility? Why are they closed? What are their conditions? What is the status of procedures for entry?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Listing of surveillances and maintenance activities
- Evaluations conducted on this subject
- Listing of repair or maintenance order backlogs
- Listings of equipment and materials to be removed

10. Quality Assurance

Purpose: To determine potential risk for Price Anderson Amendment Act (PAAA) liabilities.

Questions/Lines of Inquiry

Does the facility have a Quality Assurance Program Plan (QAPP)?

Does the facility fall under the Price Anderson Amendment Act (PAAA) for QA and RADCON?

Have the current safety systems been reviewed to ensure that the systems were designed, procured, constructed and maintained consistent with the requirements?

Does the facility have identified open issues on the sites deficiency tracking system? If so, please provide a listing.

Does the facility have an approved SRIDS?

Types of Documents of Interest During a Site Visit (to the extent they exist)

- Deficiency tracking reports
- SRIDS
- Quality Assurance Plans
- Occurrence reports
- Training Plans

Survey Report Content

Excess facilities slated for transfer to EM are surveyed for several **objectives** listed in the overview.

The report of the results of a facility survey provides the bases for agreement to transfer the facility to EM. A memorandum of Agreement (MOA) incorporating the survey report by reference is the vehicle for finalizing the transfer.

The following suggested survey report content is presented as a combination of an annotated outline and example text. This content evolved during several surveys conducted in 1999 and 2000. The reports typically ranged from 5 to 20 pages, depending on the complexity and conditions of the facility.

Survey Report Front Material

The report should have a cover page and table of contents. Sections include:

1. **Introduction**
2. **Summary, Conclusions & Recommendations**
3. **Survey Results**
4. **Stabilization and Other Action Required for Transfer**
5. **Post-Stabilization Surveillance and Maintenance**
6. **Attachments**

1. Introduction

1.1 Purpose

This is a report of the survey conducted on the name & number Facility on the area property at the name Site. The survey was conducted the week of date .

The primary purpose of the survey is to identify facility conditions and issues that need to be addressed to transfer responsibility for the facility from the Office of _____ to the Office of Environmental Management (EM). The second purpose is to provide EM with insight regarding the facility's risks and liabilities that may influence the management of eventual downstream life-cycle activities.

The survey and this report are part of a process for implementing the requirements related to the disposition of excess facilities addressed in the DOE's REAL PROPERTY & ASSET MANAGEMENT Order (DOE O 430.1B) using the associated guidance for facility transition, deactivation, surveillance & maintenance, and decommissioning.

1.2 Facility Description

Include a written description of the facility in a page or less. Visualization of the facility is the goal here. Embedded photographs are useful.

The proposed scope/boundaries of transfer include _____

Provide a listing of buildings and/or external structures; and brief description of each including approximate floor area and height or number of stories.

Systems and major equipment within the scope of transfer are the following types:

- Process Systems – describe
- Process Support System – describe systems for process support, contrasted with those used for general facility services
- Support Systems – describe utility and auxiliaries used for general facility services (e.g., potable water, fire protection)

1.3 Organization Representatives

Identify contacts in transferring and receiving organizations; for example:

Oak Ridge XX John Doe
 Oak Ridge EM Jane Doe
 Headquarters XX John Smith
 Headquarters EM Jane Smith

1.4 Survey Participants

Name	Organization Represented	Phone	Fax	Email
Jane Smith	DOE EM-22	(301) 903 nnnn	(301) 903 nnnn	Jane.smith@em.doe.gov
EM Local Representative				
DOE Transferring Organization HQ Representative				
DOE Transferring Organization Local Representative				
Other DOE Organization Representatives				
Support Contractors				
Walk through participants				

2. Summary, Conclusions & Recommendations

This is a summary of the key points from the body of the survey.

2.1 Comparison with LCAM Requirements

Provide an overall assessment of the facility with regard to hazards and conditions. Summarize the degree to which there are unknowns or uncertainties. Address prior missions for the facility for which information may be sketchy.

2.2 Transfer Considerations

Summarize key points of Section 4. below, and specifically: 1) characterization and 2) stabilization requirements.

2.3 EM Path Forward & Management Risk

This discussion is not required for transfer. It is included if the surveyors have insights, opinions, or recommendations as to what EM should do with the facility after transfer, include it here. For example, deactivate or demolish, how to reduce costs, etc. The rationale for such statements should be stated.

Management risk deals with specific vulnerabilities of the facility as a result of unknown conditions or lacking information. Any such statements should also be backed up with a brief rationale.

There is no need to address this information in the body of the report.

2.4 Surveillance & Maintenance After Transfer

Summarize key points of Section 5. below.

3. Survey Results

This section consists of **Table 1**, which details the results of the survey and walkthrough. It must be included in the survey report. This table should contain observations of fact including expert judgment and opinion regarding facility conditions. Table 1 should not include recommendations for pre-transfer actions. Rather, these recommendations are to be stated in Section 4 based on observations in Table 1. A checklist aid is provided as a reminder for taking notes to complete Table 1.

Experience has shown that Table 1 is sufficient for recording the details of a walkthrough for small facilities. However, for larger or complex facilities, a more detailed report may be appropriate to convey the results. A more detailed **walk down checklist** should be used during such facility walkdowns and may be included in the survey report.

Table 1- Survey Results

Subject of Survey	Summary – These are observations except as otherwise indicated to be statements or presumptions. Recommendations, however, are elsewhere in the report. See the walkdown checklist for more detailed listings.
Facility Structure	State the overall type and condition of the structure. State when it was constructed. Note degrading conditions. Address both internal and external structure. Note last structural inspections and significant repairs. Separately address the roof condition, if there have been formal inspections, if there is leakage, and when the last re-roofing was done.
Process Systems	Identify process systems and their operational status. This includes major process equipment and areas such as gloveboxes and hot cells. Indicate systems for which "clean out" runs should be conducted.
Infrastructure and Support Systems	Identify systems, or types of systems used for process support and facility operation. Indicate the general condition, operational status, and specifically address those that are in poor condition. Indicate any special considerations for transfer.
Nuclear Safety &	Identify nuclear materials that need to be addressed either prior to the transfer or for which EM will

Materials	assume custody. If allowed by security, list the specific types and magnitude of amount.
Hazardous Material	List hazardous materials that need to be removed or stabilized, and/or for which a permit applies. Be sure to note fluids such as oil.
Radioactive Contamination and Waste	Note types and extent of radioactive contamination and where in general it is located. Indicate systems that are contaminated. Indicate the degree to which these will cause difficulty during deactivation or demolition, for example to gain access. If there are significant amounts of non-contaminated items/materials that require clearance prior to release, obtain survey data to support cost estimating.
Environmental	Note any exterior special conditions or systems for environmental protection. Indicate if there are special cleanup considerations related to contamination not contained within buildings or tanks.
Characterization Information	Indicate the extent to which information exists that provides quantitative information regarding the above subjects. If conditions are unknown, point out where this could be problematic.
Surveillance and Maintenance	Indicate the degree to which surveillance and maintenance has been conducted routinely (if appropriate) or neglected. Note specific areas that appear to need attention.

4. Stabilization and Other Action Required for Transfer

This section addresses stabilization actions that should be conducted prior to transfer. This should relate to equipment, structures, hazard removal or fixing, materials, etc. Typically, subjects for noting might include the following:

- Characterization where conditions are unknown and thought to represent hazards or risks.
- Isolation of hazards or systems containing hazardous materials that do not otherwise require stabilization actions, electrical systems no longer in use, etc.
- Stabilization such as cleanout runs for systems containing hazards, removal of hazardous or precious materials. Stabilization focuses on activities where knowledge of the current facility staff is important to operating equipment.
- Remove anything that would be declared RCRA waste if left. This is to avoid unnecessary declaration of waste or the need to establish a RCRA storage area.
- Provide a list and description, or supporting documents, of facility specific commitments, if any, for which EM will be responsible after transfer.
- Determine if any of the process equipment remaining in the facility is of historical significance, and if so, remove it.
- Agreements (Permits, Licenses, Purchase Orders, Contracts, etc.) - Provide a list and description, or supporting documents, of facility specific permits, licenses, purchase orders, contracts, and other agreements, if any, that would become the responsibility of EM upon transfer.

This list is neither mandatory nor all-inclusive. Any others subjects that surveyors think appropriate should be addressed.

5. Post-Stabilization Surveillance and Maintenance

This section provides an overview of the Post Stabilization S&M regimen (after transfer) and an estimate of the costs. The estimate will depend on the overall conditions resulting from stabilization activities and specifically, but not all inclusively, on whether the facility be occupied or not, if equipment and utilities are operational, and if there is material requiring surveillance and security measures.

Table 2 can be used for estimating the post-stabilization surveillance and maintenance burden. It must be included in the survey report. This table should include the number of FTEs annually as well as other direct costs for each activity.

Budget estimates for labor should use a site-specific fully burdened labor rate and is applied to the number of FTE's for each S&M activity.

Other Direct Costs are included in either or both of two ways:

- Specific costs for the facility S&M associated with line items in Table 2 (e.g., waste disposal)
- An allowance of 20% of the S&M Labor costs for other direct costs, such as consumables.

Table 2 should not include costs (such as general training) for activities that are not directly related to the facility being surveyed. Such costs are included either in the burdened rate or site surcharges.

Experience has shown that Table 2 is sufficient for recording the details of an S&M estimate for small facilities. However, for larger or complex facilities, a more detailed basis of estimate may be needed from which to derive an overall estimate. A more **comprehensive checklist** for such a purpose may be included in the survey report.

Table 2 - S&M Cost Estimate Worksheet for Activities After Transfer					
Surveillance & Maintenance Costs	Basis for Estimate	Annual Estimated Hours & Capital by		Annual Estimated Cost by	
		Survey	Site	Survey	Site
Nuclear Safety					
Occupational Safety Health					
Fire Protection					
Radiation Protection					
Emergency Management					
Control, Accountability, Security for SNM					
Training and Qualification					
Quality Assurance					
Engineering, Configuration Control					
Environmental & Waste Management					
Administration					
Facility Structural S&M					
Facility Systems & Components Surveillance					
				Subtotal	
Other Direct Costs associated with S&M.	Allow 20% of the S&M labor cost for consumables (HEPA filters, equipment repair parts, paint, absorbent, etc.)				
Site Assessment Costs					
Utilities					
Security					
Site Services					
				Subtotal	
				Overall Total	

6. Attachments

Attach sketches, photographs, drawings, that show physical features of the facility or are useful to explain information in the survey report.

Detailed Walkdown Checklist

The following detailed checklist is appropriate for surveying a complex facility.

The purpose of an initial walkdown is NOT a comprehensive documentation of the facility, but rather a screening evaluation. In some situations, a second comprehensive walkdown may be required.

The items on the detailed checklist should serve as reminders of what to look for/at. It is not intended that each listed item be documented. To serve the objectives above, it is advisable to use a level of detail that is "by exception." That is, conditions should be noted that are considered significant to safety, stability or S&M budgets.

	Subject of Survey	Notes
1.0	Exterior Structure	
1.01	Roof Condition (Integrity)	
1.02	Roof Leakage	
1.03	Foundation (cracks, crumbling)	
1.04	Walls (air and water tight)	
1.05	Doors	
1.06	Hatches	
1.07	Windows	
1.08	Loading Docks	
1.09	Ladders and Stairs	
1.10	Piping Supports	
1.11	Power Poles	
1.12	Transmission lines	
1.13	Transfer piping	
1.14	Walkways and Roadways	
1.15	Tanks and piping	
1.16	Piping insulation	
1.17	Valve boxes or pits	
1.18	Manholes and Drains	
1.19	Cribs, ditches and trenches	
1.20	Waste sites	
1.20	Animal Nesting	
1.21	Paint chipping	
1.22	Paved or Painted Contamination	
2.0	Interior Structure	
2.01	Ceilings	
2.02	Floors	
2.03	Walls (load bearing)	
2.04	Foundations	
2.05	Mezzanines	
2.06	Cat Walks	
2.07	Ladders and Stairs	
2.08	Doors	
2.09	Fire Doors & Air Locks	
2.10	Vaults	
2.11	Cells	
2.12	Hot Cells	
2.13	Pits and Crawl spaces	

2.14	Sumps	
2.15	Office and Maintenance Shops	
2.16	Elevators	
	General Appearance/Conditions	
2.17	Housekeeping	
2.18	Maintenance	
2.19	Lighting	
2.20	Signage	
2.21	Access Control	
3.0	Environmental Compliance	
	Liquid Effluents	
3.01	Liquid Discharge Points	
3.02	Cribs, Ditches, Ponds	
3.03	Sampling and monitoring	
3.04	Abandoned systems	
3.05	Marking and Mapping	
3.06	Characterization info	
3.07	Storm water Management	
3.08	Records Retention	
	Gaseous Effluents	
3.09	Discharge Points (stacks)	
3.10	Fugitive Emission sources	
3.11	Sampling and monitoring	
3.12	Abandoned systems	
3.13	Records Retention	
3.14	Characterization info	
3.15	Filter calibration	
3.16	Filter loading info	
	Chemical Management	
3.17	Spills and Releases	
3.18	Chemical Storage	
3.19	Underground Tanks	
3.20	Records Retention	
	Regulatory	
3.21	Permitted Area boundary	
3.22	TSCA –PCB Labels	
3.23	Hazard Labels	
3.24	Calibration records/stickers	
4.0	Process Systems	
4.01	Process Control Room	
4.02	Exhaust Systems	
4.03	Fans	
4.04	Motors	
4.05	Stacks	
4.06	Ductwork	
4.07	HEPA Filters	
4.08	Off Gas Scrubber	
4.09	Stack Monitoring	
4.10	Glove Boxes	
4.11	Lab Hoods	
4.12	Fume Hoods	

4.13	Vacuum Pumps	
4.14	Vessels or tanks	
4.15	Pumps	
4.16	Motors	
4.17	Piping	
4.18	Level Detection	
4.19	Inert Gas Systems	
4.20	Heat Detection Systems	
4.21	Compressed Air Systems	
4.22	Containment Systems	
4.23	Conveyer Systems	
4.24	Waste Handling Systems	
4.25	Waste Assay Systems	
4.26	Reactor	
4.27	Storage Pool or basins	
4.28	Manipulators	
4.29	Water Filtration	
4.30	Water Treatment	
4.31	Assay Requirements	
5.0	Infrastructure & Support Systems	
5.01	Electrical Distribution	
5.02	Normal Power	
5.03	UPS	
5.04	Emergency Generators	
5.05	Steam Turbines	
5.06	Switchgear	
5.07	Breaker Panels	
5.08	General Wiring	
5.09	Emergency Lighting	
5.10	Security Power	
5.11	Steam and Water Systems	
5.12	Potable Supply	
5.13	Process Supply	
5.14	Distiller	
5.15	Floor and Sanitary Drains	
5.16	Process Drains	
5.17	Cranes	
5.18	Moving Platforms	
5.19	Elevators	
5.20	Security	
5.21	Communication Systems	
5.22	Phone and Computer Networks	
5.23	Fire Systems	
5.24	Fire Detection	
5.25	Fire Suppression	
5.26	Fire Maintenance	
5.27	Criticality Alarms	
5.28	Industrial Alarms	
5.29	Emergency Broadcasting	
5.30	HVAC Supply	
5.31	Air filtering	

5.32	Building Heat	
5.33	Building A/C	
5.34	Freon Systems	
5.35	Shop systems	
5.36	Supply Storage	
5.37	Change Rooms	
5.38	Emergency Response Org	
5.39	Temporary Structures	
5.40	Site Services/Support i.e. Rigging	
6.0	Nuclear Safety & Materials	
	Plutonium	
6.01	Material in Storage	
6.02	In Solution	
6.03	In Equipment	
6.04	In Glove Boxes	
6.05	In Hot Cells	
6.06	In Cells, Sumps	
6.07	In Ducts	
6.08	In HEPA Filters	
6.09	Sump or Pool Sludge	
	Uranium or Thorium	
6.10	Material in Storage	
6.11	In Solution	
6.12	In Equipment	
6.13	In Glove Boxes	
6.14	In Hot Cells	
6.15	In Cells, Sumps	
6.15	In Ducts	
6.16	In HEPA Filters	
6.17	Sump or Pool Sludge	
	Nuclear Fuel	
6.18	New in Storage	
6.19	In Reactor	
6.20	In Wet Storage	
6.21	In Dry Storage	
	TRU – (am, cm, bk, cf)	
6.22	Material in Storage	
6.23	In Solution	
6.24	In Equipment	
6.25	In Glove Boxes	
6.26	In Hot Cells	
6.27	In Cells, Sumps	
6.28	In Ducts	
6.29	In HEPA Filters	
6.30	Sump or Pool Sludge	
	Other Nuclear Materials	
6.31	Deuterium, Tritium, Lithium 6	
6.32	Sealed Sources	
6.33	Source Accountability	
6.34	Neutron Monitors	
6.35	Neutron Absorbers	

6.36	In line Neutron Source	
7.0	Hazardous Material	
	Process Chemicals	
7.01	Acids	
7.02	Caustics	
7.03	Sodium	
7.04	Hydrazine	
7.05	Lab Reagents	
7.06	Misc. Chemicals or Explosives	
	Environmental Hazards	
7.07	Lead, Heavy Metals	
7.08	Potassium Chromate	
7.09	PCBs	
7.10	Solvents and thinners	
7.11	Freon, CFC's	
7.12	Paints, Sealants, Adhesives	
7.13	Decontamination Agents and Cleaners	
7.14	Pesticides and Herbicides	
	Industrial Hazards	
7.15	Asbestos	
7.16	Beryllium	
7.17	Magnesium	
7.18	Chlorine	
7.19	Toxic/Air Deficient Atmospheres	
7.20	Carcinogens	
	Biological Hazards	
7.21	Animal and Rodent Feces	
7.22	Bird Droppings	
7.23	Snakes	
7.24	Spiders & Insects	
7.25	Molds and Mildew	
	Hazardous Waste	
7.26	Profiles/Types	
7.27	Packaged	
7.28	Not Packaged	
7.29	Disposal Path Availability	
7.30	Excess Material	
7.31	90 Day Pad w/material*	
7.32	Satellite Area	
7.33	Containment	
7.34	Shipping Records	
8.0	Radioactive Contamination & Waste	
	Radioactive Contamination/Materials	
8.01	Surface contamination Alpha	
8.02	Surface contamination B/G	
8.03	Airborne Contamination	
8.04	PPE (Mask, Fresh Air etc)	
8.05	Boundary	
8.06	Postings	
8.07	Mapping	
8.08	Fixed Contamination	

8.09	Fixative Information	
8.10	Work Place Air Sampling	
8.11	High Radiation Area's	
8.12	Key Control	
8.13	Log Books	
8.14	Radon	
8.15	Decontamination Stations	
8.16	Laundry (SWPs)	
	Outside Contamination Areas	
8.17	Boundary	
8.18	Postings	
8.19	Mapping	
8.20	Fixed Contamination	
8.21	Fixative Information	
8.22	Work Place Air Sampling	
	Radioactive Waste	
8.23	TRU Waste	
8.24	Mixed Waste	
8.25	Resins, Sludge or others	
8.26	Packaged	
8.27	Not Packaged	
8.28	Disposal Path Availability	
8.29	Excess Material	
8.30	90 Day Pad	
8.31	Satellite Area	
8.32	Containment	
8.33	Shipping Records	
8.34	Assay Requirements	

Walkdown Checklist Clipboard Aids

During walkdowns in equipment areas, it has proven convenient to have clipboard sheets similar the two aids that follow:

- Survey Sheet for the major categories of walkdown focus – Several copies should be taken on each walkdown, as one sheet may be insufficient.
- Individual listing of specific conditions, structures, equipment to look for, etc. This can be laminated in plastic and used many times.

Facility Transfer Survey

By _____ Facility _____ Walkdown Date _____

Notes regarding _____ Area(s) of Facility

1. Facility Exterior Structure

2. Facility Interior Structure

3. Process Systems

4. Infrastructure and Support Systems

5. Nuclear Safety & Materials

6. Hazardous Material

7. Radioactive Contamination and Waste

8. Environmental

1.0	Facility Exterior Structure	2.0	Facility Interior Structure	3.0	Process Systems	4.0	Infrastructure & Support Systems
1.01	Roof Condition (Integrity)	2.01	Ceilings	3.01	Process Control Room	4.01	Electrical Distribution
1.02	Roof Leakage	2.02	Floors	3.02	Exhaust Systems	4.02	Normal Power
1.03	Foundation (cracks, crumbling)	2.03	Walls (load bearing)	3.03	Fans	4.03	UPS
1.04	Walls (air and water tight)	2.04	Foundations	3.04	Motors	4.04	Emergency Generators
1.05	Doors	2.05	Mezzanines	3.05	Stacks	4.05	Steam Turbines
1.06	Hatches	2.06	Cat Walks	3.06	Ductwork	4.06	Switchgear
1.07	Windows	2.07	Ladders and Stairs	3.07	HEPA Filters	4.07	Breaker Panels
1.08	Loading Docks	2.08	Doors	3.08	Off Gas Scrubber	4.08	General Wiring
1.09	Ladders and Stairs	2.09	Fire Doors & Air Locks	3.09	Stack Monitoring	4.09	Emergency Lighting
1.10	Piping Supports	2.10	Vaults	3.10	Glove Boxes	4.10	Security Power
1.11	Power Poles	2.11	Cells	3.11	Lab Hoods	4.11	Water Systems
1.12	Transmission lines	2.12	Hot Cells	3.12	Fume Hoods	4.12	Potable Supply
1.13	Transfer piping	2.13	Pits and Crawl spaces	3.13	Vacuum Pumps	4.13	Process Supply
1.14	Walkways and Roadways	2.14	Sumps	3.14	Vessels or tanks	4.14	Distiller
1.15	Tanks and piping	2.15	Office and Maintenance Shops	3.15	Pumps	4.15	Sanitary Drains
1.16	Piping insulation	2.16	Elevators	3.16	Motors	4.16	Process Drains
1.17	Valve boxes or pits	General Appearance/Conditions		3.17	Piping	4.17	Cranes
1.18	Manholes and Drains	2.17	Housekeeping	3.18	Level Detection	4.18	Moving Platforms
1.19	Cribs, ditches and trenches	2.18	Maintenance	3.19	Inert Gas Systems	4.19	Elevators
1.20	Waste sites	2.19	Lighting	3.20	Heat Detection Systems	4.20	Security
1.20	Animal Nesting	2.20	Signage	3.21	Compressed Air Systems	4.21	Communication Systems
1.21	Paint chipping	2.21	Access Control	3.22	Containment Systems	4.22	Phone and Computer Networks
1.22	Paved or Painted Contamination			3.23	Conveyer Systems	4.23	Fire Systems
				3.24	Waste Handling Systems	4.24	Fire Detection
				3.25	Waste Assay Systems	4.25	Fire Suppression
				3.26	Reactor	4.26	Fire Maintenance
				3.27	Storage Pool or basins	4.27	Criticality Alarms
				3.28	Manipulators	4.28	Industrial Alarms
				3.29	Water Filtration	4.29	Emergency Broadcasting
				3.30	Water Treatment	4.30	HVAC Supply
				3.31	Assay Requirements	4.31	Air filtering

				4.32	Building Heat
				4.33	Building A/C
				4.34	Freon Systems
				4.35	Shop systems
				4.36	Supply Storage
				4.37	Change Rooms
				4.38	Emergency Response Org
				4.39	Temporary Structures
				4.40	Site Services/Support e.g. Rigging
5.0	Nuclear Safety & Materials	6.0	Hazardous Material	7.0	Radioactive Contamination & Waste
	Plutonium		Process Chemicals		Radioactive Contamination
5.01	Material in Storage	6.01	Acids	7.01	Surface contamination Alpha
5.02	In Solution	6.02	Caustics	7.02	Surface contamination B/G
5.03	In Equipment	6.03	Sodium	7.03	Airborne Contamination
5.04	In Glove Boxes	6.04	Hydrazine	7.04	PPE (Mask, Fresh Air etc)
5.05	In Hot Cells	6.05	Lab Reagents	7.05	Boundary
5.06	In Cells, Sumps	6.06	Misc. Chemicals or Explosives	7.06	Postings
5.07	In Ducts		Environmental Hazards	7.07	Mapping
5.08	In HEPA Filters	6.07	Lead, Heavy Metals	7.08	Fixed Contamination
5.09	Sump or Pool Sludge	6.08	Potassium Chromate	7.09	Fixative Information
	Uranium or Thorium	6.09	PCBs	7.10	Work Place Air Sampling
5.11	Material in Storage	6.10	Solvents and thinners	7.11	High Rad Area's
5.12	In Solution	6.11	Freon, CFC's	7.12	Key Control
5.13	In Equipment	6.12	Paints, Sealants, Adhesives	7.13	Log Books
5.14	In Glove Boxes	6.13	Decon Agents and Cleaners	7.14	Radon
5.15	In Hot Cells	6.14	Pesticides and Herbicides	7.14	Decontamination Stations
5.16	In Cells, Sumps		Industrial Hazards	7.15	Laundry (SWPs)
5.17	In Ducts	6.15	Asbestos		Outside Contamination Areas
5.18	In HEPA Filters	6.16	Beryllium	7.16	Boundary
5.19	Sump or Pool Sludge	6.17	Magnesium	7.17	Postings
	Nuclear Fuel	6.18	Chlorine	7.18	Mapping
5.20	New in Storage	6.19	Toxic or Deficient Air	7.19	Fixed Contamination
5.21	In Reactor	6.20	Carcinogens	7.20	Fixative Information
5.22	In Wet Storage		Biological Hazards	7.21	Work Place Air Sampling
5.23	In Dry Storage	6.21	Animal and Rodent Feces		Radioactive Waste
	TRU – (am, cu, bk, cf)	6.22	Bird Droppings	7.22	TRU Waste
5.24	Material in Storage	6.23	Snakes	7.23	Mixed Waste
				8.0	Environmental Compliance
					Liquid Effluents
				8.01	Liquid Discharge Points
				8.02	Cribs, Ditches, Ponds
				8.03	Sampling and monitoring
				8.04	Abandoned systems
				8.05	Marking and Mapping
				8.06	Characterization info
				8.07	Stormwater Management
				8.08	Records Retention
					Gaseous Effluents
				8.09	Discharge Points (stacks)
				8.10	Fugitive Emission sources
				8.11	Sampling and monitoring
				8.12	Abandoned systems
				8.13	Records Retention
				8.14	Characterization info
				8.15	Filter calibration
				8.16	Filter loading info
					Chemical Management
				8.17	Spills and Releases
				8.18	Chemical Storage
				8.19	Underground Tanks
				8.20	Records Retention
					Regulatory
				8.21	Permitted Area boundary
				8.22	TSCA –PCB Labels
				8.23	Hazard Labels

5.25	In Solution	6.24	Spiders & Insects	7.24	Resins, Sludge or others	8.24	Calibration records/stickers
5.26	In Equipment	6.25	Molds and Mildew	7.25	Packaged	8.25	Packaged
5.27	In Glove Boxes	Hazardous Waste		7.26	Not Packaged	8.26	Not Packaged
5.28	In Hot Cells	6.26	Profiles/Types	7.27	Disposal Path Availability	8.27	Disposal Path Availability
5.29	In Cells, Sumps	6.27	Packaged	7.28	Excess Material	8.28	Excess Material
5.30	In Ducts	6.28	Not Packaged	7.29	90 Day Pad	8.29	90 Day Pad
5.31	In HEPA Filters	6.29	Disposal Path Availability	7.30	Satellite Area	8.30	Satellite Area
5.32	Sump or Pool Sludge	6.30	Excess Material	7.31	Containment	8.31	Containment
	Other Nuclear Materials	6.31	90 Day Pad w/material*	7.32	Shipping Records	8.32	Shipping Records
5.33	Deuterium, Tritium, Lithium 6	6.32	Satellite Area	7.33	Assay Requirements	8.33	Assay Requirements
5.34	Sealed Sources	6.33	Containment				
5.35	Source Accountability	6.34	Shipping Records				
5.36	Neutron Monitors						
5.37	Neutron Absorbers						
5.38	In line Neutron Source						

Detailed S&M Checklist

This checklist is provided as an aid to identifying the activities for the S&M Estimate. The user should decide which of these activities will be most prevalent after transfer, either individually or as groups, and use that to estimate the number of individuals and their allocated time.

S&M Category	Activities	Hours/ Year	Per Category
1. Nuclear Safety	Maintain Nuclear Safety, Management & Administration		
	Maintain Safety Basis Documentation		
	Maintain Nuclear Criticality Safety		
	Maintain Operational Safety Requirements (Technical Safety Requirements)		
	Perform Criticality Alarm System Surveillance		
	Conduct USQs		0
2. Occupational Safety Health	Maintain O/H/S, Management & Administration		
	Implement O/H/S Hazards Identification Maintenance & Control		
	Maintain O&H Employee Program		
	Maintain O/H/S Records Reporting		
	Perform Safety Shower and Eye Wash Station Test		
	Perform First Aid Cabinet Inspection		
	Inspect Emergency Cabinets		
	Maintain Lock & Tag Program		0
3. Fire Protection	Maintain Fire Protection, Management & Administration		
	Maintain FHA		
	Perform Fire Extinguisher Inspection		
	Perform Fire Protection Water Supply System Surveillance		
	Perform Facility/Program Assessment		0
4. Radiation Protection	Maintain Radcon Administration		
	Develop & Implement Radiation Protection Program		

	Perform Radcon Assessments		
	Perform Radcon Audits		
	Maintain ALARA Program		
	Maintain Personnel Exposure Monitoring		
	Provide for Personnel Monitoring		
	Provide for Exposure Limits		
	Provide for Dosimetry Program		
	Maintain Radiation Protection Equipment, Instruments & Supplies		
	Maintain Laundry Support Activities		
	Provide Positive Mask Issuance, Control & Maintenance		
	Maintain Rad Area Access Control		
	Provide for Restrictions & Posting		
	Provide for Posting of Rad Areas		
	Provide for Rad Work Permits		
	Maintain Contamination Control Program		
	Maintain Personnel, Equipment & Area Contamination Control		
	Conduct Facility Radcon Monitoring & Surveillance's		
	Maintain Radcon Surveillance and Monitor Management		
	Conduct Facility Radcon Surveillance and Dose Rate Surveys		
	Conduct Monitoring Surveillance's and Maintain Monitors and Alarms		
	Conduct Surveillance on Monitors and Alarms		
	Manage Radiological Problems		
	Maintain Rad Records Management		
	Maintain Radiation Protection Program		0
5. Emergency Management	Maintain EP Program, Management & Administration		
	Maintain Emergency Plans & Procedures		
	Maintain EP Equipment & Supplies		
	Maintain/Demonstrate Response Capability Through Drills and Exercises		0
6. Control, Accountability, Security for SNM	Maintain SNM Oversight/Assessments		
	Maintain Safeguards of SNM Equipment		
	Custodian Material Control and Accountability		
	Respond to SNM Container Anomalies		
	Provide Security Patrol		0
7. Training and Qualification	Provide and Maintain Management Oversight of Training Program		
	Maintain All Training Records and Documentation		
	Attend Site Specific Training		
	Provide Facility Specific and Facility General Training		
	Review, Revise & Implement Facility Specific and Facility-General Courses		
	Maintain Facility-Specific and Facility-General Courses		
	Attend Facility Specific and Facility-General Courses		
	Update and Implement Qualification Program and Facility Specific Training		
	Provide and Implement Continuing Training/Requalification Programs		
	Develop and Implement New Training		0
8. Quality Assurance	Manage and administrate the Quality Assurance Program		
	Maintain Quality Assurance Program Plan (QAPP)		
	Maintain a Mngmnt. Assessment Program and Corrective Action Mngmnt.		
	Maintain a Management Assessment Program		
	Maintain Corrective Action Management		0
9. Engineering, Configuration Control	Provide Management Direction & Oversight		
	Conduct RBSM Review		
	Maintain Plant Physical Configuration		

	Manage Material Condition & Aging		
	Maintain Essential Engineering Information		
	Maintain Document Control Process		
	Maintain Engineering Documents		
	Maintain Requirements Baseline		
	Manage/Maintain S/RID Program		
	Perform S/RID Annual Update		
	Perform Inventory of Essential Materials		0
10. Environmental & Waste Management	Maintain Environmental Programs		
	Environmental Program Management & Administration		
	Emissions & Effluents (Air & Water)		
	Regulated Substances/Underground Storage Tanks		
	Spill & Release Reporting		
	Solid Waste Management/RCRA		
	NEPA/Cultural & Ecological Resources		
	Chemical Management System/EPCRA		
	Perform Inventory of Hazardous Materials		
	Perform Solid Waste Operator Routines and Surveillance's		
	Maintain Waste Packaging & Handling		
	Maintain Waste Container Storage		
	Pollution Prevention/Waste Minimization		
	Inactive Waste Sites		
	Maintain Waste Transportation & Disposal		
Maintain/Manage Waste Management Program			
Maintain Waste Certification & Acceptance Program		0	
11. Administration	Maintain Administrative Management Systems		
	Provide/Maintain Minsafe Project Management		
	Perform other Management Assessments		
	Maintain Policies, Procedures, & Records Management Program		
	Maintain Operating Procedures		
	Maintain Maintenance Procedures		
	Maintain Facility Support Procedures		
	Maintain Administrative Procedure		
	Maintain Record Management Program		
	Provide & Maintain Mngmnt. of Policies, Procedures, & Records Mngmnt.		
	Provide Business Management Support		
	Manage Baseline Control & Administration		
	Provide Short & Long Range Schedule Integration, Database Mgmt., and Maintain the Current Approved MYWP		
	Provide Future Technical Baseline Planning, MYWP & Basis of Estimate Planning and Scheduling		
	Provide/Maintain Issues Management/Reporting & Tracking		
	Maintain Price Anderson Amendment Act Compliance		
	Maintain Occurrence Reports		
Conduct Lessons Learned			
Maintain Facility Administration			
Provide/Maintain Office Supplies, Computers, Plotters, etc.			
Maintain ISMS Program			
Provide DOE Stakeholder Tour Support		0	
12. Facility Systems &	Maintain Maintenance Management		
	Maintain Maintenance, Scheduling, Plan of the Day & Plan of the Week		

Components Maintenance	Maintain Work Control		
	Provide for Training & Qualification of Maintenance Personnel		
	Conduct Facilities Maintenance		
	Conduct Preventative Maintenance		
	Conduct Safety Envelope Maintenance		
	Balance of Plant Calibration and Preventative Maintenance		
	Conduct Corrective Maintenance		
	Conduct Facility Condition Inspections		
	Procure Parts, Materials, & Services		
	Maintain Maintenance Tool & Equipment Control		
	Maintain Program for Control and Calibration		
	Maintain Spare Parts System		
	Maintain Spares Inventory Procurement		
	Maintain Spares Tracking System - Inventory Change		
	Maintain Special Projects		
	Provide & Maintain Support for Facility Upgrades & Modifications		0
Maintain Facilities, Equipment, & Tools			
13. Facility Systems & Components Surveillance	Perform Process Related Surveillance's		
	Perform Winterization Surveillance		
	Perform Routine Surveillance		
	Perform Wastewater Systems Surveillance		
	Inspect and Fill Drain Traps		
	Perform Utility Systems Surveillance		
	Perform Power and Ventilation Equipment Surveillance		
	Perform Exhaust Filter/Glovebox DP Surveillance		
	Perform Steam Trap Surveillance		
	Change Filter Media		0
	Total hours per year		
FTE per year			-

Survey Report - Hot Storage Garden

The **Hot Storage Garden** facility at Oak Ridge is small and quite limited. This example represents a brief survey report. Note that the example does not necessarily represent final concurrence on transfer conditions.

Survey Report - Tritium System Test Assembly

The **TSTA** facility at Los Alamos is medium in size and moderate in transfer scope. Note that the example does not necessarily represent final concurrence on transfer conditions.

Survey Report - Calutron

The **Calutron** facility at Oak Ridge is large and complex. This example represents a comprehensive survey report. Note that the example does not necessarily represent final concurrence on transfer conditions.