

2343

**DOCUMENTATION SUPPORTING FERNALD
ENVIRONMENTAL MANAGEMENT PROJECT
SAFE SHUTDOWN REMOVAL ACTION
NUMBER 12 PART ONE**

10-29-1991

**DOE-FSO/EPA
399
ENCLOSURE**

FINAL REPORT

DOCUMENTATION SUPPORTING

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SAFE SHUTDOWN

REMOVAL ACTION NUMBER 12

PART ONE

SAFE SHUTDOWN REMOVAL ACTION NUMBER 12

INDEX

- A. Program Overview
- B. Enclosure - Part One
 - I. General Supporting Documentation
 - IN-FMPC 6007, Site Document System
 - SSOP-0023, Deviation and Corrective Action Reporting
 - RM-FMPC-0002, Centralized Training Program Manual*
 - FMPC-2139, FMPC Quality Assurance Plan*
 - FMPC Site Health and Safety Plan*
 - FMPC-2214, Environmental Restoration and Waste Management Site Specific Plan*
 - Shutdown/Facility Acceptance and Criteria Plan
 - SSOP-0002, Completing the Material Evaluation Form
 - IN-6010, Material Disposition Order Management
 - FMPC-503, FMPC Spill Incident Reporting and Cleanup
 - PP-0125, Emergency Management
 - II. Implementing Procedures
 - Step 1. Preliminary Assessment of Process Facilities
 - U.S. Department of Energy Order 5820.2A Radioactive Waste Management
 - Step 2. Characterize Process Equipment and Hold-Up Materials
 - Amended Consent Decree
 - SOP 1-C-101, Sampling Residual and Waste Materials
 - Step 3. Transfer Existing Inventories of Chemicals, Materials, and Uranium Materials from Process Buildings to Approved Storage Locations
 - SOP PO-S-06-001, Movement of Hazardous Waste

INDEX

- Step 3. Continued
- SOP 20-C-101, Moving and Storing Nuclear Materials On-Site at the FMPC
 - SOP 20-C-904, General Nuclear Safety Requirements
 - SOP 1-C-608, Storage of Radioactive Material
 - SOP 20-C-604, Control and Utilization of Contaminated Trash Dumpsters
 - SOP-2-C-923, Trash Baler Operation
- Step 4. Energy Source Isolations, Lock & Tag-Out of Process Equipment
- SOP FMPC-0715, FMPC Work Request System
 - SOP FMPC-0719, Energy Control (Lockout & Tag-Out)
- Step 5. Prepare Safety Documentation
- SOP FMPC-508, Safety Analysis Documentation Program
 - SOP FMPC-712, Vulnerability, Risk Assessment and Management
- Step 6. Prepare NEPA Documentation
- SOP FMPC-518, Completion of National Environmental Policy Act (NEPA) Documentation

INDEX

C. Enclosure - Part Two

- Step 7. Transfer of Substance from Process Equipment and Associated Support Systems
- SOP FMPC-505, Radiation Control
 - SOP FMPC-515, Issuance and Implementation of Radiation Work Permits
 - SOP FMPC-516, Control of Permits for Accomplishing Hazardous Work
 - SOP FMPC-5010, Management of Low Level Waste (LLW)
 - SOP 20-C-601, Packaging Low Level Radioactive Waste (LLRW) for Off-Site Disposal
 - SOP 20-C-605, Establishment and Control of Satellite Accumulation Areas
 - SOP 20-C-606, Hazardous Material Spill Clean-up
 - SOP 20-C-700, Norclean Portable Vacuum Operation
 - SOP 20-C-701, Operation of Spenser & Hoffman Portable Dust Collectors
 - SOP 2-C-601, Refinery Sump
 - SOP 8-C-116, Filtering Refinery Thickener Underflow
 - SOP 8-C-115, Filtration of Uranium Bearing Slops
 - SSOP-0008, Preparing and Transferring Uncharacterized Waste to the Controlled Holding Area
 - SOP PO-D-023, Shift Orders
 - SOP 1-C-903, Plant 1 Nuclear Materials Inventory
 - 2-C-904, Refinery Nuclear Materials Inventory
 - 4-C-903, Plant 4 Nuclear Materials Inventory
 - 5-C-911, Plant 5 Nuclear Materials Inventory
 - 6-C-902, Plant 6 Nuclear Materials Inventory
 - 8-C-504, Plant 8 Nuclear Materials Inventory
 - 9-C-903, Plant 9 Nuclear Materials Inventory
 - 11-C-215, Pilot Plant Nuclear Materials Inventory
 - 11-C-212, Isotopic Changeover Clean Up of the UF6/UF4 Facility
 - 20-C-709, Baghouse Type Dust Collector Filter Removal/Replacement

INDEX

Step 8. Control Loose Contamination

- Task Specific Health & Safety Plan for Decontamination of Various Areas of Existing Fixed or Removal Contamination, June 5, 1991

Step 9. Disposition of Surplus Property

- SOP SP-P-35-010, Unrestricted Release of Materials from FMPC
- FMPC-303, Management of Government Property

REMOVAL ACTION NO. 12 SAFE SHUTDOWN

Introduction

In May 1991, the U.S. EPA, the Ohio EPA, and the U.S. Department of Energy entered into negotiations concerning a possible modification to the 1990 Consent Agreement pertaining to the Fernald Environmental Management Project (FEMP), formerly known as Feed Materials Production Center (FMPC). Consistent with arrangements made during these negotiations, all parties involved agreed that activities performed within the scope of the Safe Shutdown Program would constitute a Removal Action consistent with Section IX of the Consent Agreement and the provisions of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Removal Action will be designated as number twelve (No. 12), termed Safe Shutdown, under the amended Consent Agreement.

During the negotiation process, a consensus position was achieved between the agencies and the DOE. This position established that, in lieu of a Removal Action Work Plan, the DOE would submit a compendium of existing procedures and documentation for the ongoing Safe Shutdown Program. This deliverable has been compiled to fulfill the terms of the agreement for Removal Action No. 12, pertaining to an October 31, 1991 deliverable for the current policies and procedures governing the activities of the Safe Shutdown Program.

Accompanying this submittal is a brief background on the history of the Safe Shutdown Program and the Consent Agreement negotiations, an overview of the FEMP Safe Shutdown Program, and a review of the policies and procedures governing the program. Also included is a compilation of significant facility documentation which will control the Safe Shutdown Program.

Background

In July 1991, the FEMP initiated the Safe Shutdown Program to provide planning, engineering, and program control for the proper disposition of all uranium product and in-process residue materials, excess supplies, chemicals, and associated process equipment. The program will also assure the proper characterization, emptying, and deenergization of all existing previously-operated production-related equipment with consideration for DOE, U.S. EPA, and Ohio EPA requirements and regulations.

Although the immediate cessation of production-related operations occurred in July 1989, much of the equipment was scheduled for restart in order to prepare for continued production and to produce intermediate products for future DOE use in programs at other sites. The official termination of the FEMP production mission took place in June 1991, without the restart of the production processes or the stabilization of intermediate products.

One of the major objectives of the Safe Shutdown Program involves the transfer of materials from existing previously-operated production-related equipment. After confirmation of characterization, these materials will be transferred to appropriate containers and either stored at approved locations awaiting final disposition under OU₃ or disposed of consistent with criteria and requirements of Removal Action #9, Removal of Waste Inventories. All applicable energy sources related to a given piece of equipment will be physically isolated to render that piece of equipment non-operational. With the transfer of material to storage containers, the potential for an incident or assault to the environment is significantly reduced. Inspections of the storage containers and storage areas will be performed per all currently-applicable procedures, including

**REMOVAL ACTION NO. 12
SAFE SHUTDOWN**Background (continued)

the established Drum Management Plan. The equipment will then be decontaminated according to established DOE orders and any currently-applicable FEMP policies and procedures. After the completion of these activities and submission of a removal action close-out report for U.S. EPA/OEPA review, applicable permits will be canceled by written notification to the appropriate divisions of the Environmental Protection Agency.

Initial baseline data will be collected by performing preliminary facility surveys of the process facilities. Materials and equipment will then be characterized using process knowledge, existing RCRA determinations, applicable Material Safety Data Sheets (MSDSs) and radiological containment surveys. Information concerning each material will be recorded on a Material Evaluation Form (MEF), which provides a vehicle for the evaluation of materials in any category (raw, product, process, excess, or waste) and the characterization of the materials (hazardous, radioactive, or mixed) for proper handling and disposition. Evaluations of these materials as hazardous wastes will be conducted or performed in accordance with the provisions of the Ohio Administrative Code (OAC) 3745-52-11 and 3745-65-13 and 40 CFR 262.11 and 265.13. These environmental regulations will be considered ARARs (Applicable or Relevant and Appropriate Requirements) under CERCLA. The MEF will also identify Reactivity Group Codes of the materials for compatibility purposes, thus preventing the improper storage of containers. If the characterization of a material cannot be completed based upon information gathered for the MEF and preliminary facility surveys, analytical sampling will be performed in order to properly identify the characteristics and/or constituents of the material.

NEPA Documentation is being prepared in parallel with the disposition of uranium material products and disposition of idle equipment. This documentation is being completed prior to the 4activity involving the physical removal of material from formerly-operated process equipment.

Another portion of the Safe Shutdown Program is the disposition of chemicals and materials either directly or indirectly-related to the production of uranium products. Since production ceased, approximately 400,000 pounds of directly-related production materials (magnesium metal turnings) have been successfully transferred to the private sector for product-related use.

The proper disposition of uranium material products and recoverable residues will also be conducted as an integral part of the Safe Shutdown Program. After confirmation of characterization, these substances will be transferred to appropriate containers and either stored at approved locations (consistent with the Drum Management Plan) on site for disposition under OU₃ or disposed of consistent with requirements/criteria for Removal Action #9, Removal of Waste Inventories. Since production ceased, approximately 2.6 million pounds of uranium product have been transferred from the FEMP as part of the Safe Shutdown Program. It is estimated that 28 million pounds of uranium materials will be removed during this portion of the Safe Shutdown Program.

REMOVAL ACTION NO. 12 SAFE SHUTDOWN

Safe Shutdown Program

The FEMP Safe Shutdown Program represents an effort to mitigate potential sources of contamination to the environment and to stabilize, isolate, and/or treat any existing contamination to prevent release or migration. This approach will prepare the process facilities for either removal under independent OU₃ removal actions or remediation under the Approved Record of Decision (ROD) for Operable Unit 3 (OU3). Work elements are conducted and controlled through a hierarchy of site documentation. Figure 1 presents a brief summary of the hierarchy of documentation supporting site operations at the FEMP. As identified in the figure, program documentation is prepared to fulfill the driving statutory, DOE, and corporate requirements. These drivers result in a series of FEMP site and individual supporting departmental policies and procedures controlling the conduct of every aspect of program operations. The primary driving requirement of the Safe Shutdown Program is CERCLA/RCRA compliance and best management practices, along with DOE Order 5820.2A, Radioactive Waste Management, which is the implementation document that establishes the policies and guidelines for the management, decontamination, and decommissioning of radioactively-contaminated facilities.

As identified in the figure and as further described in the Attachment (see IN-FEMP 6007), management directives and supporting organization charters are established to fulfill driving regulatory or management requirements. Consistent with the management directives, site level documentation (i.e. Documentation governing the conduct of work across the site, as opposed to discrete departments) is compiled to establish the interrelationship and requirements of site organizations. On the basis of the site level documentation, individual supporting departments typically prepare specific procedures detailing the conduct of operations to fulfill a program requirement as defined in the site level documentation.

As previously discussed, the hierarchy of documentation supports every aspect of operation at the FEMP including, but not limited to, Health and Safety, Training, Quality Control and Assurance, Laboratory Services, and Waste Management Operations. Since the focus of this submittal is on the existing documentation supporting ongoing Safe Shutdown operations, other supporting documentation such as Quality Assurance, Health and Safety, and Laboratory Services plans and procedures have not been included within this submittal. Supporting documentation other than that specifically provided in the attachment is available upon request.

Figure 2 provides a simplified logic diagram defining the interrelationship between the major components of the Safe Shutdown Program. Table 1 represents a summarization of the key site documentation supporting each of these major program components. Copies of the current version of this key site documentation, effective August 1, 1991, are provided in the Attachment except as specifically defined within Table 1.

It should be recognized that revisions to existing policies and procedures to respond to evolving program needs or unique site conditions is an integral part of a successful program. The site documentation provided in the Attachment is intended to be a living baseline, meeting current site needs while retaining the flexibility to respond to changes in an efficient manner. Frequent changes or updates to the provided documentation are expected and necessary to ensure the continuity of operations. As previously discussed, revisions or updates to the provided documentation will be provided to U.S. EPA as part of the Phase III submittal for Removal Action No. 12.

**REMOVAL ACTION NO. 12
SAFE SHUTDOWN****Integration With Operable Unit 3 RI/FS**

The inventory of uranium and other process/raw materials that currently exists within equipment and lines in areas of formerly used process equipment in the nine production plants lies within the purview of Operable Unit 3 of the ongoing site-wide Remedial Investigation/Feasibility Study (RI/FS). Each plant's original production responsibilities are described below.

PLANT 1 operations included a sampling line for incoming uranium compounds, a roller mill to reduce the particle size of MgF_2 , a safe geometry digester, a drum reconditioning system, scrap drum baler, warehouses and storage pads for drummed residues and wastes, and dust collectors.

PLANTS 2 and 3 operations included a nitric acid digestion system, a metal dissolver system, a liquid-liquid extraction system, a boildown and denitration area where purified UNH was converted to orange oxide (UO_3), a nitric acid recovery system, a combined raffinate area, a hot raffinate building, a refinery sump system, and dust collectors.

PLANT 4 operations included reactors to convert orange oxide (UO_3) to brown oxide (UO_2) or black oxide (U_3O_8) and then to green salt (UF_4), ammonia dissociators, nitrogen generators, an HF recovery area, a tank farm, product packaging stations, and dust collectors.

PLANT 5 operations included derby manufacturing that featured jolters, F-machines, Rockwell furnaces, a breakout system, slag milling and liner preparation, and dust collectors. Also, ingot manufacturing that featured vacuum remelt casting furnaces, crucible charge and burnout areas, ingot separation, mold cleaning and painting, ingot sawing and saw blade sharpening, a Hilco oil reclaiming system, and dust collectors.

PLANT 6 operations included machining processes to heat treat ingots before shipping for extrusion, cut off extruded ingots, heat treat the blank cores, machine cores to a finished target element, a chip cleaning and briquetting system, machines for sizing and scalping pillow ingots, a rolling mill system, a waste water processing system, electrostatic precipitators, and dust collectors.

PLANT 7 is a skeletal structure used for the storage of empty cans and drums. All process equipment used for a UF_6 to UF_4 process was removed in the late 1950s.

PLANT 8 operations included several types of furnaces, liquid filtering systems, a halide acid metal dissolution area, a drum washer, a ball mill, and dust collectors.

PLANT 9 operations included N-Reactor vacuum remelt casting furnaces, Rockwell furnaces, ingot sawing and machining, Zirnlö declading, a waste water processing system, an electrostatic precipitator, and dust collectors.

The PILOT PLANT operations included small-scale facilities of all the production processes for the FEMP. In the early 1980s, a production-scale UF_6 to UF_4 unit was installed and operated.

**REMOVAL ACTION NO. 12
SAFE SHUTDOWN**

Integration With Operable Unit 3 RI/FS (continued)

Consistent with the provisions of the NCP, removal actions shall be appropriately integrated with the ongoing RI/FS to assure appropriate documentation is provided for the Administrative Record to document actions taken which may affect preexisting site conditions relative to the affected Operable Unit and the known source term associated therewith; and to assure the removal action supports final remedial objectives. Within the FEMP Administrative Record, a separate file will be established for placement of supporting documentation pertaining to Safe Shutdown Removal Action No. 12. Included in the Administrative Record file will be all key program documentation, including this submittal of current Safe Shutdown work procedures, and a compilation of appropriate materials disposition records for materials removed throughout the Safe Shutdown Removal Action.

The implementation of Safe Shutdown activities clearly supports the final remedial objectives for Operable Unit 3 by providing a necessary preliminary step for preparation of the systems for subsequent remedial activities. The proposed Safe Shutdown actions are consistent with final remedial actions based on the fact that mitigation of personnel/environmental risk, and safe permanent disposition of FEMP wastes/materials are ultimate goals.

Close coordination will be maintained with the ongoing RI/FS and other removal actions for Operable Unit 3 to ensure that planned removal action program activities appropriately support RI/FS field investigations and alternative evaluations by incorporating interim cleanup of source term into baseline risk determination and Operable Unit 3 site characterizations.

TABLE 1

STEP	REGULATION/PROCEDURE	COMMENTS
General	U.S. Department of Energy Order 5820.2A, Radioactive Waste Management	This order establishes policies, guidelines, and minimum requirements by which the Department of Energy (DOE) manages its radioactive and mixed waste and contaminated facilities.
	IN-FMPC-6007, Site Documentation System	This site procedure defines the system of documents by which the FEMP is managed and details the requirements for development, preparation and control of these documents.
	SSOP-0023, Deviation and Corrective Action Reporting	This procedure identifies the assigned responsibilities and required actions for identifying, documenting, evaluating and providing dispositions and corrective action plans for deviations and corrective actions observed during audits, reviews, surveillances, inspections or tests performed at the Site by both internal and external organizations, as well as the evaluation of supplier-proposed dispositions and corrective actions plans.
	RM-FMPC-0002, Centralized Training Program Manual *	This site manual establishes the requirements for all personnel involved in the development and delivery of training. The manual is prepared in accordance with DOE Order 5480.18. The manual also references the DOE Training Accreditation Program (TAP) Manuals. Copies of this document will be made available upon request.
	FMPC-2139, FMPC Quality Assurance Plan *	This site manual incorporates the policies for achieving or exceeding the required quality levels in the operation of the Site. The program is based on the criteria specified in ANSI/ASME NQA-1. DOE Orders 5700.6 and 5700.6B specify NQA-1 as the preferred standard for Quality Assurance. Copies of this document will be made available upon request.
	FMPC Site Health and Safety Plan *	This site plan provides the overall means for planning and implementing the job site characterization, health, and safety training and job orientation for personnel. Copies of this document will be made available upon request.

STEP	REGULATION/PROCEDURE	COMMENTS
General	FMPC-2214, Environmental Restoration and Waste Management Site Specific Plan *	This site specific plan provides a detailed, comprehensive overview of environmental restoration and waste management corrective actions and related concerns. Copies of this document will be made available upon request.
	Shutdown/Facility Acceptance and Criteria Plan	This document includes general information on the current status of all shutdown facilities at the FEMP and provides a general overview of Safe Shutdown activities.
	SSOP-0002, Completing the Material Evaluation Form	This site standard operating procedure provides guidance for the proper completion of the Material Evaluation Form in order to classify substances or material.
	IN-6010, Material Disposition Order Management	This procedure provides the controlling order requirements for material disposition activities from order receipt through material release.
	FMPC-503, FMPC Spill Incident Reporting and Cleanup	This procedure describes actions and responsibilities for initial reporting, clean-up operations, and follow-up actions for spill incidents at the FEMP.
	PP-0125, Emergency Management	This document states the emergency management policy and establishes the responsibilities for the development, coordination, and direction of FEMP planning, preparedness, and readiness assurance for emergencies at the FEMP or requiring FEMP assistance.

E: ACTIVITIES REFERENCED UNDER THE INDIVIDUAL S CANS CAN BE FOUND ON THE LOGIC DIAGRAM IN FIGURE 2

STEP	REGULATION/PROCEDURE	COMMENTS
Step 1 Preliminary Assessment of Process Facilities - refer to Activity 1	U.S. Department of Energy Order 5820.2A	Chapter V, "Decommissioning of Radioactively Contaminated Facilities", Section 3d, requires baseline data including the type, form, quantity and location of hazardous chemical and radioactive materials and information on factors that could influence the selection of decommissioning alternatives.
Step 2 Characterize Process Equipment and Hold Up Materials - refer to Activities 2, 3, 4, and 5	Amended Consent Decree	Provision to evaluate all other materials located at the FEMP as of the date of this amendment that are not located in appropriate hazardous waste storage units to determine if such materials are hazardous or mixed wastes by reason of the criteria established in 40 CFR 262.11.
Step 3 Transfer Existing Inventories of Chemicals, Materials, and Uranium Materials from Process Buildings to Approved Storage Locations - refer to Activities 9, 10, 11, and 12	PO-S-06-001, Movement of Hazardous Waste	The purpose of this procedure is to establish a set of guidelines and practices that are to be used by motor vehicle operator personnel when transporting RCRA and other hazardous wastes.
	SOP-20-C-101, Moving and Storing Nuclear Materials On-Site at the FMPC	This procedure describes the process of transferring nuclear materials from one plant or storage area to another, vehicle load limits, material and container identification requirements and nuclear safety limitations.
	SOP-20-C-904, General Nuclear Safety Requirements	The purpose of this procedure is to define the criteria for nuclear safety handling and storage.
	SOP-1-C-608, Storage of Radioactive Material	The purpose of this departmental procedure is to provide the requirements for storing radioactive material.
	SOP-20-C-604, Control and Utilization of Contaminated Trash Dumpsters	This procedure provides instructions to waste generators for filling specially marked dumpsters with contaminated trash that is in compliance with governing regulations.
13	SOP-2-C-923, Trash Baler Operation	The purpose of this document is to establish the procedure for preparing contaminated trash for shipment to a burial site.

STEP	REGULATION/PROCEDURE	COMMENTS
<p>Step 4 Isolate, Lock & Tag Out Process Equipment, Piping Systems, & Associated Utilities - refer to Activity 8</p>	<p>SOP-FMPC-0715, FMPC Work Request System</p> <p>SOP-FMPC-0719, Energy Control (Lockout and Tagout)</p>	<p>This site procedure establishes a system for initiating, performing and controlling maintenance and service work at the FEMP.</p> <p>This site procedure establishes the controls to ensure that all processes, machines, and/or equipment are isolated from all potentially-hazardous energy before personnel are allowed to perform any servicing, inspecting, maintenance, or construction activities where unexpected energization, start-up, or release of stored energy could cause injury to personnel or harm to the environment.</p>
<p>Step 5 Prepare Safety Documentation - refer to Activity 6</p>	<p>SOP-FMPC-508, Safety Analysis Documentation Program</p> <p>SOP-FMPC-712, Vulnerability and Risk Assessment and Management</p>	<p>This site procedure ensures that potential hazards are systematically identified for proposed operations; reasonable measures have been taken to eliminate, control, or mitigate the hazards; and potential risks have been evaluated.</p> <p>This procedure identifies responsibilities and guidance for conducting risk assessments and developing action plans to minimize the chances and mitigate the consequences of risks. It also includes guidance in determining Quality Levels for systems and components based on the results of a risk assessment.</p>
<p>Step 6 Prepare NEPA Documentation - refer to Activity 7</p>	<p>SOP-FMPC-0518, Completion of National Environmental Policy Act (NEPA) Documentation</p>	<p>This policy describes WEMCO's formal environmental review and documentation program which is implemented to meet the requirements of the National Environmental Policy Act (NEPA). This program covers all NEPA activities and their integration with: the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other applicable environmental protection statutes.</p>
<p>Step 7 Transfer Substances from Process Equipment and Associated Support Systems - refer to Activities 11 and 12</p>	<p>SOP-FMPC-505, Radiation Control</p> <p>SOP-FMPC-515, Issuance and Implementation of Radiation Work Permits</p>	<p>This procedure identifies the safety requirements and assigns the responsibilities for the control of radioactive materials and personnel radiation exposure and contamination at the FEMP.</p> <p>This procedure provides direction for administratively controlling exposure to personnel at the FEMP.</p>

STEP	REGULATION/PROCEDURE	COMMENTS
<p>Step 7 Transfer Substances (continued) - refer to Activities 11 and 12</p>	<p>SOP-FMPC-516, Control of Permits for Accomplishing Hazardous Work</p>	<p>This procedure establishes positive means for controlling work tasks that involve hazardous or potentially hazardous materials, equipment, operations or activities to maintain employee health and safety and assure environmental compliance. The procedure describes the responsibilities and means for control of work by WEMCO employees, subcontractor personnel, and/or others involved with any of the following activities: working with asbestos; working on a chemically-hazardous system; open flame and/or welding activities; working with a radioactive material; and entering or working in a confined space.</p>
	<p>SOP-FMPC-5010, Management of Low Level Waste (LLW)</p>	<p>This procedure establishes the policy to manage and control the generation of low level waste to minimize waste production in a manner that is consistent with established environmental standards.</p>
	<p>SOP-20-C-601, Packaging Low Level Radioactive Waste (LLRW) for Off-Site Disposal</p>	<p>This departmental procedure provides for the packaging of contaminated waste for off-site disposal.</p>
	<p>SOP-20-C-605, Establishment and Control of Satellite Accumulation Areas</p>	<p>The purpose of this procedure is to provide the requirements for establishing and maintaining a Satellite Accumulation Area (SAA) and container, accumulating hazardous waste, and preparing a full accumulation container for transfer to storage.</p>
	<p>SOP-20-C-606, Hazardous Material Spill Clean-Up</p>	<p>This procedure defines the requirements for reporting, containing, controlling, and cleaning hazardous material leaks and spills.</p>
	<p>SOP-20-C-700, Norclean Portable Vacuum Operation</p>	<p>The purpose of this document is to establish the procedure for operating Norclean vacuum units.</p>
	<p>SOP-20-C-701, Operation of Spencer & Hoffman Portable Dust Collectors</p>	<p>The purpose of this document is to establish the procedure for operating the Spencer & Hoffman portable dust collectors.</p>
	<p>SOP-2-C-601, Refinery Sump</p>	<p>This document establishes the procedure for processing waste water through the Refinery Sump System and is also applicable to processing uranyl nitrate solutions from the Refinery Storage Tanks.</p>

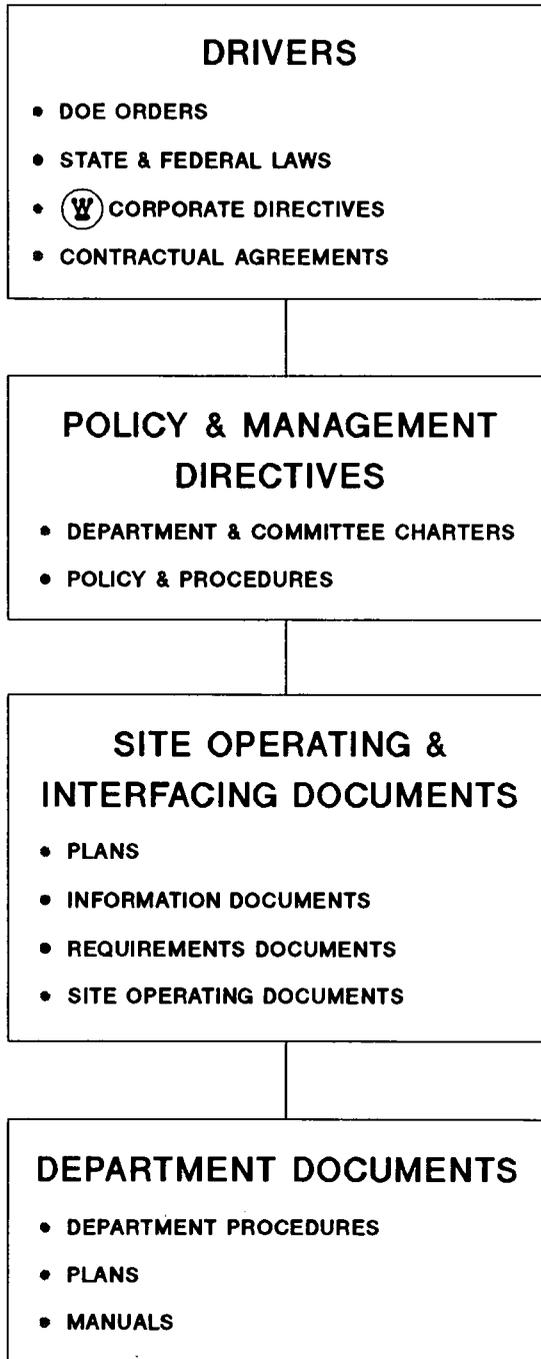
STEP	REGULATION/PROCEDURE	COMMENTS
<p>Step 7 Transfer Substances (continued) - refer to Activities 11 and 12</p>	<p>SOP-8-C-116, Filtering Refinery Thickener Underflow</p> <p>SOP-8-C-115, Filtration of Uranium Bearing Slops</p> <p>SSOP-0008, Preparing and Transferring Uncharacterized Waste to the Controlled Holding Area</p> <p>SOP-PO-D-023, Shift Orders</p> <p>SOP-1-C-903, 2-C-904, 4-C-903, 5-C-911, 6-C-902, 8-C-504, 9-C-903, 11-C-215, 11-C-212, and 20-C-709</p>	<p>This procedure is applicable to the Plant 8 filters and associated equipment used to process Refinery Thickener Underflow received from the Refinery Sump System.</p> <p>The purpose of this document is to provide the procedure for precipitating and filtering uranium from the Process Plants waste water streams.</p> <p>This document provides the procedure for the preparation and transport of uncharacterized waste to the Controlled Holding Area (CHA) located at the center of Building 64.</p> <p>The shift orders are essential in providing a means for management to communicate Administrative Instructions to operating personnel. Shift orders are required when information such as special operations, administrative directions and other short term matters need to be communicated to the shift supervisor and the operation crew.</p> <p>These procedures provide general guidelines for removing nuclear materials from the process equipment. * Additional detail for specific tasks to be provided by Shift Orders and the work controlled by the issuance of work permits.</p>
<p>Step 8 Control of Loose Contamination - refer to Activity 13</p>	<p>Task Specific Health & Safety Plan for Decontamination of Various Areas of Existing Fixed or Removable Contamination, June 5, 1991</p>	<p>This document provides detailed information and controls necessary to remove loose contamination from the Process Facilities.</p>
<p>Step 9 Disposition of Surplus Property - refer to Activities 14 through 24</p> <p>16</p>	<p>SP-P-35-010, Unrestricted Release of Materials from FMPC</p> <p>FMPC-303, Management of Government Property</p>	<p>This safety procedure establishes the radiation levels for unrestricted release of materials from the site.</p> <p>This procedure identifies the responsibilities and requirements of the property management system which includes the acquisition, receipt, maintenance, utilization, protection, storage, subcontractor/vendor control, inventory, disposition, movement, and removal of non-nuclear Government-owned property at the FEMP.</p>

2242

LIST OF ACRONYMS

ARAR	- <i>Applicable or Relevant and Appropriate Requirement</i>
CERCLA	- <i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
CHA	- <i>Controlled Holding Area</i>
DOE	- <i>United States Department of Energy</i>
FEMP	- <i>Fernald Environmental Management Project (previously FMPC)</i>
FMPC	- <i>Feed Materials Production Center (now FEMP)</i>
FO	- <i>Fernald Office (DOE)</i>
LLRW	- <i>Low-Level Radioactive Waste (same as LLW)</i>
LLW	- <i>Low-Level Waste (same as LLRW)</i>
MEF	- <i>Material Evaluation Form</i>
MSDS	- <i>Material Safety Data Sheet</i>
NCP	- <i>National Contingency Plan</i>
NEPA	- <i>National Environmental Policy Act</i>
OU3	- <i>Operable Unit 3</i>
RCRA	- <i>Resource Conservation and Recovery Act</i>
RI/FS	- <i>Remedial Investigation/Feasibility Study</i>
ROD	- <i>Record of Decision</i>
SAA	- <i>Satellite Accumulation Area</i>
SOP	- <i>Site Operating Procedure</i>
SSP	- <i>Safe Shutdown Program</i>
TAP	- <i>Training Accreditation Program</i>
U.S. EPA	- <i>United States Environmental Protection Agency</i>
WEMCO	- <i>Westinghouse Environmental Management Company of Ohio (previously WMCO)</i>
WMCO	- <i>Westinghouse Materials Company of Ohio (now WEMCO)</i>

FIGURE 1
SAFE SHUTDOWN
 WEMCO SITE DOCUMENT PROGRAM HIERARCHY



CHARTER - A document defining the work scope & responsibilities of a department, committee, council, board or function.

POLICY & PROCEDURE - A statement of management policy followed by a series of administrative instructions, including responsibilities & principal actions affecting two or more departments.

PLAN - A document identified as required by a driver or information defining actions to be taken to meet a requirement.

INFORMATION DOCUMENT - Information compiled on a subject and presented to be informative for personnel of the FEMP or as required by external organizations.

REQUIREMENTS DOCUMENT - A document defining requirements for an activity affecting two or more WEMCO organizations.

SITE OPERATING DOCUMENT - A procedure that provides detailed operating instructions for an activity to two or more WEMCO organizations.

DEPARTMENT PROCEDURE - A procedure that provides instructions to only one WEMCO organization.

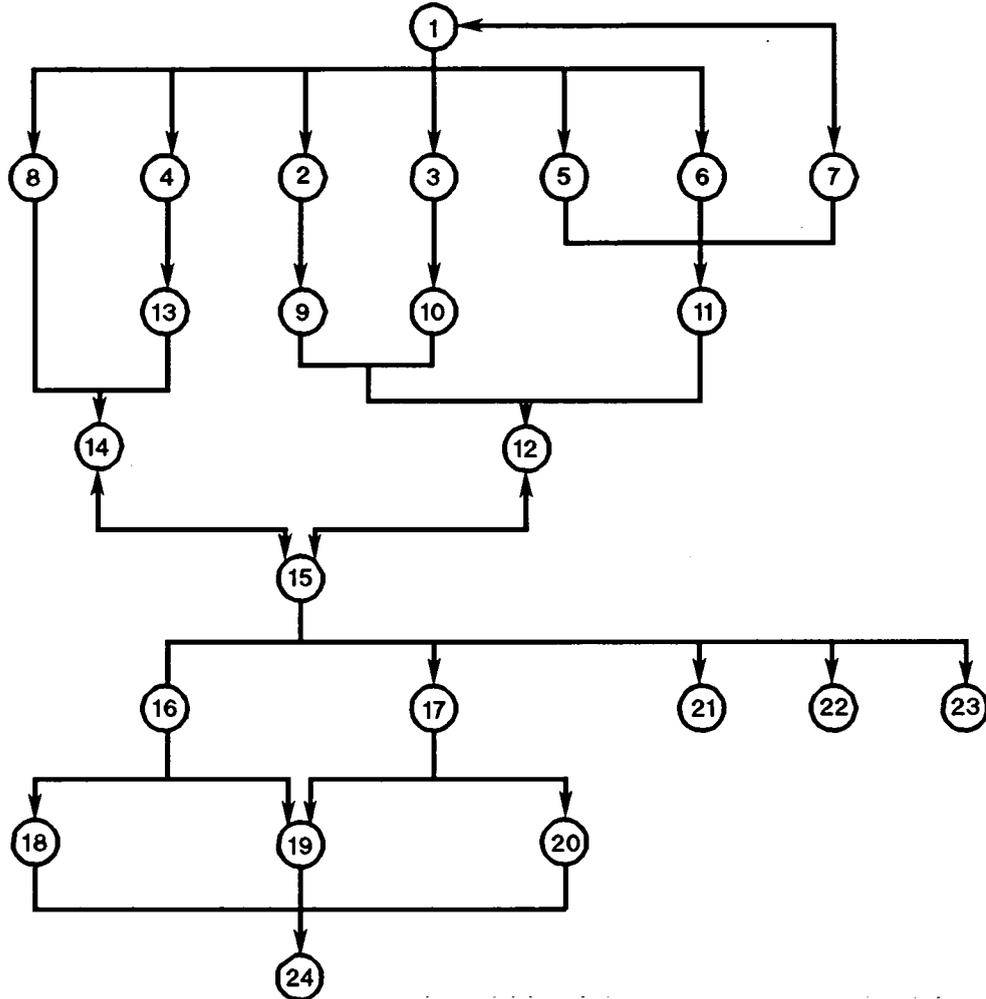
PLAN - A document identified as required by a driver for only one WEMCO organization in order to meet a requirement.

MANUAL - A document that provides detailed requirements/ instructions affecting only one WEMCO organization.

FIGURE 2

SAFE SHUTDOWN

LOGIC DIAGRAM



LEGEND

- | | |
|--|---|
| <p>1. PRELIMINARY ASSESMENT OF PROCESS FACILITIES</p> <p>2. CHARACTERIZE URANIUM PRODUCTS IN PROCESS BUILDINGS</p> <p>3. CHARACTERIZE CHEMICALS/OTHER MATERIALS ASSOCIATED WITH PRODUCTION IN PROCESS BUILDINGS</p> <p>4. CHARACTERIZE EQUIPMENT</p> <p>5. CHARACTERIZE IN PROCESS HOLD-UP MATERIAL</p> <p>6. SAFETY DOCUMENTATION</p> <p>7. NEPA DOCUMENTATION</p> <p>8. ENERGY SOURCE ISOLATIONS LOCK AND TAG OF EQUIPMENT</p> <p>9. TRANSFER URANIUM PRODUCTS FROM PROCESS BUILDINGS</p> <p>10. TRANSFER CHEMICALS/OTHER MATERIALS ASSOCIATED WITH PRODUCTION FROM PROCESS BUILDINGS</p> <p>11. TRANSFER IN PROCESS HOLD-UP MATERIAL FROM PROCESS EQUIPMENT TO STORAGE CONTAINERS</p> | <p>12. TRANSFER ALL MATERIALS TO APPROVED STORAGE AREA</p> <p>13. CONTROL OF LOOSE CONTAMINATION ON EQUIPMENT</p> <p>14. TRANSFER EQUIPMENT FROM PROCESS BUILDINGS</p> <p>15. PREPARE DISPOSITION FORMS FOR SURPLUS EQUIPMENT/MATERIAL</p> <p>16. NON-CONTAMINATED EQUIPMENT</p> <p>17. CONTAMINATED EQUIPMENT</p> <p>18. SALE TO PUBLIC NON-CONTAMINATED PROPERTY</p> <p>19. TRANSFER TO OTHER DOE SITES</p> <p>20. TRANSFER TO OFFSITE CONTAMINATED WASTE DISPOSAL FACILITY</p> <p>21. COMPLETED DISPOSITION OF URANIUM PRODUCTS</p> <p>22. COMPLETED DISPOSITION OF CHEMICALS/OTHER MATERIALS</p> <p>23. COMPLETED DISPOSITION OF PROCESS HOLD-UP MATERIALS</p> <p>24. COMPLETED DISPOSITION OF SURPLUS EQUIPMENT/MATERIAL</p> |
|--|---|

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM	INTERIM 2343 Page 1 of 14
Title: SITE DOCUMENT SYSTEM	DOCUMENT NO: IN-FMPC-6007
Authorization: <i>W. H. Britton</i> W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91 Issue Date: 06-28-91 Expiration Date: 08-28-91

1.0 POLICY

Westinghouse Materials Company of Ohio (WMCO) shall operate the Feed Materials Production Center (FMPC) in compliance with Department of Energy (DOE) contractual requirements, Westinghouse Corporate Directives, and state and federal laws. An integrated system of documents shall implement these identified requirements.

2.0 SCOPE

This procedure defines the system of documents by which the FMPC is managed and details the requirements for development, preparation and control of these documents.

3.0 DEFINITIONS

- 3.1 Site Document System - The system of procedural documents governing the performance of administrative, technical, and operational activities at the FMPC. The document hierarchy is described in Figure 1.
- 3.2 Drivers - Operational and administrative requirements imposed on WMCO by agreement, law, contract, DOE Directives, or Corporate Directives.
- 3.3 Policy and Management Directives - Documents by which the WMCO President delegates responsibility for implementing requirements imposed by the drivers.
- 3.4 Site Operating and Interfacing Documents - Detailed instructions or requirements necessary to manage operations requiring participation by two or more departments.
- 3.5 Department Document - A document providing administrative, technical, or operating instructions to personnel within that department.
- 3.6 Interim Document - A document issued to satisfy an urgent need as identified by the WMCO President or Staff Manager. Any site document may be selected for issue as an Interim document with an expiration date of sixty days from issue.
- 3.7 Document Owner - The Staff Manager having primary responsibility for sitewide implementation of a driver or a manager other than a Staff Manager having a need for the document to permit safe and effective operation of activities for which they have primary responsibility. This manager may be the Staff Manager or manager designated by the responsible Staff Manager.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 2 of 14 2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91

3.0 DEFINITIONS (cont.)

- 3.8 Procedure Technical Representative (PTR) - An individual that prepares the technical content of a site or department document at the request of the document owner.
- 3.9 Significant Review Comment (SRC) - A review comment that is considered by the reviewer to require satisfactory resolution before the document is acceptable for issue. SRC comments are only based on technical inaccuracies, noncompliance, or inconsistencies with established requirements, laws, regulations, and/or procedures.
- 3.10 Documentation Control (DC) - An organization within the Performance Assessment & Communications Department charged with developing, maintaining, and implementing a site document system.

4.0 RESPONSIBILITIES

- 4.1 Document Owner - Responsible for preparing, revising, and approving a document for their area of responsibility.
- 4.2 Staff Manager - Responsible for preparing and approving their department charter and those site documents which implement their chartered responsibilities and identifying those documents which require mandatory training or which require trained, qualified, and certified employees. Coordinates the required department review for the site documents which affect the department by evaluating and consolidating comments to reflect a single department position.
- 4.3 WMCO President - Responsible for authorizing the issue of documents which define and establish WMCO Policies and Management Directives.
- 4.4 WMCO Management - Responsible for reviewing issued site documents for applicability to their operation, assuring affected personnel are informed and trained to applicable documents, and ensuring implementation of issued document(s).
- 4.5 Documentation Control (DC) - A group within the Performance Assessment & Communications Department having responsibility for establishing and maintaining a controlled centralized document system that is capable of translating external and internal customer requirements into process logic, and facilitating the development or update of the required procedure necessary to accomplish the WMCO mission.
- 4.6 WMCO Employees - WMCO employees shall identify site document deficiencies to their supervisor/manager.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 3 of 14 2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91

5.0 GENERAL

5.1 Site Document System Description

- 5.1.1 The Site Document System consists of all the actions necessary to control and record; a) review of drivers, b) development of documents, c) document reviews, d) document approvals, e) issue and distribution, f) document revisions, and g) cancellation. The types of documents in this system and their relationships are shown in Figure 1.
- 5.1.2 A Site Policy and Procedure shall identify how a particular driver will be implemented by describing the necessary actions and identifying the position and/or organization(s) responsible for those actions. Detailed instructions, when necessary, shall be implemented through other site documents or department procedures.
- 5.1.3 Topical Manuals which have site applicability and were previously issued through the FMPC Library Report System shall be considered a site document.
- 5.1.4 Technical reports shall be issued through the FMPC Library Report System.

5.2 Document Initiation

- 5.2.1 Drivers enter the Site Document System by: formal transmittal of a driver to the President; formal transmittal of DOE Directives through the DOE Directives Administrator (Refer to FMPC-605); laws and regulations ; or direct communication with a staff manager having responsibility for the implementing actions. Regardless of the route that the driver enters, a staff manager evaluates the driver for applicability to WMCO operations and initiates actions to implement the driver.
- 5.2.2 A department charter shall be prepared by each staff manager as directed by the WMCO President and shall follow the guidelines provided in this procedure.

5.3 Document Preparation, Review, and Approval

- 5.3.1 The document owner may designate a PTR to identify document needs to DC and prepare a preliminary draft of the document.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 4 of 14 2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91

5.0 GENERAL (cont.)

- 5.3.2 The document owner or the PTR is responsible for resolving and documenting resolution of review comments. At the request of the document owner or PTR, DC will facilitate or resolve comments.
- 5.3.3 Reviewers may indicate comments critical for incorporation. Comments should be marked as SRC (Significant Review Comment) only when based on technical inaccuracies, noncompliance, or inconsistencies with established requirements, laws, regulations, and/or procedures. Comments which are questioned as being SRC by the document owner are referred to DC for decision on final disposition.
- 5.3.4 A procedure development team may be formed for development, review or approval of documents.
- 5.3.5 Unless a document requires extensive (50% or more) revision, changes shall be identified with a vertical bar or an "R" in the left margin of each revision line at the line of revision.
- 5.3.6 Plans and Information Documents have no established format unless required by a driver.
- 5.3.7 Document format, content guidelines, word processing requirements are identified in Figures 2, 3, and Table 1.
- 5.3.8 Required document approvals are identified in Table 2.

5.4 Document Issue and Control

- 5.4.1 Full compliance with the requirements of site documents is expected. Site documents are effective on the date they are issued. If a manager cannot comply with the requirements of the document as of the document issue date, the manager must take whatever actions are necessary to bring their organization into compliance as expeditiously as possible.
- 5.4.2 DC has the authority, without site review, to identify and correct minor editorial changes or corrections which do not impact technical content. These changes shall be identified by "replacement pages" and be transmitted by controlled distribution.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 5 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

5.0 GENERAL (cont.)

- 5.4.3 Cancellation of a document shall require the same review and authority as an issued document. DC will cancel existing documents when a document is assigned a new number, superseded by another document, or required strictly for records management purposes.
- 5.4.4 Each Site Document shall be reviewed at least annually by the responsible department. DC shall notify the responsible staff manager when an annual review is required.
- 5.4.5 A Site Document Index shall be issued each month to include site and department documents. The index includes current documents.
- 5.4.6 Documents are authorized for issue by individuals identified in Table 2.
- 5.4.7 DC shall maintain review, issue, control, and history records for Site Documents.
- 5.4.8 Holders of controlled documents are responsible for maintaining the current version of documents in their possession.

5.5 Department Documents

- 5.5.1 Department documents shall be prepared in accordance with a department document program approved and authorized by the department manager and shall contain the elements listed in Table 3. If requested, DC will assist the department in developing and/or administering a department program.
- 5.5.2 If requested by a department, DC may assist in document development and approval.
- 5.5.3 Department documents shall be formally reviewed at minimum every two years by the responsible department and a record of the review must be maintained.
- 5.5.4 The first day of each month, a current list of issued or revised department documents shall be transmitted by each department to DC for inclusion in the Site Document Index.
- 5.5.5 Department procedures shall not assign responsibilities to personnel in other departments.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 6 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

5.0 GENERAL (cont.)

5.6 Control Of Documents to Subcontractors

5.6.1 A document issued and controlled through the Site Document System, the FMPC Library, or a department procedure program, shall be transmitted by Documentation Control to a subcontractor by request of the contract administrator.

6.0 PROCEDURE

6.1 Review Applicability of Drivers

STAFF MANAGER

6.1.1 Review the driver for applicability in functional area of responsibility.

NOTE: DOE Directives are reviewed in accordance with FMPC-605, DOE Directives Administration.

6.1.2 Take appropriate implementation actions and maintain records of the implementation actions.

6.2 Preparation, Review, and Issue or Revision of a Site Document

DOCUMENT OWNER

6.2.1 Identify the need for, or a change to, a site document and provide a preliminary draft to DC.

DOCUMENT OWNER/DC

6.2.2 Jointly develop an action plan for development, preparation, review, and issue of a document.

NOTE: Document Owner may designate a PTR to develop this action plan.

DC

6.2.3 Facilitate document review/approval.

6.2.4 Assist the PTR as identified in the action plan in resolving review comments.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 7 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

6.0 PROCEDURE (cont.)

- 6.2.5 Prepare final document.
- 6.2.6 Obtain authorization.
- 6.2.7 Issue and control the document.

7.0 APPLICABLE DOCUMENTS

- 7.1 Drivers - DOE Order 5700.6B, Quality Assurance
- 7.2 Reference Documents - FMPC-605, DOE Directives Administration

8.0 APPLICABLE FORMS

None

9.0 ATTACHMENTS

None

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 8 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supersedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

TABLE 1
DOCUMENT WORD PROCESSING REQUIREMENTS

DOCUMENT TYPE	WORD PROCESSING MARGIN REQUIREMENTS
1. Department/Committee Charter	Left 1.0 inch Bottom 0.5 inch, Right 1.0 inch
2. Policy & Procedure	Left 1.0 inch Bottom 0.5 inch, Right 1.0 inch
3. Plan	NONE
4. Information Documents	NONE
5. Requirement Documents	As identified for specific documents
6. Site Operating Documents	As identified for specific documents

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 9 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

TABLE 2
DOCUMENT APPROVAL AND AUTHORIZATION

Document Type	Approval	Authorization
Interim Site Document	Staff Manager responsible for area of subject document	WMCO President
Policy and Procedure	Affected Staff Managers	WMCO President
Charter	Affected Staff Managers	WMCO President
Plan	Affected Staff Managers	WMCO President
Information Documents	Staff Manager responsible for area of subject document	Staff Manager responsible for area of subject document
Requirements Documents	Affected Staff Managers	WMCO President
Site Operating Documents	Affected Staff Managers	WMCO President
Department Documents	As identified by department document program	Department Mgr. or as identified by department program

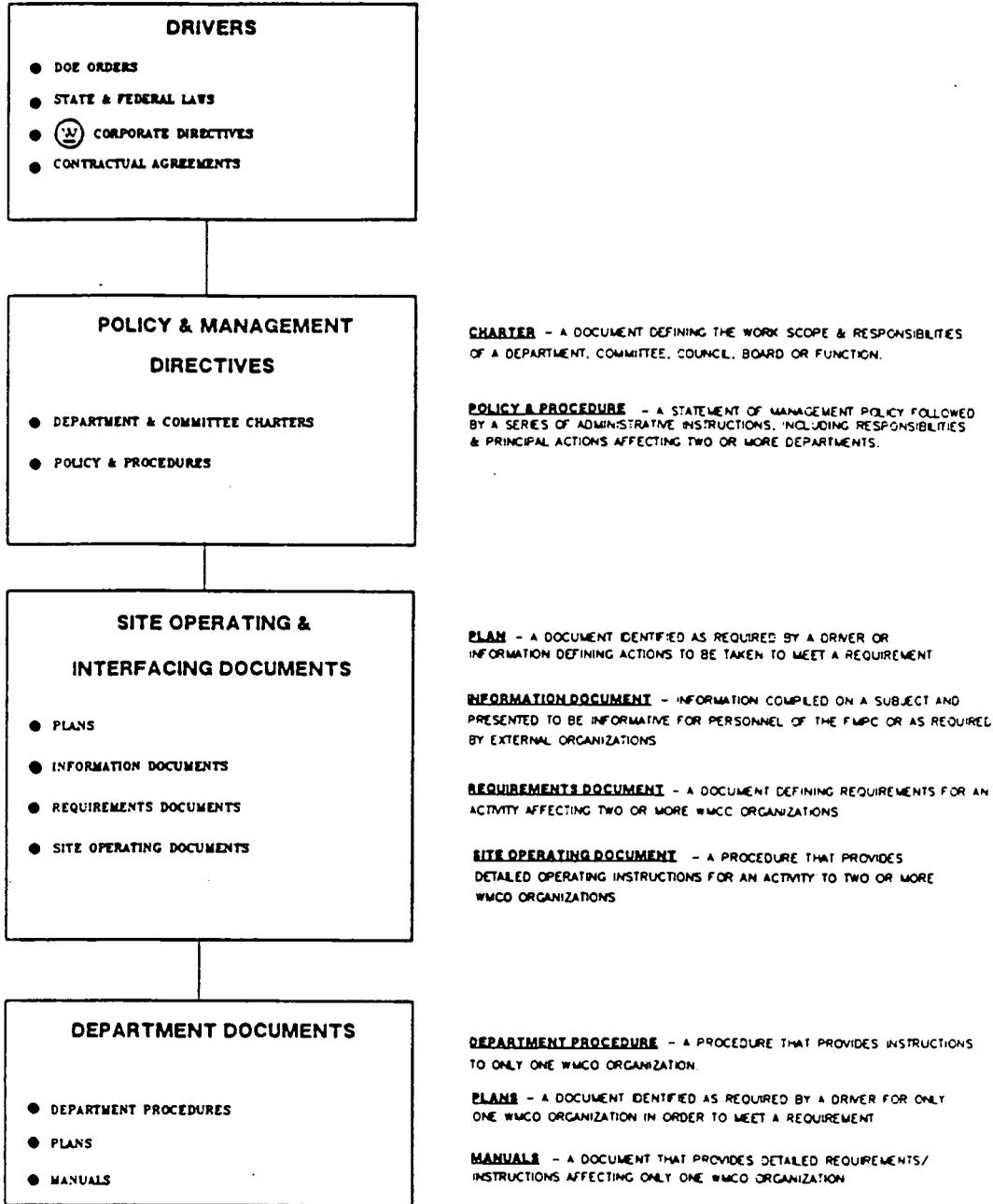
WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 10 of 14 2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91

TABLE 3
DEPARTMENT PROCEDURE SYSTEM ELEMENTS

1. Program description
2. Initiation of a new document or revision to an existing document
3. Identification of format for each type of document
4. Processing and review/approval for new or changes to documents
5. Identification of documents
6. Temporary Changes
7. Required approvals
8. Cancellation of Documents
9. Issuing authority
10. Document control
11. Records maintenance

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 11 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

WMCO DOCUMENT HIERARCHY



SITE DOCUMENT PROGRAM HIERARCHY
Figure 1

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 12 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

CHARTER FORMAT AND CONTENT GUIDELINES

1.0 FUNCTION

Develop a statement of the purpose for the committee, council, board, or department.

2.0 MEMBERSHIP

List by title those individuals who serve as members and describe briefly how and by whom members are chosen.

3.0 FUNCTION/RESPONSIBILITIES

Include the function of the committee, council, board, or department and, if appropriate, the unique responsibilities of the members. State the authority of the committee, council, or board. Do not include responsibilities that are standard for any organization, such as the chairperson "chairs" the committee or the members participate in the meetings.

4.0 APPLICABLE DOCUMENTS

Include in this section the specific documents that are applicable to the particular committee, council, board, or department. If no documents exist, state "NONE".

4.1 Drivers - Administrative requirements creating need for the document.

4.2 Reference Documents - Documents required to complete actions or portions of actions identified in the document.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 13 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supercedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

POLICY AND PROCEDURE FORMAT AND CONTENT GUIDELINES

1.0 POLICY

Provide a precise statement of the action(s) necessary to meet DOE Orders, Westinghouse Corporate Management Directives, or other identified requirements.

2.0 SCOPE

Describe briefly the purpose of the document and the functions, tasks, or situations that the procedure would be applicable.

3.0 DEFINITIONS

Define those unique terms used in the document that are important to the understanding of the document. Exclude from this section acronyms and abbreviations if the intent of inclusion is only identification and not definition.

4.0 RESPONSIBILITIES

Identify, by title, the individual or group responsible for the required action. This section shall provide an overview of the individual/organization actions and activities which, in a procedure, are presented in greater detail in Section 6.0.

5.0 GENERAL

Include explanatory information that is not specific to the procedure section but is necessary for the clarity and understanding of the document. If there are no general items, indicate by "None". Include figures and tables and locate as placed in this procedure.

6.0 PROCEDURE

6.1 Subsection Title Describing Following Series of Actions

WMCO EMPLOYEE (Title of WMCO employee or group responsible for completing the accompanying action steps)

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 14 of 14	2343
Title: SITE DOCUMENT SYSTEM		DOCUMENT NO: IN-FMPC-6007	
Authorization: W. H. Britton, President	Supersedes: IN-FMPC-103, Dated 2-28-91	Issue Date: 06-28-91 Expiration Date: 08-28-91	

POLICY AND PROCEDURE FORMAT AND CONTENT GUIDELINES (cont.)

6.0 PROCEDURE (cont.)

6.1.1 Indicate employee or group action in progressive order.

NOTE: Notes place emphasis on the continuity and logical sequence of actions. The use of notes within Section 6.0 shall be restricted to information necessary for user understanding of a particular procedural step. Notes shall not contain action steps.

7.0 APPLICABLE DOCUMENTS

7.1 Drivers - Administrative requirements creating need for the document.

7.2 Reference Documents - Documents required to complete actions or portions of actions identified in the document. Reference only issued documents.

8.0 APPLICABLE FORMS

List forms and form numbers used in the P&P.

9.0 ATTACHMENTS

Attachments should only supplement information contained in the procedure. The attachment shall not be used to direct procedure activities. Information in the attachment shall be within the borders of the formatted page and be identified at the bottom.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE ²³⁴³ Page 1 of 21
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: (SOF) W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

1.0 POLICY

Westinghouse Materials Company of Ohio (WMCO) shall document, disposition and, where appropriate, identify root cause and take action to prevent the recurrence of deviations discovered in materials, processes and related documentation at the Site or at supplier facilities.

2.0 SCOPE

This procedure identifies the assigned responsibilities and required actions for identifying, documenting, evaluating and providing dispositions and corrective action plans for deviations and corrective actions observed during audits, reviews, surveillances, inspections or tests performed at the Site both internal and external organizations, as well as the evaluation of supplier-proposed dispositions and corrective actions plans.

3.0 DEFINITIONS

- 3.1 Condition Adverse to Quality (CAQ) - An all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, violation of regulatory requirement or nonconformances.
- 3.2 Corrective Action - Measures taken to rectify significant conditions adverse to quality or violation of regulatory requirement and, where necessary, to preclude repetition.
- 3.3 Corrective Action Report (CAR) - A form used to document the corrective action process for significant conditions adverse to quality or violation of regulatory requirements discovered during audits, reviews, surveillances, inspections or tests performed by both internal and external organizations. This form can be either the CAR form shown in Attachment D or a computer generated form which contains the same information.
- 3.4 Deviation - As used in this procedure, "deviation" means a departure from a specified requirement discovered during an audit, review, surveillance, inspection or test. A deviation can be a condition in which characteristics of an item or service do not conform to prescribed limits; a required document is not available or is inadequate; a regulatory requirement was violated; or a procedure does not yield the desired results. These conditions can occur at any point in the fabrication, handling, shipment, storage, installation, operation of an item; the performance of a service; or the execution of quality assurance activities.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE 2343 Page 2 of 21
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

3.0 DEFINITIONS (cont.)

- 3.5 Deviation Report (DR) - A form used to document deviations, their disposition, verification and closure. This form can be either the DR form shown in Attachment A or a computer generated form which contains the same information.
- 3.6 Disposition - The action necessary to correct or resolve a specific deviation. Disposition involves the following:
- 3.6.1 Accept-as-is - item is acceptable for use when supported with technical justification.
 - 3.6.2 Rework - item is processed further to conform to specified requirements.
 - 3.6.3 Repair - item is processed to become acceptable for use but does not conform to specified requirements.
 - 3.6.4 Reject - a decision that a nonconforming item cannot be accepted-as-is, reworked, or repaired. Rejected items shall be scrapped, identified and altered so as to be inapplicable for their original use, or returned to the supplier, as appropriate.
 - 3.6.5 Other - describe in space provided on DR form the specific actions taken or to be taken such as revise procedure, develop procedure, provide training, etc.
- 3.7 External Corrective Action Report (XCAR) - A term used to signify the Corrective Action Report Form used to document findings discovered during external reviews by organizations other than WMCO and the corrective action process for addressing the findings.
- 3.8 Requisitioner - The individual who authorizes and/or initiates a purchase request.
- 3.9 Root Cause - The most basic reason for an effect, which, if corrected, will prevent recurrence of that effect. The correction must be achievable by WMCO and it cannot interfere with WMCO's goals and objectives. Most negative effects of interest will have a root cause that falls into one of three categories: Personnel Error, Procedural Error, or Equipment Failure.
- 3.10 Senior Management - Management reporting directly to the President of WMCO.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 3 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

3.0 DEFINITIONS (cont.)

- 3.11 Significant Condition Adverse to Quality (SCAQ) - A condition which, if uncorrected, could have a impact on safety of employees and general public or operability, or violate a regulatory requirement.

4.0 RESPONSIBILITIES

- 4.1 WMCO Personnel/Preparer - Every WMCO employee is responsible for notifying Environmental Compliance/Quality Assurance of potential deviations by completing sections 1 and 2, as appropriate, of the Deviation Report (DR) form Attachment A.
- 4.2 Environmental Compliance and Quality Assurance - Is responsible for the following actions associated with deviations from reviews, surveillances, inspections and tests conducted at the Site and supplier facilities:
- 4.2.1 Identifying, documenting, issuing and requesting disposition of deviations on a DR form. Also assures clear description of deviation is provided.
 - 4.2.2 Evaluating deviations and requesting root cause determination and corrective action where warranted.
 - 4.2.3 Evaluating proposed disposition, root cause and corrective actions.
 - 4.2.4 Verifying disposition/corrective actions are complete and acceptable, and closes DRs and CARs.
 - 4.2.5 Retaining official records and files related to the documentation of deviations and their disposition and/or corrective action.
 - 4.2.6 Tracking of the status of deviations.
- 4.3 Performance Assessment and Communications - Is responsible for the following actions associated with deviations from QA Program audits, trend analysis programs and external review findings:
- 4.3.1 Identifying, documenting, issuing and requesting disposition of deviations on a CAR form. Also assures clear description of deviation is provided.
 - 4.3.2 Evaluating deviations and requesting root cause determination and corrective action where warranted.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE. 2343 Page 4 of 21
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

4.0 RESPONSIBILITIES (cont.)

4.3.3 Evaluating proposed disposition, root cause and corrective actions.

4.3.4 Conducting actions to verify disposition/corrective actions are complete and acceptable.

4.3.5 Issuing final closure upon verification of corrective action.

4.3.6 Performing trend analysis of deviations.

4.3.7 Retaining official records and files related to the documentation of deviations and their disposition and/or corrective action.

4.3.8 Tracking of the status of deviations.

4.4 Senior Management/Activity Manager/Cognizant Engineer - Evaluates and determines root cause for the deviation. Proposes and accomplishes disposition/corrective actions. Approves Supplier Disposition Requests.

4.5 Procurement - Coordinates Supplier Disposition Requests for disposition/corrective action approval.

4.6 Evaluator - A person from Environmental Compliance and Quality Assurance or Performance Assessment and Communications, who is responsible to perform the following steps in processing a DR or CAR:

4.6.1 Determine whether a DR or CAR will be issued.

4.6.2 Accept the proposed disposition, root cause and corrective action.

4.6.3 Perform verification of disposition or corrective action.

4.6.4 Closeout the DR or CAR.

5.0 GENERAL

5.1 Deviations may or may not adversely affect the quality of the item or service involved, depending on the severity of the condition. Those deviations determined to be significant conditions adverse to quality require corrective action in accordance with this procedure. Deviations shall be evaluated for root cause determinations.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 5 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

5.0 GENERAL (cont.)

- 5.2 Repetitive non-significant deviations of the same kind noted over a short period of time require corrective action in accordance with the requirements of this procedure.
- 5.3 A trend analysis of DRs, CARs and XCARs is performed by Performance Assessment to identify chronic problem areas. Results of this trend analysis are reported to responsible management, who review the data to determine root causes and develop corrective action(s) to prevent recurrence.

6.0 PROCEDURE

6.1 Deviation Reports

WMCO PERSONNEL/PREPARER

- 6.1.1 Identify and document potential deviations, as outlined in Attachment A, in Sections 1 and 2 of the Deviation Report (DR) form.
- 6.1.2 Verbally notify the responsible management of the potential deviation the same day it was discovered.
- 6.1.3 Sign and date the Prepared By block in section 2.
- 6.1.4 Forward the DR to Environmental Compliance/Quality Assurance for evaluation.

EVALUATOR

- 6.1.5 Evaluate the potential deviation for actual violation of requirements/specifications and assures clear description of deviation is provided. If an actual DR is not required notify preparer a DR is not required. If a DR is required proceed with step 6.1.6.
- 6.1.6 Obtain and enter a DR number from the computer DR data base or from the Administrator, Deviation and Corrective Action Control on the DR form. The unique number is composed of the current year and a three digit number (Example 89-001)

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE-DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 6 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

6.0 PROCEDURE (cont.)

6.1.7 When a nonconforming item (hardware or material) is discovered, ensure that a Quality Nonconformance Tag, Form FMPC-QA-2708 (Attachment B) is attached to it, where practical. If not practical to affix Nonconformance Tag, ensure other precautions are taken to preclude inadvertent use or further processing.

NOTE: Quality Nonconformance Tags shall be removed only after completion of the disposition action identified on the DR by the evaluator.

6.1.8 Evaluate deviations for Significant Conditions Adverse to Quality (SCAQ). See Attachment C for criteria and examples for determining the need for a Corrective Action Report. For those deviations determined to be SCAQ complete a Corrective Action Report in accordance with 6.2, if DR is no longer required close it out based upon the issue of a CAR.

6.1.9 Request disposition from the activity manager/cognizant engineer of the organization responsible for item or activity in which the deviation was discovered.

NOTE: When a deviation is identified at receiving inspection, the disposition shall be determined by the requisitioner/cognizant engineer.

ACTIVITY MANAGERS/COGNIZANT ENGINEER

6.1.10 Segregate hardware items in designated hold areas or implement other precautions to preclude inadvertent use, as appropriate.

6.1.11 Evaluate deviations for reportability under the occurrence reporting system. See PR-FMPC-4006, Occurrence Reports (OR). If an Occurrence Report is required, enter this as the proposed disposition and the DR will be closed out based upon the issue of an OR.

6.1.12 Enter the proposed disposition by checking the appropriate block in Section 3 of the DR. For non-hardware deviations check the "Other" block and enter the disposition in the space provided. Include the scheduled completion date for dispositioning action.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 7 of 21	2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0	
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91	

6.0 PROCEDURE (cont.)

6.1.13 Provide a technical justification for items which are dispositioned "Accept-As-Is" or "Repair". This justification must identify specific engineering calculations or higher tier documents which provide evidence that the item will function reliably and safely even though it does not conform to the original requirement. An unsupported belief, opinion, or recommendation is not an acceptable technical justification.

NOTE: When "accept-as-is" or "repair" are used for the disposition, configuration control records shall be updated to reflect changes.

6.1.14 Return the disposition for the DR to the Evaluator within the requested time frame.

EVALUATOR

6.1.15 Evaluate proposed disposition action(s) and notify the activity manager/cognizant engineer of the responsible organization of the results by signing the "Evaluation of Disposition" section of the DR form.

6.1.16 Obtain customer approval of proposed dispositions for deviations associated with accountability of nuclear materials and for products that do not conform to customer specification requirements.

ACTIVITY MANAGERS/COGNIZANT ENGINEER

6.1.17 Accomplish disposition action(s) as scheduled.

6.1.18 Notify the evaluator when disposition action(s) is completed by signing the "Verification of Disposition Action Completion" section of the DR form.

EVALUATOR

6.1.19 Monitor accomplishment of disposition action(s) and verify completeness and acceptability.

6.1.20 Close DR and notify the activity manager/cognizant engineer, of the organization responsible for disposition action, of closure.

6.1.21 Ensure Nonconformance tags are removed and release any hardware items involved from hold status.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 8 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

6.0 PROCEDURE (cont.)

6.2 Corrective Action Reports

EVALUATOR

- 6.2.1 Evaluate deviations for Significant Conditions Adverse to Quality (SCAQ). See Attachment C for criteria and examples for determining the need for a Corrective Action Report (CAR).
- 6.2.2 Evaluate the need to issue the CAR to Senior Management in accordance with Attachment C. If a CAR is required obtain a CAR number from the computer CAR data base or from the Administrator, Deviation and Corrective Action Control. The unique number is composed of the current year and a three digit number (Example 89-001)
- 6.2.3 Verbally notify the responsible management the same day as identified.
- 6.2.4 Identify and document the request for corrective actions, as outlined in Attachment D, in sections 1 and 2 of the CAR form.
- 6.2.5 Obtain the concurrence of the Evaluator's manager.
- 6.2.6 Issue the Corrective Action Report to the senior management/activity manager of the organization responsible for the deviation.

ACTIVITY MANAGER

- 6.2.7 Evaluate deviations for reportability under the occurrences reporting system. See PR-FMPC-4006, Occurrence Report (OR).
- 6.2.8 Determine the underlying (root) cause of the problem and document it in Section 3A of the CAR form.
- 6.2.9 If necessary, perform an investigation to determine if any similar work is affected by the problem and, if so, identify the action taken/proposed and the schedule to correct it in Section 3B of the CAR form.
- 6.2.10 Describe the action taken/proposed to correct the root cause and to prevent recurrence of the problem in Section 3C of the DCAR form. Enter the scheduled completion date for corrective action in Section 3D.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 9 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

6.0 PROCEDURE (cont.)

6.2.11 Provide response to the CAR to the Evaluator within the time frame requested.

EVALUATOR

6.2.12 Evaluate proposed corrective action(s), obtain the evaluating manager's approval, sign block 4 of CAR form and notify the activity manager of the responsible organization of the results.

ACTIVITY MANAGERS

6.2.13 Accomplish corrective action(s) as scheduled.

6.2.14 Notify the evaluator when corrective action(s) is completed.

EVALUATOR

6.2.15 Monitor accomplishment of corrective action(s) and verify completeness and acceptability.

6.2.16 Close CAR, by signing block 5 of the CAR form, and notify the activity manager of the organization responsible for disposition action of closure.

6.3 External Corrective Action Reports (XCARS)

PERFORMANCE ASSESSMENT

6.3.1 Receive external findings from external organization (such as Tiger Teams, Technical Safety Appraisal, Westinghouse Corporate, etc.).

6.3.2 Obtain and enter an XCAR number from the computer XCAR data base or from the Administrator, External Corrective Action Control on the CAR form. Enter the XCAR data into the Commitment System. The unique number is composed of an X, the current year and a three digit number (Example X89-001).

6.3.3 Process the finding in accordance with 6.2 except the use of an XCAR number instead of a CAR number.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE 2343 Page 10 of 21
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

6.0 PROCEDURE (cont.)

6.4 Responding to Supplier Request for Disposition/Corrective Action Approval

BUYER

- 6.4.1 Receive Supplier Disposition Requests (SDR), Attachment E, with proposed dispositions.
- 6.4.2 Forward the SDR with proposed disposition to requisitioning department and a copy to Environmental Compliance and Quality Assurance for review and concurrence.

REQUISITIONER

- 6.4.3 Evaluate the supplier's proposed disposition, obtain concurrence from Environmental Compliance and Quality Assurance concerning its acceptability and if appropriate, approve the disposition action in an approval memorandum.

NOTE: If disposition action is unacceptable, the Requisitioner initiates correspondence through the Buyer back to the supplier until resolution is reached.

REQUISITIONER

- 6.4.4 Forward the approval memorandum and supporting documentation to the Buyer.

BUYER

- 6.4.5 Issue disposition approval memorandum to supplier.
- 6.4.6 File a copy of disposition approval memorandum, completed SDR and supporting documentation in the purchase order file.

6.5 Trend Analysis

PERFORMANCE ASSESSMENT AND COMMUNICATIONS

- 6.5.1 Maintain a trend analysis program for the Deviation Reports, Corrective Action Reports and External Corrective Action Reports.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 11 of 21	2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0	
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91	

6.0 PROCEDURE (cont.)

6.6 Tracking of Deviations

ENVIRONMENTAL COMPLIANCE AND QUALITY ASSURANCE

6.6.1 Maintain a computer tracking/history system on open and closed Deviation Reports and Corrective Action Reports.

PERFORMANCE ASSESSMENT AND COMMUNICATIONS

6.6.2 Maintain a computer tracking/history system on open and closed External Corrective Action Reports.

6.7 Records

ENVIRONMENTAL COMPLIANCE AND QUALITY ASSURANCE

6.7.1 Maintain completed Deviation Reports and Corrective Action Reports as Quality Records.

PERFORMANCE ASSESSMENT AND COMMUNICATIONS

6.7.2 Maintain completed External Corrective Action Reports as Quality Records.

7.0 APPLICABLE DOCUMENTS

7.1 PR-FMPC-4006, Occurrence Reports (OR)

8.0 APPLICABLE FORMS

8.1 Form FMPC-EC&QA-2909 Deviation Report (DR)

8.2 Form FMPC-Q-2708, Quality Nonconformance Tag

8.3 Form FMPC-EC&QA-2909-1, Corrective Action Report (CAR)

8.4 Form FMPC-QA-2642, Supplier Disposition Request

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 12 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

9.0 ATTACHMENTS

- 9.1 Attachment A - Deviation Report (DR).
- 9.2 Attachment B - Quality Nonconformance Tag.
- 9.3 Attachment C - Criteria for Determining If a Corrective Action Report Is Required - Criteria for Determining If a Corrective Action Report Is Required To Be Issued To Senior Management
- 9.4 Attachment D - Corrective Action Report Form (CAR)
- 9.5 Attachment E - Supplier Disposition Request (SDR)

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 13 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

Attachment A
Page 1 of 2

DR NO.:	DEVIATION REPORT	REVISION:
---------	-------------------------	-----------

1 Date of Discovery: _____ Responsible Organization: _____
 Responsible Organization Representative: _____
 Activity: _____ Location: _____

2 Requirements: _____

 Deviation: _____

 Verbally Notified Management: _____ (DATE) Prepared By: _____ Date: _____
 Is Corrective Action Report Required? YES NO Provide Disposition by: _____
 Evaluator: _____ Date: _____

3 Is Deviation Reportable Under OR? *Yes (UOR No. _____) No
**If yes, proceed in accordance with PR-FMPC-4006 and close this DR.*
 Disposition: Accept-As-Is Rework Repair Reject Other

 Accept-As-Is/Repair Justification: _____

 _____ Scheduled Completion Date: _____
 Responsible Organization's Representative: _____ Date: _____

4 Evaluation of Disposition:
 Evaluator: _____ Date: _____

5 Verification of Disposition Action Completion:
 Evaluator: _____ Date: _____

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 14 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

Attachment A
Page 2 of 2

Preparer

Complete Section 1 and 2 as follows:

- o Date of Discovery - Enter date the deviation was discovered.
- o Responsible Organization - Enter the organization responsible for the item or activity in which a deviation is discovered.
- o Responsible Organizations Representative - Enter name of the representative responsible for disposition/corrective action.
- o Activity - Enter activity performed. (Example Audit 189-1)
- o Location - Location of the activity. (Example Plant 6)
- o Requirements - Identify the procedure, instruction, standard, or code which establishes the acceptance criteria for the activity or item being evaluated.
- o Deviation - Fully describe the deviation as it relates to the requirements.
- o Verbally Notified Management - List the date that the responsible organizations management was verbally notified of the potential deviation.
- o Prepared By - The preparer signs and dates for Sections 2.

Evaluator

- o Is Corrective Action Report Required - Evaluate deviation for issue of a Corrective Action Request. Check "Yes" if required or "No" if not required.
- o DR No. - Obtain and enter on the DR Form a DR Number from the Computer DR Data Base or from the Administrator, Deviation Control and Corrective Action.
- o Revision - Enter the current revision number 0, 1, etc.
- o Provide Disposition By Date - Request the organization deemed responsible to provide dispositioning action by a certain date outlining steps taken or planned to correct immediate problem.
- o Evaluator - Sign & date Section 2 of the DR form.

Responsible Organization Representative

Completion of Disposition Action Section 3

- o Is Deviation Reportable Under OR - Evaluate the deviation in accordance with PR-FMPC-4006 for Occurrence Reporting and check the appropriate block. If an OR is required sign off section 3 as complete and forward back to Evaluator.
- o Disposition - for DR's not reportable as an OR, check the appropriate block for Accept-as-is, Rework, Repair, Reject or Other and indicate the appropriate disposition in the space provided. disposition is Accept-as-is or Repair provide a technical justification

Evaluator

Completion of the Receipt & Evaluation of Proposed Dispositions Section 4

- o Receive and evaluate the proposed disposition to determine its adequacy for solving the specific problem identified in the deviation report, which includes verification that a decision has been made by the Manager of the organization responsible, as to whether the deviation is reportable in accordance with PR-FMPC-4006 for Occurrence Report (OR). If the "Yes" box is checked, the responsible organization proceeds with the reportability process in accordance with PR-FMPC-4006 and the DR can be closed based upon the issue of a OR.
- o Document acceptance of the proposed disposition in Block 4 by signature and date.
- o Notify the organization responsible for disposition action of the rejection of the proposed disposition action and coordinate with the organization to obtain a revised response.

Completion of the Verification and Closure of Disposition Action Section 5

- o Monitor the disposition and verify that the actions taken to correct the deviation have been completed satisfactorily.
- o Approve acceptance of verified disposition in Section 5 by signature and date.
- o Ensure the removal of nonconforming item tag(s) only after verifying satisfactory completion of all dispositioning actions.
- o Forward the closed out deviation report (DR) to the Administrator, Deviation Control and Corrective Action with a copy to responsible organization management.

JA

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE 2343 Page 15 of 21
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

Attachment B

QUALITY NONCONFORMANCE

P.O./SHIPMENT/LOT/PACKAGE/CONTAINER ID No.: _____
 RECEIVING REPORT NO.: _____ INSPECTION REPORT NO.: _____

DESCRIPTION OF NONCONFORMANCE: _____

NAME _____ BADGE No. _____ PHONE No. _____

TO BE REMOVED BY AUTHORIZED PERSONNEL ONLY
FMPC-O-2708 (REV. 8-29-90)



DCAR No.: _____

DATE: _____

QUALITY NONCONFORMANCE

TO BE REMOVED BY AUTHORIZED PERSONNEL ONLY
FMPC O 2708 (REV. 8-29-90)

TAG IS WHITE WITH RED LETTERS

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 16 of 21	2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0	
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91	

Attachment C

CRITERIA FOR DETERMINING IF A CORRECTIVE ACTION REPORT IS REQUIRED

A Corrective Action Report shall be issued for deviations with:

- o Significance - Deviations which have, or may have, serious effect on safety, health, operability, environment or reliability.
- o Quantity/Frequency - Repetitive deviations or similar deviations resulting from activities or conditions which are common to the deviations.
- o Ineffective Implementation of Dispositions - Deviations which have not been properly or promptly dispositioned or resolved and which if uncorrected could result in other deviations or significant conditions adverse to quality.

The following are examples of significant conditions adverse to quality and shall be processed in accordance with this procedure:

- o Approved and released documents such as design documents, procurement documents, procedures, instructions, reports, and data found to contain significant errors or to be inadequate for their intended function.
- o In-process checks that indicate process or test limits may be exceeded and may have serious effect on safety, operability, or reliability.
- o Out-of-calibration standards or instruments used to verify process limits and may have serious effect on safety, operability, or reliability.
- o Significant Adverse trend analysis results.

CRITERIA FOR DETERMINING IF A CORRECTIVE ACTION REPORT IS REQUIRED TO BE ISSUED TO SENIOR MANAGEMENT

An evaluation shall be performed of each CAR for issue to Senior Management. If the CAR meets the following criteria, it shall be issued to Senior Management:

- a) Significant and repetitive trends in deviation documents, audit/surveillance findings, and other inspections for which corrective action measures have proven ineffective or inadequate.
- b) Delinquent Corrective Action that cannot be resolved at a lower level of Management.
- c) Significant conditions adverse to quality which require more than a routine evaluation, analysis and corrective action.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 17 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

Attachment D
Page 1 of 2

CAR NO.:	CORRECTIVE ACTION REPORT	REVISION:
<p>1 Date of Discovery: _____ Responsible Organization: _____ Responsible Organization Representative: _____ Activity: _____ Location: _____</p>		
<p>2 Requirements: _____ _____ _____ Deviation: _____ _____ _____ Verbally Notified Management: _____ Evaluator: _____ Date: _____ Provide Disposition by: _____ Evaluating Manager: _____ Date: _____</p>		
<p>3 Response to the Request for Corrective Action: Is Deviation Reportable Under OR? <input type="checkbox"/> Yes (OR No. _____) <input type="checkbox"/> No <i>*If yes, proceed in accordance with PR-FMPC-4006 and close this CAR.</i> A. Reason for the Deviation (Root Cause): _____ _____ _____ B. Action Taken/Proposed to Investigate and Correct Similar Work: _____ _____ _____ C. Action Taken to Prevent Recurrence: _____ _____ _____ D. Date(s) Action(s) will be Complete: _____ Responsible Organization's Representative: _____ Date: _____</p>		
<p>4 Evaluation of Corrective Action Response: Evaluator: _____ Date: _____ Evaluating Manager: _____ Date: _____</p>		
<p>5 Verification of Corrective Action Completion: 16 Evaluator: _____ Date: _____</p>		

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 18 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

Attachment D
Page 2 of 2

Evaluator

Complete Section 1 and 2 as follows:

- Date of Discovery - Enter date that corrective action was discovered to be required.
- Responsible Organization - Enter the organization responsible for the item or activity in which a corrective action is required.
- Responsible Organization Representative - Enter name of the representative responsible for corrective action.
- Activity - Enter activity performed. (Example Audit (89-1))
- Location - Location of the activity. (Example Plant 8)
- Requirements - Identify the procedure, instruction, standard, or code which establishes the acceptance criteria for the activity or item being evaluated.
- Deviation - Fully describe the deviation as it relates to the requirements.
- Verbally Notified Management - List the date that the responsible organization's management was verbally notified of the potential deviation.
- CAR No. - Obtain and enter on the CAR Form a CAR Number from the Computer CAR Data Base or from the Administrator, Deviation Control and Corrective Action.
- Revision - Enter the current revision number 0, 1, etc.
- Provide Disposition By Date - Request the organization deemed responsible to provide dispositioning action by a certain date outlining steps taken or planned to correct immediate problem.
- Evaluator - Sign & date Section 2 of the DR form.
- Evaluating Manager - Obtain the concurrence of the Evaluator's Manager.

Responsible Organization Representative

Completion of Disposition Action Section 3

- Evaluate deviations for reportability under the occurrence reporting system. See PR-FMPC-4008, Occurrence Reporting (OR).
- A. Reason for the Deviation (Root Cause) - Determine the underlying (root) cause of the problem and document it in Section 3A of the CAR form.
- B. Action Taken/Proposed to Investigate and Correct Similar Work - If necessary, perform an investigation to determine if any similar work is affected by the problem and, if so, identify the action taken/proposed and the schedule to correct it in Section 3B of the CAR form.
- C. Action Taken to Prevent Recurrence - Describe action taken/proposed to correct the root cause and to prevent recurrence of the problem in Section 3C of the CAR form.
- D. Date(s) Action(s) will be Complete - Enter the scheduled completion date for corrective action in Section 3D.

Evaluator

Completion of the Evaluation of Corrective Action Response Section 4

- Receive and evaluate the proposed corrective action to determine its adequacy for solving the specific problem identified in the deviation report, which includes verification that a decision has been made, by the Manager of the organization responsible, as to whether the deviation is reportable in accordance with PR-FMPC-4008 for Occurrence Report (OR). If the "Yes" box is checked, the responsible organization proceeds with the reportability process in accordance with PR-FMPC-4008 and the CAR can be closed based upon the issue of a CR.
- Document acceptance of the proposed disposition in Block 4 by signature and date.
- Notify the organization responsible for disposition action of the rejection of the proposed disposition action and coordinate with the organization to obtain a revised response.

Completion of the Verification and Closure of Disposition Action Section 5

- Monitor the disposition and verify that the actions taken to correct the deviation have been completed satisfactorily.
- Approve acceptance of verified disposition in Section 5 by signature and date.
- Ensure the removal of nonconforming item tag(s) only after verifying satisfactory completion of all dispositioning actions.
- Forward the closed out corrective action report (CAR) to the Administrator, Deviation Control and Corrective Action with a copy to responsible organization management.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 19 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

Attachment E
Page 1 of 2

 Westinghouse Materials Company of Ohio SUPPLIER DISPOSITION REQUEST		SDR SERIAL NUMBER _____ SUBCONTRACT NUMBER _____	
TO BE COMPLETED BY SUPPLIER			
1 Waiver <input type="checkbox"/> (W) Non Conformance <input type="checkbox"/> (N)		2 FROM: SUPPLIER NAME & ADDRESS: _____ _____ _____	
		3 DRAWING NUMBER & REVISION _____	
		4 COMPONENT AND SERIAL NUMBER _____	
		5 PART NAME AND SERIAL NUMBER _____	
Alt# _____ <small>CONTRACT ADMINISTRATOR</small>			
6 DESCRIPTION OF SPECIFICATION OR DRAWING REQUIREMENT TO BE WAIVED, OR INTERPRETATION REQUIRED. (W) OR DEFICIENT CONDITION: (N) _____			
7 SDR'S PREVIOUSLY ISSUED ON THIS PART _____		8 OTHER PARTS AFFECTED <input type="checkbox"/> YES <input type="checkbox"/> SDR NO _____ (W) <input type="checkbox"/> NO <input type="checkbox"/> Quantity _____ (N)	
9 (A) SUPPLIER'S RECOMMENDED DISPOSITION (WAIVER) (B) JUSTIFICATION FOR WAIVER (W) (A) SUPPLIER'S RECOMMENDED DISPOSITION (B) JUSTIFICATION (C) CORRECTIVE ACTION BEING TAKEN TO PREVENT REOCCURRENCE (N)			
10 THIS DISPOSITION WOULD AFFECT INTERCHANGEABILITY <input type="checkbox"/> YES <input type="checkbox"/> NO OPERATION <input type="checkbox"/> YES <input type="checkbox"/> NO REPAIR PARTS <input type="checkbox"/> YES <input type="checkbox"/> NO			
11 LIST ATTACHMENTS: _____		12 SIGNATURE OF SUPPLIER'S AUTHORIZED REPRESENTATIVE _____ DATE _____	
TO BE COMPLETED BY WMCO			
13 BASELINE ENGR. DOCUMENTS AFFECTED (ECR REQUIRED): <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> MAJOR SCOPE CHANGE <input type="checkbox"/> CLASS I CHANGE <input type="checkbox"/> CLASS II CHANGE ECR NO. _____			
14 DISPOSITION ACTION APPROVED AS RECOMMENDED <input type="checkbox"/> DISAPPROVED <input type="checkbox"/> OP AS BELOW <input type="checkbox"/>			
15 THIS REQUEST AFFECTS INSPECTION OR INSTALLATION AT SITE <input type="checkbox"/> YES <input type="checkbox"/> NO			
16 SIGNATURES & APPROVALS			17 DISTRIBUTION
ENGINEERING APPROVAL _____		DATE _____	
QUALITY ASSURANCE _____		DATE _____	
SUBCONTRACT ADMINISTRATOR BUYER _____		DATE _____	
DOE (AS REQUIRED) _____		DATE _____	
		Subcontract Consideration Required <input type="checkbox"/> Yes <input type="checkbox"/> No	

The supplier accepts full responsibility for the accuracy and completeness of the information above. The issuance and acceptance of this request in no way limits or affects the warranty provisions of the order. This request shall not establish a precedent or obligation to accept similar conditions in the future.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 20 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

Attachment E
Page 2 of 2

INSTRUCTIONS FOR PREPARATION
OF SUPPLIER DISPOSITION REQUEST

GENERAL

It shall be the responsibility of the Supplier to initiate an SDR (Form FMPC QA 2642) for each waiver or nonconforming condition and submit it to WMCO for approval prior to implementing the supplier's recommended disposition. Attach all supplemental sheets as necessary to provide detailed explanations for those factors that cannot be fully explained in the space provided on the SDR form. Reports and dispositions via telephone or FAX are not prohibited, however, the supplier is responsible to execute an SDR on ALL deviations from drawing, specifications, or contract requirements. Any work done before receipt of written approval of the recommended disposition shall be at supplier's risk. Items shall not be released for shipment before approval of the recommended disposition.

The supplier shall maintain an SDR log and record a sequential numerical identification number on each SDR submitted. The subcontract or purchase order number, and the serial number shall be entered on the top of each SDR submitted.

PROCEDURE

Supplier Responsibility

- Box 1 — Record the name of the cognizant Subcontract Administrator and check Box W or Box N. Box W (Waiver) shall be used to identify a design change which will produce a better or less expensive product or improve the delivery schedule but requires waiving one or more requirements of the procurement document. Box W shall also be checked if a clarification of specified requirements is requested. Box N (Nonconformance) shall be used to identify a deviation from procurement document requirements which has occurred unintentionally during fabrication.
- Box 2 — Record the mailing address as stated on the purchase order.
- Box 3 — Record the drawing number and revision for the affected parts.
- Box 4 — Record name of article as described in purchase order including serial number if applicable.
- Box 5 — Record name of the affected part as shown on the drawing recorded in block 3, including serial number if applicable.
- Box 6 — (W) For waiver or clarification request. Describe the problem or question, identifying specification section for which the waiver is requested. (N) For nonconformance. Record the condition including specification section violated. (Both) Include sufficient detail to allow complete evaluation. Describe in detail those conditions not characterized by numerical variables.
- Box 7 — List by serial number all previous SDR's submitted on the material defined by the information in blocks 5 and 6.
- Box 8 — Evaluate and record whether other parts are influenced by the condition in block 6. (W) For waiver or clarification request. Enter number of associated SDR. (N) For nonconformance. Record the quantity of parts which are part of the same lot having the same attributes as described in block 6 for which disposition has not been requested.
- Box 9 — Record the recommended disposition, the justification for such disposition and the corrective action to be taken to prevent recurrence (if applicable).
- Box 10 — Record what effect the recommended disposition would have on interchangeability, operation and repair parts insofar as the Supplier can determine. Attach supplemental sheets explaining in detail what the effects are if any of the blocks are checked "yes".
- Box 12 — Signature and title of the Supplier's authorized representative.

Mail to the cognizant Subcontract Administrator

WMCO Responsibility

- Box 13 — Responsible WMCO Engineer shall indicate if Baseline Engineering Documents are affected. If an ECR is required, process and obtain required review and approvals prior to obtaining the required signatures in Box 16.
- Box 14 — The WMCO Engineer shall record the disposition action after coordination with Quantity and Procurement. Reason for disapproval shall be stated.
- Box 15 — The WMCO Engineer shall check the appropriate box after coordination with Quantity. The affected superintendent or manager shall be notified immediately.
- Box 16 — The Representatives of Engineering, Quantity, and Subcontracts will enforce the disposition by their signature.
- Box 17 — Distribute copies of completed form to: Signer, Receiving Inspection, and QA Records.

NOTE: The Subcontract Administrator will record in the SDR log the date of transmittal of the disposition to the supplier.

WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE STANDARD OPERATING PROCEDURE Page 21 of 21 2343
Title: DEVIATION AND CORRECTIVE ACTION REPORTING		DOCUMENT NO: SSOP-0023 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: None	Issue Date: 06-27-91

RECORD OF ISSUE/REVISIONS

<u>DATE</u>	<u>REV. NO</u>	<u>DESCRIPTION AND AUTHORITY</u>
06-27-91	0	Issued to identify the assigned responsibilities and required actions for identifying, documenting, and providing dispositions for deviations and corrective actions observed during audits, reviews, initiated by M. A. Malone per Request No. P91-220.

TRANSFER OF THE FEED MATERIALS PRODUCTION CENTER
issued October 15, 1990

The "Transfer of the Feed Materials Production Center" DOE document involved the transfer of defense-related programs to environmental restoration and waste management programs. The Shutdown/Facility Acceptance and Criteria Plan was extracted in part from this document, and is included here for its application to the FEMP to provide additional general information. It is not to be considered as a complete implementation directive.

SHUTDOWN/FACILITY ACCEPTANCE AND CRITERIA PLAN

1.0 INTRODUCTION

In July 1989, production was stopped at the Feed Materials Production Center (FMPC) and many of the facilities were placed in standby. This prompted FMPC to develop plans for placing the facilities at FMPC in a safe shutdown mode.

This "Shutdown/Facility Acceptance and Criteria Plan" includes general information on the current status of all shutdown facilities at the FMPC and RMI (Reactive Metals, Inc.). The shutdown/facility acceptance criteria and anticipated timing of the necessary safe shutdown activities are presented, along with the staffing and funding resources allocated for FY 1991 through FY 1994, for placing all FMPC and RMI facilities into safe shutdown. Figure 1 provides a plan of action and milestones for placing FMPC facilities into a safe shutdown mode by FY 1995.

2.0 DEFINITION OF SAFE SHUTDOWN

Putting the FMPC in a safe shutdown mode is defined within this plan as follows: documented concurrence/verification that FMPC activities, operations, and facilities not currently in operation comply with applicable United States Department of Energy (DOE) and regulatory environmental, safety, and health requirements and statutes and do not pose unacceptable environmental, safety, or health risks to workers, the public, or the environment.

To achieve safe shutdown status, the following activities will be undertaken. Gross contamination will be removed. Inventories and residual raw nuclear materials, products, combustibles, and low-level and hazardous wastes will be removed to approved storage facilities. Production equipment and associated utilities will be locked and tagged out of service. Storm water flows and other flows will be transferred to appropriate collection and/or treatment systems. Lighting and alarms on plants will be maintained. Fire protection systems will be converted to dry systems. Surveillance and maintenance (S&M), including routine structural and friable asbestos inspections, will continue to be conducted. Focused corrective actions will be implemented as necessary. Post closure monitoring will be performed. Fire protection systems, lighting, heating, and sanitary facilities will be maintained and updated to satisfy Occupational Safety and Health Act (OSHA) and National Fire Protection Association (NFPA) code requirements. FMPC will continue on Resource Conservation and Recovery Act (RCRA) interim status while awaiting final permit status.

THIS PAGE
INTENTIONALLY
LEFT BLANK

Shutdown of equipment for the RMI project is defined as "equipment permanently shut down with no intention of restarting." All equipment that is determined to be of use to the government will be dismantled, removed from the site, and sent to Savannah River (SR) or other government facilities for storage. All other equipment which is not useful will be disposed of.

3.0 LISTING OF CURRENT SHUTDOWN STATUS OF ALL FACILITIES

The current uses of the major metals production plants are shown in Table 1. This table lists each plant by number, its previous use, its current use, and its planned future use. Within this table, the time period defined by "short-term" includes plant usages anticipated to occur within two years beyond the budgeted year. "Long-term" denotes the time span for such anticipated usages between two and four years beyond the budgeted year.

The 117 plants/facilities located at FMPC are listed in Table 2. Each plant/facility has been placed in one of the following categories:

- Needed for Office of Environmental Restoration and Waste Management (EM) mission (61)
- Can be used as a warehouse for EM missions (28)
- No currently identified need (28)

RMI has been directed by Westinghouse Materials Company of Ohio (WMCO) to complete necessary activities for placing production equipment and facilities in a safe configuration by September 30, 1990.

4.0 SHUTDOWN FACILITY ACCEPTANCE CRITERIA

FMPC facilities must be put into an acceptable condition by meeting the following requirements and the Decontamination and Decommissioning (D&D) criteria specified within DOE Order 5820.2A.

4.1 Complete and Document the Final Deactivation/Shutdown of the FMPC Facilities

For these facilities, including ancillary facilities, to be considered finally deactivated/shutdown, the following conditions must be met by Defense Programs (DP):

- Terminate programmatic facility operations and document that no future use of the facilities that would result in recontamination is either planned or intended. This documentation requires signatures of both the Operations Office and Headquarters Program Office.

- Make available the final nuclear hazardous materials survey records; final configuration; S&M requirements; and available drawings, specifications, procedures, manuals, and unplanned occurrences records applicable to the facilities.
- Prepare or update S&M plan, including a cost estimate, consistent with final condition of facilities at turnover.

4.2 Place the Facilities in a Safe Condition and in Compliance with DOE and Regulatory Environmental, Safety, and Health Requirements

The following conditions must be met for these facilities to be considered safe and in regulatory compliance with respect to nuclear and hazardous materials:

- The structure(s) and existing radiation monitoring systems, as required, shall be in a physical condition adequate to contain and monitor potential release of any radioactive contamination, in accordance with DOE Order 5400.1 (General Environmental Protection Program). A current radioactive contamination/hazardous materials survey of the facilities and surrounding areas shall be available.
- Security systems and procedures shall be adequate to prevent unauthorized entry.
- All special nuclear materials, reactor fuels, high-level waste, contaminated liquid wastes, and hazardous chemicals or materials/wastes that are stored at facilities, other than in approved warehouses, shall be removed.
- An assessment of compliance with regulatory and DOE environmental, safety, and health requirements shall be performed and a determination made that the facilities at the site, as a whole, either are in compliance therewith or do not pose an unacceptable risk to workers, the public, and the environment.
- Ensure that the facility and its required systems are structurally sound so as to permit deferred final D&D.

4.3 Complete and Document RMI Shutdown and Inspection of All Plant Equipment to Ensure that Safe Configuration Under Applicable Local, State, and Federal Regulations is Performed in Accordance with WMC0 subcontract No. 2-77226

Other regulatory guidance is provided by DOE Order 5400.5 and 5820.2A and by Nuclear Regulatory Commission (NRC) regulatory guides 1.86 and 3.65.

Table
FMPC BUILDING AND PLANT USAGES

<u>Plant No.</u>	<u>Previous Use</u>	<u>Current Use</u>	<u>Function</u>	<u>Future Use</u>	<u>Period</u>
1	Sample preparation, Shipping, Receiving, Storage of Uranium compounds and metal	Waste Management Packaging waste, Thorium and Uranium residue storage	Waste Packaging Thorium Storage		Long-term
2/3	Ore Refinery - Digest U residues in HNO ₃ , solvent extraction, produce UO ₃ , HNO ₃ recovery	Shutdown, UN solution, Nitric Acid, TBP/Kerosene storage	Shutdown		Short-term
4	UO ₃ → UF ₄ Green Salt; Package UF ₄	Shutdown, UF ₄ storage	No storage capacity without removing equipment		Short-term
5	UF ₄ → U Metal Derbies, Production of Ingots	Shutdown, Uranium derbie and ingot storage	Warehouse		Long-term
6	Metals Fabrication Machining Area	Shutdown, Uranium residue storage	Warehouse		Long-term
7	UF ₆ Reduction. Equipment removed 20 years ago	UF ₄ Storage	Storage		Long-term
8	Process residues for refinery feed by furnacing	Process waste for Volume Reduction by furnacing; Uranium residue storage	Volume Reduction		Long-term

**Note: Short Term = Budget Year + 2 years
 Long Term = Budget Year + 4 years**

FMPC BUILDING AND PLANT USAGES

<u>Plant No.</u>	<u>Previous Use</u>	<u>Future Use</u>		
		<u>Current Use</u>	<u>Function</u>	<u>Period</u>
9	Special Products - Cast enriched U Ingots. Machine ingots and billets for extrusion. Derby salt cleaning and pickling	Shutdown, Uranium residue storage	Warehouse	Long-term
13	Pilot Plant - UF ₆ → UF ₄ . Packaged UF ₄ for metal reduction. Thorium processing.	Shutdown, UF ₄ storage	Shutdown	Long-term
51	UF ₆ → UF ₄ Reduction	Never placed in operation	Advanced waste water treatment facility	Long-term
64	Plant 9 Warehouse Thorium Storage	Thorium and Uranium Storage	Thorium Storage	Long-term
65	Plant 5 Warehouse Thorium Storage	Thorium Storage	Thorium Storage	Long-term
67	Plant 1 Warehouse Thorium Storage	Thorium Storage	Thorium Storage	Long-term
79	Plant 6 Warehouse	Storage	RCRA Storage	Short-term
81	Plant 9 Warehouse	Storage	RCRA Storage	Short-term

Table 2

List of EMPC Plants/Facilities

<u>FACILITY</u>	<u>CATEGORY</u>	<u>DESCRIPTION</u>
No. 1A	2	PREPARATION PLANT
No. 1B	2	PLANT 1 STORAGE BLDG.
No. 2A	3	ORE REFINERY PLANT
No. 2B	1	LIME HANDLING BLDG.
No. 2C	1	BULK LIME HANDLING BLDG.
No. 2D	3	METAL DISSOLVER BLDG.
No. 2E	3	NFS STORAGE AND PUMP HOUSE
No. 3A	1	MAINTENANCE BLDG.
No. 3B	3	OZONE BLDG.
No. 3C	1	CONTROL HOUSE
No. 3D	3	NAR TOWERS
No. 3E	3	HOT RAFFINATE BLDG.
No. 3F	3	DIGESTION FUME RECOVERY
No. 3G	3	REFRIGERATION BLDG.
No. 3H	3	REFINERY SUMP
No. 4A	3	GREEN SALT PLANT
No. 4B	2	PLANT 4 WHSE.
No. 4C	1	PLANT 4 MAINTENANCE BLDG.
No. 5	2	METALS PRODUCTION PLANT
No. 6	2	METALS FABRICATION PLANT
No. 7	3	PLANT 7
No. 8A	1	RECOVERY PLANT
No. 8B	1	MAINTENANCE BLDG.

Table 2
List of FMPC Plants/Facilities

<u>FACILITY</u>	<u>CATEGORY</u>	<u>DESCRIPTION</u>
No. 8C	1	ROTARY KILN/DRUM RECONDITIONING BLDG.
No. 9	2	SPECIAL PRODUCTS PLANT
No. 10A	1	BOILER PLANT
No. 10B	1	BOILER PLANT MAINTENANCE BLDG.
No. 11	1	SERVICE BLDG.
No. 12A	1	MAIN MAINTENANCE BLDG.
No. 12B	2	CYLINDER STORAGE BLDG.
NO. 12C	2	LUMBER STORAGE BLDG.
NO. 13A	3	PILOT PLANT WET SIDE
NO. 13B	2	PILOT PLANT MAINTENANCE BLDG.
NO. 13C	3	SUMP PUMP HOUSE
NO. 14	1	ADMINISTRATION BLDG.
NO. 15	1	LABORATORIES
NO. 16A	1	MAIN ELECTRICAL STATION
NO. 16B	1	ELECTRICAL SUBSTATION
NO. 18A	1	SURGE LAGOON
NO. 18B	1	GENERAL SUMP
NO. 18C	1	COAL PILE RUNOFF BASIN
NO. 18D	1	BIODENTRIFICATION TOWERS
NO. 18E	1	STORM WATER RETENTION BASIN
NO. 18F	3	PIT 5 SLUICE GATE
NO. 18G	1	CLEARWELL PUMP HOUSE

Table 2

List of FMPC Plants/Facilities

<u>FACILITY</u>	<u>CATEGORY</u>	<u>DESCRIPTION</u>
NO. 18H	1	BDN EFFLUENT TREATMENT FACILITY
NO. 19A	3	MAIN METAL TANK FARM
NO. 19B	3	PILOT PLANT AMMONIA TANK FARM
NO. 20A	1	VALVE/CONTROL BLDG.
NO. 20B	1	FILTER/CHEMICAL BLDG.
NO. 20C	1	COOLING TOWERS
NO. 20D	1	ELEVATED PORTABLE STORAGE TANK
NO. 20E	1	WELL HOUSE #1
NO. 20F	1	WELL HOUSE #2
NO. 20G	1	WELL HOUSE #3
NO. 20H	1	PROCESS WATER STORAGE TANK
NO. 20J	3	LIME SLURRY PITS
NO. 22A	1	GAS METER BLDG.
NO. 22B	1	SEWER LIFT STATION
NO. 22C	1	TRUCK SCALE
NO. 23	1	METEOROLOGICAL TOWER
NO. 24A	1	RAILROAD SCALE HOUSE
NO. 24B	1	RAILROAD ENGINE HOUSE
NO. 25A	1	CHLORINATION BLDG.
NO. 25B	1	MH #175
NO. 25C	1	SEWAGE LIFT STATION BLDG.

Table 2
List of EMPC Plants/Facilities

<u>FACILITY</u>	<u>CATEGORY</u>	<u>DESCRIPTION</u>
NO. 25D	1	U.V. DISINFECTION BLDG.
NO. 25E	1	DIGESTER CONTROL BLDG.
NO. 26A	1	PUMP HOUSE-HP FIRE PROTECTION
NO. 26B	1	ELEVATED WATER STORAGE TANK
NO. 28A	1	SECURITY BLDG.
NO. 28B	1	HUMAN RESOURCES BLDG.
NO. 30A	2	CHEMICAL WHSE.
NO. 30B	2	DRUM STORAGE WHSE.
NO. 31	1	ENGINE HOUSE/GARAGE
NO. 32	2	MAGNESIUM STORAGE BLDG.
NO. 34A	3	K-65 STORAGE TANK (NORTH)
NO. 34B	3	K-65 STORAGE TANK (SOUTH)
NO. 35A	3	METAL OXIDE STORAGE TANK (NORTH)
NO. 35B	3	METAL OXIDE STORAGE TANK (SOUTH)
NO. 37	3	PILOT PLANT ANNEX
NO. 38	1	PROPANE STORAGE
NO. 39A	3	INCINERATOR BLDG.
NO. 39B	3	SHELTER STORAGE BLDG.
NO. 39C	1	INCINERATOR BLDG. SPRINKLER RISER HOUSE
NO. 44A	1	TRAILER COMPLEX (6-PLEX)
NO. 44C	1	TRAILER COMPLEX (7-PLEX S)

Table 2

List of FMPC Plants/Facilities

<u>FACILITY</u>	<u>CATEGORY</u>	<u>DESCRIPTION</u>
NO. 44D	1	TRAILER COMPLEX (7-PLEX N)
NO. 44E	1	TRAILER COMPLEX (10-PLEX)
NO. 45	1	RUST ENG. BLDG.
NO. 46	1	HEAVY EQUIPMENT BLDG.
NO. 51	1	6 TO 4 REDUCTION FACILITY #2, FUTURE ADVANCED WASTE WATER TREATMENT FACILITY
NO. 53A	1	OS & H BLDG.
NO. 53B	1	IN-VIVO BLDG.
NO. 54A	3	6 TO 4 REDUCTION FACILITY #1
NO. 54B	2	PILOT PLANT WHSE.
NO. 55A	3	SLAG RECYCLING BLDG.
NO. 55B	3	SLAG RECYCLING PIT/ELEVATOR
NO. 56	2	CP STORAGE WHSE.
NO. 60	2	QUONSET HUT #1
NO. 61	2	QUONSET HUT #2
NO. 62	2	QUONSET HUT #3
NO. 63	2	KC-2 WHSE.
NO. 64	2	THORIUM WHSE.
NO. 65	2	(OLD) PLANT 5 WHSE.
NO. 66	3	DRUM RECONDITIONING BLDG.
NO. 67	2	PLANT 1 THORIUM WHSE.
NO. 68	2	PILOT PLANT WHSE.
NO. 69	1	DECONTAMINATION BLDG.

Table 2

List of EMPC Plants/Facilities

<u>FACILITY</u>	<u>CATEGORY</u>	<u>DESCRIPTION</u>
NO. 71	2	GENERAL IN-PROCESS STORAGE WHSE.
NO. 72	2	DRUM STORAGE BLDG.
NO. 73	1	FIRE BRIGADE TRAINING CENTER BLDG.
NO. 77	2	FINISHED PRODUCT WHSE.
NO. 79	2	PLANT 6 WHSE.
NO. 80	2	PLANT 8 WHSE.
NO. 81	2	PLANT 9 WHSE.
NO. 82	1	RECEIVING/INCOMING MATS. INSPECTION BLDG.
RMI		EXTRUSION PLANT

4.4 Major Steps to be Met for FMPC and RMI Safe Shutdown Conditions:

- Issue revisions to RCRA Part A and Part B permit applications to provide for increased storage responsibilities and to meet other appropriate requirements.
- Complete process inventory and preliminary hazard characterization for each plant (29 CFR 1910.120).
- Submit RCRA closure plans for affected Treatment, Storage, and Disposal (TSD) facilities and gain regulatory approval.
- Complete site specific shutdown plans by plant and complete the Operational Readiness Review (ORR).
- Vacuum gross removable contamination from facilities within plants.
- Characterize existing plant inventories consistent with RCRA; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and DOE Order 5820.2A.
- Remove existing inventories of raw materials, products, hazardous substances and wastes, and combustibles to approved storage facilities. Remove/encapsulate friable asbestos. Complete closures of affected RCRA TSD facilities.
- Isolate, lock, and tag out process equipment, piping systems, and associated utilities (maintain lighting).
- Modify piping systems to terminate use of plant sumps servicing roof drains and perched water removal systems. Transfer flows to other site systems, as appropriate.
- Convert existing fire protection systems to dry systems.
- Terminate point source air emission permits and notify the State of Ohio of changes to liquid discharges.
- Complete routine structural assessments and friable asbestos inspections and implement corrective actions as necessary.
- Complete Safety Analysis Reports (SAR) and necessary National Environmental Policy Act (NEPA) documentation for use of Plants 5, 6, and 9 as warehouses.
- Upgrade fire protection systems, lighting, and sanitary facilities as necessary to fulfill NFPA code and OSHA requirements. Install necessary systems to fulfill RCRA storage requirements.

4.5. Categories of Material Present at FMPC that are Affected by Various Environmental Regulations and Must be Addressed During Safe Shutdown Operations:

- Nuclear
- Chemicals
- Hazardous Metals
- Oils
- Coolants
- Polychlorinated Biphenyls (PCB)
- Asbestos

Table 3 is a summary of the hazards, liabilities, and/or assets at FMPC that will be addressed during safe shutdown operations.

A flowchart for implementing the FMPC safe shutdown plan is shown in Figure 2. The shutdown equipment can be processed as surplus property and disposed of, as provided for by Federal Acquisition Regulation (FAR) 45, by shipment to other DOE facilities, or it can be maintained in place. The uncontaminated equipment can also be shipped to other DOE operating sites or maintained in place. Additionally, Figure 2 depicts the implementation path for hazardous nuclear materials. The PCBs and oils can be incinerated, after filtering, if contaminated. The hazardous chemicals may be reused in other DOE operating plants or treated/disposed of in an approved manner. Asbestos will be packaged for approved burial. Contaminated filters and process building nuclear and hazardous materials will be cleaned and decontaminated prior to storing or selling, if permissible. The various uranium compounds will be maintained as is under the S&M program.

4.6 FMPC Safe Shutdown Actions - DOE Order 5820.2A Radioactive Waste Management

DOE Order 5820.2A specifies that operational records (e.g., facility design drawings and modifications, characterization data on contamination levels, prior decontamination activities, and incident reports required by DOE Orders) for all contaminated facilities shall be maintained by the cognizant field organization for use in preparing decommissioning plans.

Program offices shall be responsible for placing the facility in a safe shutdown condition, providing S&M, and decommissioning the facilities under their jurisdiction when they become excess to programmatic needs, or for finding another programmatic sponsor for them. The FMPC safe shutdown actions are designed to satisfy these requirements.



Westinghouse
Materials Company
of Ohio — FMPC

SITE STANDARD OPERATING PROCEDURE

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
TITLE: COMPLETING THE MATERIAL EVALUATION FORM		
APPROVED BY: <i>W. H. Britton</i> W. H. Britton, President		

1.0 PURPOSE

The purpose of this document is to provide the procedure for completing the Material Evaluation form to classify material as RCRA or NON-RCRA.

2.0 APPLICABILITY

This procedure shall apply to the classification of raw, process, excess, and waste material.

3.0 RESPONSIBILITIES

3.1 The Material Generator shall be responsible for the following:

- 3.1.1 Completing Section I of the Material Evaluation per this procedure.
- 3.1.2 Maintaining a copy of the completed Material Evaluation for each generated stream.
- 3.1.3 Completing a new Material Evaluation if changes occur to a previously evaluated material stream.

3.2 Solid Waste Compliance (SWC) shall be responsible for the following:

- 3.2.1 Completing Sections II and IV of the Material Evaluation per this procedure.
- 3.2.2 Determining that sufficient information exists to classify material as RCRA or NON-RCRA.
- 3.2.3 Recommending to Waste Technology additional information that is required to complete a RCRA determination.
- 3.2.4 Maintaining the original of the completed form on file.
- 3.2.5 Establishing a primary and alternate contact within SWC responsible for replying to inquiries on the completing and utilization of the Material Evaluation form.

3.3 Waste Technology shall be responsible for the following:

- 3.3.1 Completing Section III of the Material Evaluation per this procedure.
- 3.3.2 Maintaining a record of the completed form.

15

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

3.0 RESPONSIBILITIES (cont.)

3.4 **Material Control and Accountability (MC&A)** shall be responsible for the following:

- 3.4.1 Retaining a record copy of Section IV for each Material Evaluation Number.
- 3.4.2 Maintaining a listing that relates inventory numbers to the Material Evaluation Number.
- 3.4.3 Assisting Material Generator in maintenance of Material Evaluation files and tracking the Material Evaluation form.

3.5 **Waste Management** shall be responsible for the following:

- 3.5.1 Providing a Material Evaluation Number to generator upon request.
- 3.5.2 Maintaining a log of Material Evaluation Numbers.
- 3.5.3 Retaining a record copy of Section IV for each Material Evaluation Number.

4.0 DEFINITIONS

- 4.1 Material Generator - a person at the originating facility who is authorized to prepare raw material, process material, and waste material for transfer.
- 4.2 Resource Conservation and Recovery Act (RCRA) - The congressional act which established safe and environmentally acceptable management practices for specific wastes. RCRA requires strict "cradle to grave" control and proper management of hazardous waste.
- 4.3 Hazardous Waste - A discarded material which is listed in the Environmental Protection Agency Hazardous Waste List which exhibits characteristics of ignitability, corrosivity, or reactivity. Both "listed" and "characteristic" wastes are regulated under RCRA.
- 4.4 Ignitable - Liquid waste with closed-cup flash points $< 60^{\circ}\text{C}$ (140°F), or non-liquid waste capable of causing fire through friction, absorption of moisture, or spontaneous chemical changes.
- 4.5 Corrosive - Aqueous wastes with a $\text{pH} \leq 2$ or ≥ 12.5 .
- 4.6 Reactive - Waste that exhibits properties such as reacting violently, forming potentially explosive mixtures or generating toxic gases when mixed with water, generating toxic gases (cyanide or sulfid) at pH between 2 and 12.5, or detonating or exploding at standard temperature and pressure or when heated under confinement.

4.0 DEFINITIONS (cont.)

- 4.7 Authorized Personnel - Personnel who have successfully completed all training requirements to perform work related to this procedure and have been authorized by the Facility Owner to perform the work.
- R 4.8 Controlled Holding Area - The area designated for holding
R uncharacterized material and staging characterized material (excluding
R backlog material and material generated from a soil boring activity)
R for a maximum period of 90 calendar days.
- R 4.9 Fingerprint Analysis - An analytical process providing a brief
R description of material parameters as listed in Table 5.
- R 4.10 Raw Material - A non-manufactured substance at the FMPC.
- R 4.11 Process Material - A substance which has gone through a physical state
R of change.
- R 4.12 Excess Material - A substance which has exceeded its recommended shelf
R life or intended use.
- R 4.13 Waste Material - A substance which has expended its usefulness, non-
R recyclable and non-recoverable.

5.0 GENERAL

5.1 General Instructions for Completing the Material Evaluation

5.1.1 Fill in all items of each section.

R 5.1.1.1 DELETED

5.1.1.2 If an item is not applicable to the material stream being evaluated, indicate as "N/A".

5.1.2 Refer questions regarding the form to SWC.

6.0 PROCEDURE

6.1 Identification of Material

MATERIAL GENERATOR

NOTE: If no information is known on the material and the container has no identification, contact SWC for direction.

6.1.1 Obtain a Material Evaluation Number from Waste Management.

6.1.2 Record the Material Evaluation Number at the top of each sheet of the Material Evaluation, Form FMPC-OPR-3252 (See Figure 1).

6.1.3 Complete Section I of the Material Evaluation per Table 1.

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

6.0 PROCEDURE (cont.)

6.1.4 When Section I is completed, forward the form to SWC.

NOTE: The material being evaluated shall remain in the generator area until direction is received from Waste Technology or SWC for disposition.

6.2 Evaluation of Material

SOLID WASTE COMPLIANCE

6.2.1 Ensure an evaluation has not been previously completed for this material type per the source and material type code (Item 1 of Section I).

6.2.2 Complete Section II of the Material Evaluation form per Table 2.

6.2.3 When Section II is complete, proceed as follows:

6.2.3.1 If the material is classified RCRA or additional information is required for the classification (refer to Item 7 of Section IV), forward the form to Waste Technology.

6.2.3.2 If the material is classified as NON-RCRA or exempt (refer to Item 7 of Section II), retain the original form on file and transmit a copy to the material generator.

6.3 Material Analysis/Disposition Determination

WASTE TECHNOLOGY

6.3.1 Refer to Section II and complete the following applicable substep.

6.3.1.1 If the material had been classified, proceed to Item 6.5.

6.3.1.2 If additional information is required to classify the material, proceed to Item 6.4.

6.4 Additional Requirements

WASTE TECHNOLOGY

6.4.1 Complete Items 1 and 2, Section III of the Material Evaluation.

R 6.4.2 Forward a copy of Section III to the material generator as authorization to prepare uncharacterized material for transfer to the Controlled Holding Area.

NOTE: The original form shall be retained until the required information is received.

ST

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

6.0 PROCEDURE (cont.)

6.4.3 When additional information is received, proceed as follows:

6.4.3.1 Fill in the completion date (Item 3 of Section III).

6.4.3.2 Transmit the Material Evaluation along with additional information to SWC for review.

SOLID WASTE COMPLIANCE

6.4.4 Upon receipt of the Material Evaluation with the analysis results, proceed as follows:

6.4.4.1 Ensure that Section II is complete, including the additional information received from Waste Technology.

6.4.4.2 Initial and date each revision of Section II.

6.4.4.3 Briefly explain any corrections made (Item II of Section II) to the information contained in Section II.

6.4.4.4 Return the Material Evaluation and analysis results to Waste Technology.

6.5 Classified Material

WASTE TECHNOLOGY

NOTE: Refer to Item 7 of Section II for material classification.

6.5.1 If the material is classified as NON-RCRA, proceed as follows:

6.5.1.1 For material in storage, transmit the original Material Evaluation form to SWC, a copy to the Facility Owner of the Controlled Holding Area, and a copy to the material generator.

6.5.1.2 For material being held at the generator area, forward the original Material Evaluation form to SWC and a copy to the material generator.

6.5.2 If the material is classified as RCRA, proceed as follows:

6.5.2.1 Complete Section III per Table 3.

6.5.2.2 Forward the Material Evaluation to SWC.

6.0 PROCEDURE (cont.)**6.6 Material Identification****SOLID WASTE COMPLIANCE**

NOTE: Section IV of the Material Evaluation form shall be completed for RCRA material only.

6.6.1 Complete Section IV per Table 4.

6.6.2 Transmit copies of the Material Evaluation form per the distribution list designated in Section IV. Maintain the original copy.

R 6.7 Revising the Material Evaluation**R GENERATOR, SWC, OR WASTE TECHNOLOGY**

R 6.7.1 Determine a revision to the MEF is required.

R 6.7.2 Notify the appropriate departments of the numbered MEF requiring change and the revision required.

R MATERIAL GENERATOR

R 6.7.3 Obtain file copy of the specified MEF and a new MEF.

R 6.7.4 Obtain a revision number from Waste Management.

R 6.7.5 Record the original MEF number and the revision number on the new MEF.

R 6.7.6 Complete Section 1 of the new MEF incorporating the necessary revisions and submit to SWC.

R 6.7.6.1 If the revision requested is not applicable to Section 1, complete Section 1 per the original MEF and forward to SWC.

R SWC/WASTE TECHNOLOGY

R 6.7.7 If the revision is applicable to Section 2, 3, or 4, complete the new MEF incorporating the revision.

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

7.0 REFERENCE DOCUMENTS

None

8.0 APPLICABLE FORMS

8.1 FMPC-OPR-3252, "Material Evaluation"

9.0 FIGURES

9.1 Figure 1, Material Evaluation

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

TABLE 1
INSTRUCTIONS FOR COMPLETING MATERIAL EVALUATION FORM - (SECTION I)

ITEM NO.	
1	Record the FMPC Source Code (SRC) and Material Type Code (MTC).
2	Designate the Plant/Building/Site location where material was generated.
3	Specify the process/building area which generates the material.
4	Provide the name of equipment generating the material.
5	Record the approximate date of generation (year, month, day) as specifically as possible.
6	Indicate the physical state of the material.
7	Estimate net weight of material in a full 55 gallon drum.
8	Indicate whether the material contains more than one substance.
9	Indicate whether the material is a waste.
10	Provide common names of the material.
11	Provide chemical names associated with the material.
12	Indicate sources of the common and chemical names.
13	Specify alternate material name (For example, identical material generated by different equipment).
14	Record alternate codes (source or material codes) used for material which is chemically identical to this material.
15	Indicate any substance which is contained or suspected to be contained in the material.
16	a) Specify the reason for suspecting the substance indicated and quantity of suspect material ⁽¹⁾ . b) List sources of information utilized for identifying the suspect substances indicated.

(1) Attach a copy of the MSDS as applicable.

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

TABLE 1 (cont.)
INSTRUCTIONS FOR COMPLETING MATERIAL EVALUATION FORM - (SECTION I)

ITEM NO.	
R 17	If a fingerprint visual inspection of the material was completed, attach to the Material Evaluation Form.
R 18	Record and describe the number of solid/liquid/gas layers within the material.
R 19	Record the pH of liquid material or liquid phase of material (2).
20	Record the flashpoint of liquid material or liquid phase (2).
21	If the material is a wet solid (sludge) and a paint filter test has been completed, specify test results (solid or liquid) (2).
22	Indicate if material is considered reactive. Include an explanation.
23	If the material is not a liquid, indicate if material is ignitable. Include an explanation.
24	Provide any health or safety concern the material may exhibit. For example, if fumes are possible, respiratory protection and protective clothing may be required.
25	Provide additional information that may be used to evaluate the material.
26	List additional sources of information used to complete this form (phone call, specification, procedures, etc.)
27	a) Provide the name and extension number of the individual responsible for responding to questions regarding Section I. b) Record the date Section I is completed.

R (2) Attach results if available.

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

TABLE 2
INSTRUCTIONS FOR COMPLETING MATERIAL EVALUATION FORM - (SECTION II)

ITEM NO.	
1	Indicate if material is waste (garbage, discarded, used, by-product).
2	Indicate if waste is excluded under 261.4(a) (CWA pointsource discharge, irrigation return flow, AEC source, special nuclear or by-product material, insitu mining waste).
3	Indicate if waste excluded from regulation under 264.1(b).
R 4	If the waste is listed in 261 Subpart D, or material contains a waste listed in subpart D, indicate the list and the waste number.
5	Indicate if waste exhibits characteristics specified in 261 Subpart C. List the characteristic exhibited.
6	Indicate if material is a possible RQ hazardous substance. If yes, list the RQ amount in Lbs.
R R 7	Indicate material classification. If material can not be classified indicate that the material needs further action and provide recommendations regarding information required.
8	Indicate if waste classification was based on information from Section I or on an evaluation of a waste stream known to be identical. If based on previous evaluation, list the Material Evaluation # and FMPC lot code of stream used for classification.
R 9	Indicate whether or not the material is subject to land ban restrictions and the effective date if applicable.
10	List additional sources of information used in this evaluation (such as phone calls, manufacturing specification, reference books).
R 11	DELETED
12	Provide the name and phone extension of the individual responsible for responding to questions regarding Section II and the date that Section II was completed.

87

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

TABLE 3
INSTRUCTIONS FOR COMPLETING MATERIAL EVALUATION FORM - (SECTION III)

ITEM NO.	
1	Indicate if sampling is required (Refer to Section II Item 7).
2	Indicate if amount of time necessary for sampling and analysis require transfer of material to a controlled holding area. If yes, record date that the material was authorized for transfer.
3	Indicate date that additional information was included on the form.
4	Based on Section I and II (or recent information), indicate container recommended (carbon steel, stainless steel, polyethylene).
5	Based on Section I and II (or recent information) indicate the reactivity group codes associated with the material.
6	List additional sources of information used to complete the form (phone calls, material specifications, reference material).
7	Provide the name and extension of the individual responsible for responding to questions regarding Section III and the date that Section III was completed.

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

TABLE 4
INSTRUCTIONS FOR COMPLETING MATERIAL EVALUATION FORM - (SECTION IV)

ITEM NO.	
1	Provide the D.O.T. Shipping Name for material.
2	Provide the D.O.T. Hazard Class for material.
3	List required D.O.T. drum labels.
4	Provide the D.O.T. Identification No. (UN or NA) and prefix.
5	Provide the EPA Waste No. noted for material.
6	List applicable reactivity group codes (Refer to Section III, Item 5).
7	Record the FMPC lot code (Refer to Section I, Item 1).
R 8	Indicate whether a revision is required to the MEF.
9	Distribution.
10	Provide the name and extension of the individual responsible for responding to questions regarding Section IV and the date that Section IV was completed.

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

TABLE 5
FINGERPRINT ANALYSIS PARAMETERS

Parameter	Applicability	Test Method/Requirements
visual inspection	required for all waste streams	To include, at a minimum, a discussion of the following: - general description - material color(s) - particle size - apparent stains - multiple phases - probe drum with pipe to ensure consistency
liquid content	required for any waste suspected of containing free liquids	SW-846-9095: Paint Filter Liquids Test (PFLT) (FMPC Method No. 1096)*
pH	required for any waste stream with a free liquid phase (as determined by the PFLT)	SW-846-9040: pH Electrometric Method (FMPC Method No. 3033)*
flash point	required for any waste with a free liquid phase (as determined by the PFLT)	flash point meter
density/specific gravity	required for homogeneous wastes only; density for solid wastes, specific gravity for liquid wastes	Gravimetric for Density/ASTM D 1217 for Specific Gravity (FMPC Method Nos. 1004 and 1005)*

*These references are included for information purposes only and not for operational use.

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

**FMPC
MATERIAL EVALUATION FORM**

MEF NO.: _____

MEF REV. NO.: _____

SECTION 1 - MATERIAL GENERATOR			
1. FMPC SRC:	MTC:	2. PLANT AND/OR BUILDING NO.:	3. PROCESS AREA:
4. EQUIPMENT NAME(S):		5. MEF NO. DATE:	MEF REV. DATE:
7. APPROXIMATE NET WEIGHT OF FULL CONTAINER? <input type="checkbox"/> <100 lbs. <input type="checkbox"/> 100 to 1000 lbs. <input type="checkbox"/> >1000 lbs.		8. DOES MATERIAL CONSIST OF MORE THAN ONE SUBSTANCE? <input type="checkbox"/> YES <input type="checkbox"/> NO	
9. IS MATERIAL A WASTE? <input type="checkbox"/> YES <input type="checkbox"/> NO	10. COMMON NAMES:		11. CHEMICAL NAMES:
12. COMMON/CHEMICAL NAME SOURCE: <input type="checkbox"/> Process Information <input type="checkbox"/> MSDS OTHER: <input type="checkbox"/> Container Label <input type="checkbox"/> FMPC Lot Code	13. SIMILAR MATERIAL NAME:		14. SIMILAR MATERIAL LOT CODE(S):
15. SUBSTANCES SUSPECTED:			
<input type="checkbox"/> Aerosols	<input type="checkbox"/> Cresol	<input type="checkbox"/> Endrine	<input type="checkbox"/> Methylene Chloride
<input type="checkbox"/> Arsenic	<input type="checkbox"/> m-Cresol	<input type="checkbox"/> Heptachlor	<input type="checkbox"/> Motor/Engine Oil
<input type="checkbox"/> Barium	<input type="checkbox"/> o-Cresol	<input type="checkbox"/> Hexachlorobenzene	<input type="checkbox"/> Nitrobenzene
<input type="checkbox"/> Benzene	<input type="checkbox"/> p-Cresol	<input type="checkbox"/> Hexachloroethane	<input type="checkbox"/> Other Organics
<input type="checkbox"/> Cadmium	<input type="checkbox"/> 2,4-D	<input type="checkbox"/> Hexachloro-1,3-butadiene	<input type="checkbox"/> Paint Stripper
<input type="checkbox"/> Carbon Tetrachloride	<input type="checkbox"/> Degreaser	<input type="checkbox"/> Hydraulic Oil	<input type="checkbox"/> Paint Thinner/Mineral Spirits
<input type="checkbox"/> Chlordane	<input type="checkbox"/> 1,4-Dichlorobenzene	<input type="checkbox"/> Ink	<input type="checkbox"/> Pentachlorophenol
<input type="checkbox"/> Chlorobenzene	<input type="checkbox"/> 1,2-Dichloroethane	<input type="checkbox"/> Lead	<input type="checkbox"/> Perchloroethylene
<input type="checkbox"/> Chloroform	<input type="checkbox"/> 1,1-Dichloroethylene	<input type="checkbox"/> Lindane	<input type="checkbox"/> Pyridine
<input type="checkbox"/> Chromium	<input type="checkbox"/> 2,4-Dinitrotoluene	<input type="checkbox"/> Mercury	<input type="checkbox"/> Selenium
<input type="checkbox"/> Coolants	<input type="checkbox"/> Enamel	<input type="checkbox"/> Methoxychlor	<input type="checkbox"/> Silver
		<input type="checkbox"/> Methyl ethyl ketone	<input type="checkbox"/> Synthetic oil
			<input type="checkbox"/> TBP/Kerosene
			<input type="checkbox"/> Tetrachloroethylene
			<input type="checkbox"/> 1,1,1-Trichloroethane
			<input type="checkbox"/> 2,4,5-TP (Silvex)
			<input type="checkbox"/> 2,4,5-Trichlorophenol
			<input type="checkbox"/> 2,4,6-Trichlorophenol
			<input type="checkbox"/> Toxaphene
			<input type="checkbox"/> Trichloroethylene
			<input type="checkbox"/> Unknown
			<input type="checkbox"/> Vinyl Chloride
			<input type="checkbox"/> Xylene
			<input type="checkbox"/> Oil
16. a. REASON FOR SUSPECTING ALL SUBSTANCES AND QUANTITY:			
16. b. SOURCE FOR REASON AND QUANTITY: (Attach MSDS if Available)			
<input type="checkbox"/> Personnel Interviews	<input type="checkbox"/> AEDO Log	<input type="checkbox"/> MSDS	<input type="checkbox"/> Prior Evaluation of Similar Material
<input type="checkbox"/> Historical Records	<input type="checkbox"/> Physical Evidence	<input type="checkbox"/> Container Label	What Material: _____
<input type="checkbox"/> FMPC Lot Code	<input type="checkbox"/> Process Information	<input type="checkbox"/> Sump Report	
	<input type="checkbox"/> Spill Database	SRC: _____	MTC: _____
17. HAS THE "FINGERPRINT" VISUAL INSPECTION BEEN COMPLETED? <input type="checkbox"/> YES <input type="checkbox"/> NO	18. NUMBER OF PHASES:	19. pH (IF KNOWN): (Attach Lab Results)	20. FLASH POINT (IF KNOWN): (Attach Lab Results)
21. HAS A PAINT FILTER TEST BEEN COMPLETED? <input type="checkbox"/> YES <input type="checkbox"/> NO			
22. IS IT REACTIVE? EXPLAIN: <input type="checkbox"/> YES <input type="checkbox"/> NO			
23. IS IT IGNITABLE? EXPLAIN: <input type="checkbox"/> YES <input type="checkbox"/> NO			
24. HEALTH AND SAFETY CONCERNS:			
25. OTHER INFORMATION: (Example: Is the Material a Product or Waste?)			
26. ADDITIONAL SOURCES OF INFORMATION:			
27. PRIMARY CONTACT INDIVIDUAL:	EXTENSION:	DATE COMPLETED:	

FMPC-OPR-3252 (REV. 3/7/91)

**MATERIAL EVALUATION
FMPC-OPR-3252 (Sheet 1 of 2)
Figure 1**

28

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

**FMPC
MATERIAL EVALUATION FORM**
(Continued)

MEF NO.: _____

MEF REV. NO.: _____

SECTION 2 - SOLID WASTE COMPLIANCE		
1. IS MATERIAL A WASTE? <input type="checkbox"/> YES <input type="checkbox"/> NO	2. IS IT EXCLUDED UNDER 261.4(a)? <input type="checkbox"/> YES <input type="checkbox"/> NO	3. IS IT EXCLUDED UNDER 261.4 (b)? <input type="checkbox"/> YES <input type="checkbox"/> NO
4. DOES IT CONTAIN A LISTED WASTE AS PER 261 SUBPART D? <input type="checkbox"/> k _____ <input type="checkbox"/> l _____ <input type="checkbox"/> p _____ <input type="checkbox"/> u _____ <input type="checkbox"/> not listed		
5. DOES IT EXHIBIT ANY CHARACTERISTICS AS PER 261 SUBPART C? <input type="checkbox"/> YES <input type="checkbox"/> NO	EXPLAIN: _____	6. IS IT A RCRA HAZARDOUS SUBSTANCE? <input type="checkbox"/> YES <input type="checkbox"/> NO
7. CLASSIFICATION AS A WASTE: <input type="checkbox"/> RCRA Hazardous Waste <input type="checkbox"/> Source Exempt <input type="checkbox"/> Non-RCRA Waste <input type="checkbox"/> Radioactive		8. PRIMARY BASIS FOR CLASSIFICATION: WHAT MATERIAL? <input type="checkbox"/> Generator information <input type="checkbox"/> Prior material evaluation
EXPLAIN: _____		LOT NUMBER: _____
9. IS IT SUBJECT TO LAND BAN RESTRICTIONS? <input type="checkbox"/> NO <input type="checkbox"/> YES Effective Date: _____		
10. OTHER INFORMATION SOURCES USED:		
11. PRIMARY CONTACT INDIVIDUAL:		EXTENSION: _____ DATE COMPLETED: _____
SECTION 3 - WASTE TECHNOLOGY		
1. IS SAMPLING REQUIRED? <input type="checkbox"/> YES <input type="checkbox"/> NO	2. IS TRANSFER TO CONTROLLED HOLDING AREA REQUIRED? <input type="checkbox"/> YES <input type="checkbox"/> NO	DATE: _____
3. INFORMATION ACTION COMPLETION DATE: _____		
4. RECOMMENDED STORAGE CONTAINER MATERIAL <input type="checkbox"/> Carbon Steel <input type="checkbox"/> Stainless Steel <input type="checkbox"/> Polyethylene <input type="checkbox"/> Other: _____		5. APPLICABLE REACTIVITY GROUP CODES: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> H
6. OTHER INFORMATION SOURCES USED:		
7. PRIMARY CONTACT INDIVIDUAL:		EXTENSION: _____ DATE COMPLETED: _____
SECTION 4 - SWC (SUMMARY SHEET)		
1. PROPER D.O.T. SHIPPING NAME:		
2. D.O.T. HAZARD CLASS:		3. REQUIRED LABELS:
4. D.O.T. IDENTIFICATION NO.: _____ SUFFIX: _____ <input type="checkbox"/> UN <input type="checkbox"/> NA		5. EPA WASTE NO.:
6. APPLICABLE REACTIVITY GROUP CODES: (COPY FROM SECTION 3, ITEM 5)		7. FMPC SRC AND MTC (COPY FROM SECTION 1, ITEM 1) SRC: _____ MTC: _____
8. IS A REVISION TO MEF REQUIRED? <input type="checkbox"/> YES <input type="checkbox"/> NO		
9. DISTRIBUTION:	MATERIAL GENERATOR:	DATE: _____
	WASTE TECHNOLOGY:	DATE: _____
	MC&A:	DATE: _____
	WASTE MANAGEMENT:	DATE: _____
10. PRIMARY CONTACT INDIVIDUAL:		EXTENSION: _____ DATE COMPLETED: _____

FMPC-OPR-3252 (REV. 3/7/91)

MATERIAL EVALUATION
FMPC-OPR-3252 (Sheet 2 of 2)
Figure 1

88

84

NUMBER: SSOP-0002	REVISION: 1	ISSUE DATE: 04-16-91
----------------------	----------------	-------------------------

RECORD OF ISSUE/REVISIONS

<u>DATE</u>	<u>REV. NO.</u>	<u>DESCRIPTION AND AUTHORITY</u>
01-11-91	0	Instructions for completing the Material Evaluation form required per Request No. P90-292, initiated by K. Nuhfer.
04-16-91	1	Revised to update form and include steps to allow for an MEF revision per Request No. P91-093, initiated by J. Ogg.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 1 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: (SOF) W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

1.0 PURPOSE

The purpose of this document is to provide the procedure for controlling order requirements for material disposition activities from order receipt through material release.

2.0 SCOPE

This procedure is applicable to the relocation of nuclear materials that are required for defense programs, locating customers to purchase recyclable material, and disposing of material categorized as waste.

3.0 DEFINITIONS

3.1 Material Disposition Order (MDO) - An authorized directive to communicate specific customer requirements to package and ship nuclear materials in response to Department of Energy (DOE) direction or Work-for-Others Program requests. The MDO also serves as a work plan for moving, handling, packaging, and shipping nuclear materials.

3.2 Work-for-Others Program - A program of reimbursable (nonbudgeted) work available to DOE contractors, federal agencies, and the commercial private sector.

4.0 RESPONSIBILITIES

4.1 Safe Shutdown Program shall be responsible for the following:

4.1.1 Implementing the Material Disposition Order Management System to ensure that customer requirements are met.

4.1.2 Authorizing DOE-approved work for sources outside the Fernald Environmental Management Project (FEMP).

4.1.3 Planning and scheduling routine disposition activities to meet DOE programmatic requirements.

4.1.4 Distributing and tracking Material Disposition orders.

4.1.5 Maintaining documentation relating to packaging and shipping nuclear materials.

4.1.6 Administering all aspects of the Work-for-Others Program.

4.1.7 Maintaining official records of customer specifications for all orders.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO. SITE DOCUMENT PROGRAM		INTERIM Page 2 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

4.0 RESPONSIBILITIES (cont.)

- 4.1.8 Assuming primary liaison role internally and with customers on routine technical and product quality requirements.
- 4.1.9 Receiving inquiries for nonprogrammatic work or service.
- 4.1.10 Coordinating with supporting departments and maintaining liaison with the requester.
- 4.2 Site Services shall be responsible for the following:
 - 4.2.1 Performing authorized work in accordance with customer requirements.
 - 4.2.2 Providing specialized services approved under the Work-for-Others Program.
 - 4.2.3 Maintaining records of packaging and shipping regulations.
 - 4.2.4 Specifying packaging, arranging shipments with carriers and ensuring compliance with applicable regulations.
 - 4.2.5 Performing special packaging when necessary.
 - 4.2.6 Loading FEMP nuclear materials onto the carrier vehicle for final delivery.
 - 4.2.7 Providing necessary product analytical services.
 - 4.2.8 Providing technical support.
 - 4.2.9 Performing specialized services approved under the Work-for-Others Program.
- 4.3 The Controller shall be responsible for the following:
 - 4.3.1 Coordinating site-wide budgeting and accounting for FEMP programs.
 - 4.3.2 Reviewing financial planning.
 - 4.3.3 Conducting cost accounting activities for the Work-for-Others Program.
 - 4.3.4 Determining the reasonableness and accuracy of cost estimates for off-site inquiries.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 3 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

4.0 RESPONSIBILITIES (cont.)

- 4.3.5 Maintaining nuclear material inventory information.
- 4.3.6 Acting as liaison with requester sites on approvals to ship nuclear materials.
- 4.3.7 Preparing a "Nuclear Materials Transaction Report" Form for transfer of nuclear materials between sites.
- 4.3.8 Maintaining formal records and documentation of nuclear materials transfers.
- 4.4 Environmental Compliance and Quality Assurance (EC&QA) shall be responsible for providing listings of analyses and shipment reports.
- 4.5 Industrial, Radiological Safety and Training (IRS&T) shall be responsible for the following:
 - 4.5.1 Providing radiation monitoring for nuclear materials and operations.
 - 4.5.2 Giving final safety approvals for shipments of nuclear materials.

5.0 GENERAL

- 5.1 The Material Disposition Order Management System interactions and flows are shown in Figure 1.
- 5.2 Delivery requirements for programmatic nuclear materials shall be transmitted to WEMCO management via the DOE Site Manager's Office.
- 5.3 Inquiries for nonprogrammatic work or services shall be forwarded to the Work-for-Others Program Coordinator (within the Safe Shutdown Program) for follow-up liaison with other supporting departments, unless specifically reassigned by management.
- 5.4 Material Disposition Orders directing FEMP activities are indexed, filed, and maintained by Safe Shutdown Program/Uranium Disposition.
- 5.5 Material Disposition Orders for work or services to be performed under the Work-for-Others Program shall include detailed information on the project with quantities, specifications, delivery instructions, the method of cost recovery, who is to perform the work, and other special stipulations or safety requirements. The orders are issued after formal DOE approval is provided for the project.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 4 of 14 2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91

5.0 GENERAL (cont.)

- 5.6 Specific Work-for-Others Program projects shall be evaluated to determine if government resources exist to perform the task, that the work will not interfere with prime DOE missions, and that private facilities are not available to perform the work on a timely and/or cost effective basis. DOE shall approve services to be performed under the Work-for-Others program prior to starting.
- 5.7 Due to the cancellation of FMPC-714 and in light of the new site mission, open orders under FMPC-714 shall be reviewed individually for validity. Orders will be cancelled or revised as appropriate.

6.0 PROCEDURE

6.1 Preparation of Routine Material Disposition Orders

SAFE SHUTDOWN PROGRAM

- 6.1.1 After receiving official delivery requirements and changes for routine work; contact the Controller and other applicable groups to verify that resources exist to implement disposition.
- 6.1.2 Receive, maintain, and distribute official customer specification documentation for routine orders.
- 6.1.3 Schedule deliveries of nuclear materials, including revised requirements.
- 6.1.4 Prepare the formal Material Disposition Order.
- 6.1.5 Approve the MDO or revision for release.

6.2 Preparation of Material Disposition Orders for Work-for-Others Program

SAFE SHUTDOWN PROGRAM

- 6.2.1 After receiving inquires to perform special work or provide services to other DOE contractors, federal agencies, or the commercial sector notify the Work-for-Others Coordinator.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 5 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

6.0 PROCEDURE (cont.)

SAFE SHUTDOWN PROGRAM - WORK-FOR-OTHERS COORDINATOR

6.2.2 Fill out the applicable section of a "Work-for-Others Inquiry," Form FMPC-PRO-2398.

NOTE: Section I and/or Section II of the Work-for-Others form is used to inform WEMCO Management and DOE/FSO of inquiries. Section I of FMPC-PRO-2398 may not be required. If the initial contact is definite and results in an immediate purchase order, the initial communication to management and DOE would be Section II. Section II is always required.

6.2.3 Coordinate with other departments as required to determine the feasibility of the requested work.

6.2.4 Prepare a cost estimate for the requested work.

6.2.5 Transfer the cost estimate to the Controller.

CONTROLLER

6.2.6 Review the cost estimate and approve or disapprove of the proposed action.

6.2.7 Return the estimate with approval or disapproval to the Work-for-Others Coordinator.

SAFE SHUTDOWN PROGRAM - WORK-FOR-OTHERS COORDINATOR

6.2.8 Provide the formal response to the requesting party, including cost estimates.

6.2.9 Complete Section II of a "Work-for-Others Inquiry" Form upon receipt of a purchase order.

6.2.10 Submit the completed form to Safe Shutdown Program.

SAFE SHUTDOWN PROGRAM

6.2.11 Concur with the recommendations contained in Section II of Form FMPC-PRO-2398 and approve submission to DOE for project authorization.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 6 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

6.0 PROCEDURE (cont.)

SAFE SHUTDOWN PROGRAM - WORK-FOR-OTHERS COORDINATOR

6.2.12 After authorization is granted by DOE, prepare an MDO.

NOTE: An inquiry may end at any point in the Work-for-Others sequence due to lack of FEMP capabilities, relative costs, or interference with DOE mission objectives.

6.2.13 Submit the MDO to the Manager, Safe Shutdown Program for authorization.

SAFE SHUTDOWN PROGRAM

6.2.14 Approve the MDO or revision for release.

6.3 Distribution of Material Disposition Orders

SAFE SHUTDOWN PROGRAM

6.3.1 Forward the approved MDO to Site Services, EC&QA, Controller, and the DOE Site Manager.

6.3.2 Maintain and distribute purchase orders and product specifications received under the Work-for-Others Program.

6.3.3 Prepare an acknowledgement letter for transmittal to the principal managers responsible for the work.

6.3.4 Receive and file signed acceptance verifying all details of the work, including timing.

NOTE: Rocky Flats, Y-12, Los Alamos, and all private commercial firms require a completed, approved, "Authorization to Ship" request form (normally initiated just after the material disposition order is issued).

6.3.5 Request an "Authorization to Ship" form from MC&A.

6.3.6 Complete form and submit a preliminary copy of the form to Sitewide Quality.

6.3.7 Transmit the original of the authorization form to IRS&T for approval.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 7 of 14 2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91

6.0 PROCEDURE (cont.)

IRS&T

- 6.3.8 Approve the "Authorization to Ship" form for safety requirements and return the form to Safe Shutdown Program.

SAFE SHUTDOWN PROGRAM

- 6.3.9 Transmit a copy of the approved form to Site-wide Quality Assurance.

- 6.3.10 Send the original of the "Authorization to Ship" form to MC&A.

CONTROLLER - MC&A

- 6.3.11 Approve the "Authorization to Ship" form.

- 6.3.12 Contact the requestor site and coordinate nuclear material control transfer requirements.

6.4 Implementation of Material Disposition Orders

SITE SERVICES - FACILITIES AND WAREHOUSING

- 6.4.1 Perform work specified by the material disposition order.

- 6.4.2 Maintain packaging and cost control records.

SAFE SHUTDOWN PROGRAM

- 6.4.3 Coordinate with Facilities & Warehousing to track the progress of material disposition orders.

- 6.4.4 Report the progress of MDO action to WEMCO management.

CONTROLLER

- 6.4.5 Coordinate with applicable areas to track and collect the costs involved for all orders.

- 6.4.6 Bill individual customers for reimbursable work performed under Work-for-Others Program orders.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 8 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

6.0 PROCEDURE (cont.)

6.5 Material Disposition Order Verification

SITE SERVICES - FACILITIES AND WAREHOUSING

6.5.1 Package nuclear products according to applicable section procedures.

NOTE: Where special, nonroutine packaging is involved, Transportation can package materials directly.

CONTROLLER - MC&A

6.5.2 Complete a "Shipping Order for Nuclear Material," Form FMPC-CONT-558.

6.5.3 Send the completed form to Site-wide Quality Assurance.

EC&QA - SITE-WIDE QUALITY ASSURANCE

6.5.4 Prepare analytical documentation regarding the material to be shipped.

6.5.5 Transmit a copy of the analytical documentation to Uranium Disposition.

6.5.6 Return the shipping order and analytical documentation to MC&A.

CONTROLLER - MC&A

6.5.7 Complete the Material Control Data portion of the shipping order with additional inventory control data.

6.5.8 Return the shipping order to Site-wide Quality Assurance.

EC&QA - SITE-WIDE QUALITY ASSURANCE

6.5.9 Approve the completed shipping order.

6.5.10 Forward the shipping order and shipping reports to Facilities and Warehousing.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 9 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

6.0 PROCEDURE (cont.)

6.6 Completion of Material Disposition Orders

IRS&T

- 6.6.1 Monitor the packaged material for conformity to Department of Transportation radiological regulations.

FACILITIES AND WAREHOUSING

- 6.6.2 Review the packaging and shipping documentation per Site Procedure FMPC-314.
- 6.6.3 Ensure that all appropriate regulations are met.
- 6.6.4 Arrange for a carrier and notify the receiving site of the carrier name.
- 6.6.5 Load the product for shipment.
- 6.6.6 Notify Safe Shutdown Program, MC&A, and Site-wide Quality Assurance upon final shipment of the product.

MATERIALS CONTROL AND ACCOUNTABILITY

- 6.6.7 Fill out a "Nuclear Material Transaction Report," Form DOE/NRC-714.
- 6.6.8 Mail the completed "Nuclear Material Transaction Report" to the customer.

NOTE: The report shall be sent within 24 hours of shipment leaving the site.

SITE-WIDE QUALITY ASSURANCE

- 6.6.9 Prepare and transmit a formal analyses and shipping report letter (See Figure 2) to the customer.

SAFE SHUTDOWN PROGRAM

- 6.6.10 Prepare a material disposition order completion notice letter (See Figure 3) and send the letter to the involved departments.
- 6.6.11 File the records of the routine material disposition order and the Work-for-Others Program orders.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 10 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

7.0 APPLICABLE DOCUMENTS

7.1 Drivers

- 7.1.1 DOE Order 2200.6, "Financial Accounting"
- 7.1.2 DOE Order 4300.2A, "Non-Department of Energy Funded Work"
- 7.1.3 DOE Order 5660.1, "Management of Nuclear Material"

7.2 References

- 7.2.1 FMPC-314, "Packaging, On-Site Movement and Off-Site Shipment of Material"

8.0 APPLICABLE FORMS

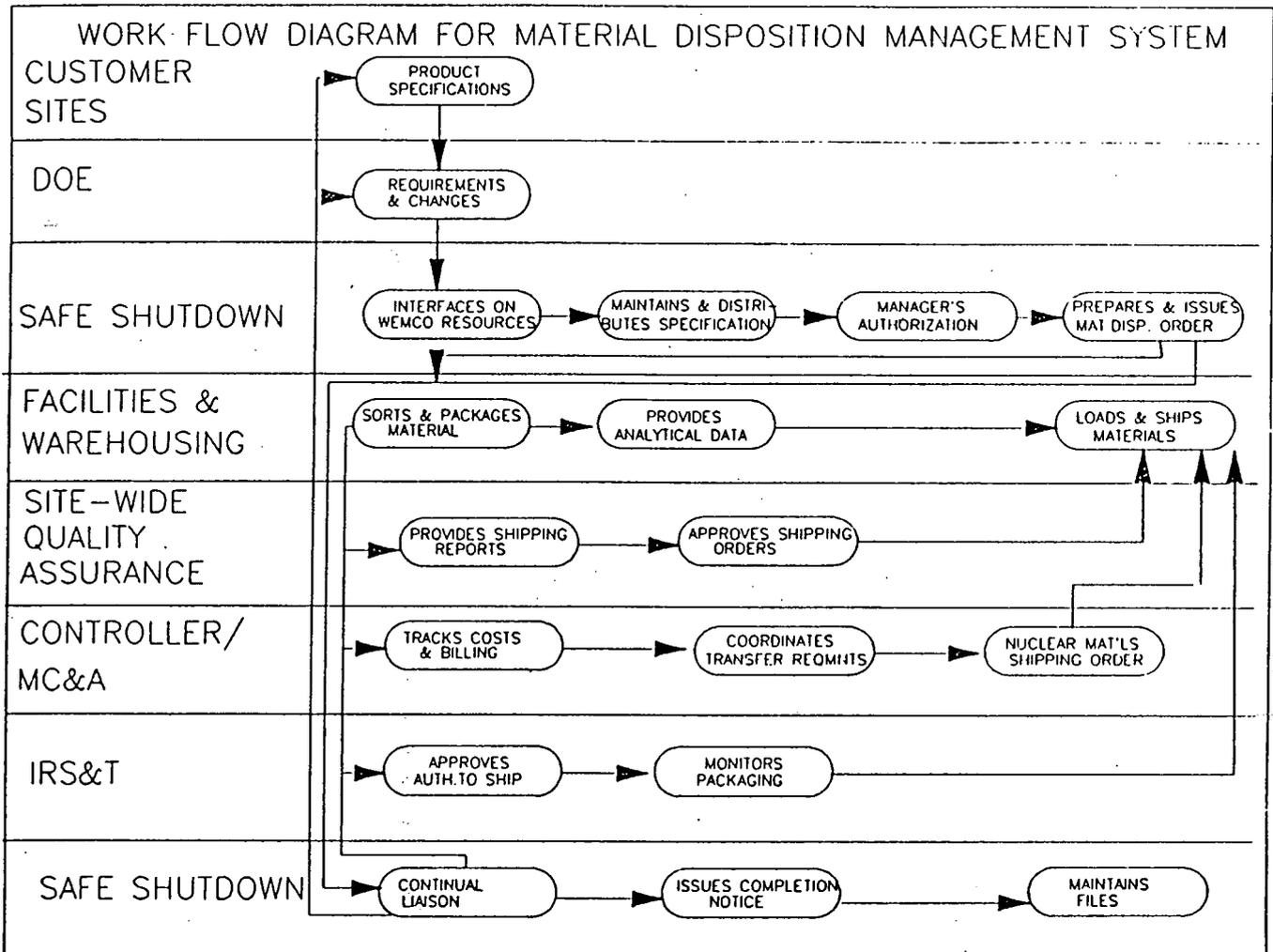
NOTE: Forms listed refer to "Production Orders" as designated by FMPC-714 which is being superseded. New forms will be generated while this procedure is in interim status.

- 8.1 FMPC-PRO-2398, "Work-for-Others Inquiry"
- 8.2 FMPC-CONT-558, "Shipping Order for Nuclear Material"
- 8.3 DOE/NRC Form 741, "Nuclear Materials Transaction Report"

9.0 FIGURES

- 9.1 Material Disposition Management System Work Flow Diagram

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 11 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	



MATERIAL DISPOSITION MANAGEMENT SYSTEM WORK FLOW DIAGRAM
Figure 1

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 12 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91.	

Westinghouse
Materials Company
of Ohio

PO Box 398704
Cincinnati, Ohio 45239-8704

(513) 738 6200

WMCO:QC:91-072

July 9, 1991

Y. H. Tracy
Martin Marietta Energy Systems
Y-12 Plant
P. O. Box 2009
Oak Ridge, TN 37830-8166

SUBJECT: MK31 DEPLETED URANIUM DERBY ANALYSES

S

Mrs. Tracy:

A

Attached are the MK31 depleted uranium derby analyses and shipment reports for shipment 741 No. 206 that has been sent to MMES, Y-12 Plant. This is in accordance with Customer Specifications 00-M-199 Rev. A and Customer Purchase Order 10Y-DP779V.

M

If you have any questions concerning the analyses, please call FTS 744-6608 or (513) 738-6608.

Very truly yours,

P

E. B. Spencer for

J. E. Clements

L

RLA:srl

Attachment

E

c: D. C. Bonfer
J. L. Trujillo
Central Files

ANALYSES AND SHIPPING-REPORT LETTER
SAMPLE
Figure 2

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 13 of 14 2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91

From: D. C. Bonfer/6536
Date: July 25, 1991
Subject: D-773 COMPLETION NOTICE

WMCO:SSP(UCB):91-034

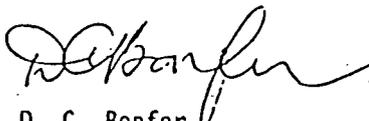
To : Distribution

S

- Ref.: 1) WMCO Order No. D-773, Issued 05/24/91
2) Martin Marietta (Y-12) P. O. 10Y-DP779V, dated 05/21/91

A

D-773 for ~200 MTU of Depleted Mark 31 Derbies has been completed.
Final shipment was made on July 18, 1991, via Overnite, Shipping
Order 1373. All charges against Charge Number NJB01 should cease and the
number should be closed effective immediately.



D. C. Bonfer
Project Leader for Transfer of Depleted Uranium Materials

DCB:slk

Distribution:

R. L. Ashcraft	C. W. Lower
J. D. Bardua	J. P. McGrogan
C. E. Block	J. M. Miller
D. L. Dunaway	D. S. Montgomery
L. M. Federmann	O. Pollard
R. J. Gall	M. E. Schroer
R. L. Gardner	J. L. Trujillo
J. A. Grumski	J. J. Volpe
R. J. Hansen, DOE-FSO	G. W. Westerbeck, DOE-FSO
H. J. Knue	M. Woods
	Work-for-Others File

MATERIAL DISPOSITION ORDER COMPLETION NOTICE LETTER
SAMPLE
Figure 3

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		INTERIM Page 14 of 14	2343
Title: MATERIAL DISPOSITION ORDER MANAGEMENT		DOCUMENT NO: IN-6010 SITE STANDARD OPERATING PROCEDURE	
Authorization: W. H. Britton, President	Supersedes: FMPC-714, Dated 12-29-89, Rev. 1	Issue Date: 08-30-91	

RECORD OF ISSUE/REVISIONS

<u>DATE</u>	<u>REV. NO</u>	<u>DESCRIPTION AND AUTHORITY</u>
08-30-91	N/A	Procedure requirement for managing the material disposition order process required per Request No. P91-391, initiated by S. Kaushiva.



Westinghouse
Materials Company
of Ohio — FMPC

NUMBER: FMPC - 503	REVISION: 0	ISSUE DATE: 10/25/88
TITLE: FMPC SPILL INCIDENT REPORTING AND CLEANUP 2343		
APPROVED BY: <i>M. B. Boswell</i> M. B. Boswell, President		

SITE POLICY AND PROCEDURE

1.0 POLICY

Westinghouse Materials Company of Ohio shall maintain a policy by which all spill incidents are contained, cleaned up, classified, reported to responsible FMPC organizations, and reported to offsite organizations in accordance with all applicable state and federal regulations and laws.

2.0 SCOPE

This procedure describes actions and responsibilities for initial reporting, clean-up operations, and follow-up actions for spill incidents at the FMPC.

3.0 DEFINITIONS

- 3.1 Assistant Emergency Duty Officer (AEDO) - The AEDO is the onsite management authority for all shifts and for all abnormal events. This position is filled by a Utilities Engineer. The AEDO reports to and communicates with the Emergency Duty Officer (EDO). The AEDO has the authority to take all actions necessary to ameliorate the event, including the authority to classify the event and to activate the FMPC offsite emergency warning system, the Emergency Response Team, the plant-wide alarm, the Emergency Operations Center, the Joint Public Information Center and to notify appropriate agencies.
- 3.2 Best Management Practices (BMPs) - Plans by which industry shall control conditions to prevent the discharge of hazardous materials to the environment. In general, the types of discharges controlled by BMPs consist of plant site runoffs, leaks, spills, sludge and waste disposals, and drainage from material storage areas.
- 3.3 Spill Incident - For purposes of this policy, a spill includes any spilling, leaking, pumping, pouring, injecting, escaping, emitting, emptying, leaching, releasing, dumping, discharging or disposing of a hazardous substance, extremely hazardous substance, hazardous material, toxic pollutant, hazardous air pollutant, radioactive substance, oil or Toxic Substances Control Act (TSCA) Section 8 (e) chemical substance or mixture into the environment.
- 3.4 Event - An unplanned, unwanted occurrence which requires classification by the AEDO.

NUMBER:	REVISION:	ISSUE DATE:
FMPC - 503	0	10/25/88

3.0 DEFINITIONS (Continued)

- 3.5 Hazardous Substance - For purposes of this policy, means any "hazardous substance" designated under the Clean Water Act (CWA), any "hazardous waste" regulated under the Resource Conservation and Recovery Act (RCRA), any "toxic pollutant" listed under the Clean Water Act, any "Hazardous Air Pollutant" listed under the Clean Air Act (CAA), any substance regulated by the EPA under section 7 of of the Toxic Substances Control Act (TSCA), any additional substances designated by USEPA as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or any substance reportable under the Occupational Safety and Health Act (OSHA). The term hazardous substance does not include petroleum.
- 3.6 Extremely Hazardous Substance - A substance listed by USEPA as extremely hazardous under Section 302(a) of the Emergency Planning and Community Right-to-Know Act of 1986 (SARA).
- 3.7 Hazardous Material - A substance or material including a hazardous substance which has been determined by the U.S. Department of Transportation to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.
- 3.8 TSCA Section 8 (e) Chemical Substance - A chemical substance or mixture which presents a substantial risk of injury to health or the environment, as defined in the Toxic Substances Control Act (TSCA).
- 3.9 Hazardous Waste - A waste material exhibiting the characteristics of ignitability, corrosivity, reactivity, or toxicity or listed in 40 CFR Part 261 (RCRA) or identified in applicable state regulations.
- 3.10 Oil - Oil of any kind or in any form including but not limited to: petroleum, fuel oil, sludge, oil refuse, and oil mixed with waste other than dredged spoils.
- 3.11 Reportable Quantity (RQ) - Quantity of substance released to the environment which must be reported to regulatory agencies. For a listing of reportable substances and their RQs see the Regulatory Compliance Guide "Regulatory Reporting Requirements," RCECW2, which is available from the Environmental Compliance Spill Advisor.

4.0 RESPONSIBILITIES

- 4.1 Employee - Takes steps, if possible, (like valving off, blocking, etc.) upon the discovery of a spill, abnormal discharge, emission or leak to immediately control the situation, then promptly notifies Immediate Supervisor (or AEDO through the Communications Officer in

NUMBER:	REVISION:	ISSUE DATE:
FMPC - 503	0	10/25/88

4.0 RESPONSIBILITIES (Continued)

- 4.1 Employee (Continued) - supervisor's absence), in accordance with Production Operations procedures, FMPC site procedures, and/or the FMPC Emergency Plan, FMPC-2046.
- 4.2 Line Supervisor - Immediately reports the incident to the AEDO through the Communications Officer, or directly to the AEDO by radio. Investigates, and performs a preliminary evaluation of the magnitude and nature of the incident, isolates and secures affected areas. Reports the spill incident to the Area or Plant Manager. After the spill is cleaned-up, the line supervisor completes a Minor Event Report (MER), as applicable, in accordance with FMPC site procedure FMPC-704.
- 4.3 Line Manager - Evaluates the nature of the spill and assures that spill clean-up actions are conducted and completed in accordance with applicable site and departmental procedures and regulatory requirements. If assistance is required, the Emergency Response Team (ERT) can aid in spill containment and clean-up. After the spill is cleaned-up, the line manager completes an Unusual Occurrence Report (UOR), as applicable, in accordance with FMPC site procedure FMPC-703.
- 4.4 Staff Manager - Reviews each MER and UOR under his/her cognizance for compliance with applicable procedures, directs an investigation of UOR's to determine the sequence of events which caused the incident, and initiates necessary corrective actions. Assigns any written follow-up reporting for spills required by regulatory agencies, following requirements specified in the Regulatory Compliance Guide RCECW2, "Regulatory Spill Reporting". Environmental Compliance will advise in determining these follow-up reporting requirements.
- 4.5 Communications Operator - Completes an Event Report form including as much information on the spill or release as is available, and notifies the Assistant Emergency Duty Officer (AEDO) and the Emergency Chief of the event, if directed to do so by the AEDO.
- 4.6 Emergency Chief - In an emergency event, directs the Emergency Response Team to the reported event and supervises emergency activities. Reports to the AEDO.
- 4.7 Assistant Emergency Duty Officer (AEDO) - Classifies the event and determines if it is reportable to DOE following DOE-ORO incident classification guidelines established in "Duty Officer Guideline Procedures" (FMPC Emergency Plan). The DOE-ORO incident

NUMBER:	REVISION:	ISSUE DATE:
FMPC - 503	0	10/25/88

4.0 RESPONSIBILITIES (Continued)

- 4.7 Assistant Emergency Duty Officer (Continued) - classification system classifies an event as an emergency or a non-routine event. All emergency and reportable non-routine events must be reported to DOE-ORO. The AEDO provides the necessary information to the Emergency Duty Officer (EDO) and the designated Environmental Compliance (EC) Spill Reporting Advisor to determine if a spill or abnormal discharge event is reportable to regulatory agencies. After a determination by the EDO and EC Spill Reporting Advisor that an event is reportable to regulatory agencies, the AEDO communicates this determination to DOE, recommends that DOE notify appropriate agencies within the time specified by regulation(s), and confirms that DOE has made this notification. The AEDO has authority to direct emergency event activities. In an emergency event, reports the event to Local Emergency Coordinator and Planning Committees as directed by the EDO or Emergency Operations Center (EOC). The AEDO may direct OS&H to assign the Radiological Safety or Industrial Hygiene & Safety personnel required to perform analyses and monitoring efforts. The AEDO logs all events and ensures that all original reports, forms, and logs are placed in Emergency Preparedness files.
- 4.8 Emergency Duty Officer (EDO) - Provides management oversight to the AEDO. Ensures that notifications and response actions are appropriate. In the event that a spill incident may be reportable to regulatory agencies, contacts the designated Environmental Compliance (EC) Spill Reporting Advisor, who advises the EDO if the spill is reportable to regulatory agencies. The EDO notifies the WMCO President, Office of Counsel, Director of Public Affairs, and DOE Site Manager of regulatory reportable events. The EDO also assures that Westinghouse Corporate Environmental Affairs has been notified of a reportable event.
- 4.9 Environmental Compliance Spill Reporting Advisor - The Manager of Environmental Compliance, using information provided by the EDO or AEDO, classifies a spill event as reportable to regulatory agencies, using guidelines established in RCECW2 "Regulatory Reporting Requirements for Spills" (Regulatory Compliance Guide). Advises the EDO of this determination.
- 4.10 Best Management Practices (BMP) Committee - Periodically reviews those MERs and UORs which result from spill incidents or events, and formulates recommendations to WMCO management to prevent the recurrence of similar incidents or events.
- 4.11 Operations, Safety & Health (OS&H) Technician - Industrial Hygiene or Radiological Safety Monitoring technician conducts analyses and monitoring of spilled substances in accordance with OS&H procedures, and reports analytical results to the AEDO.

NUMBER: FMPC - 503	REVISION: 0	ISSUE DATE: 10/25/88
-----------------------	----------------	-------------------------

4.0 RESPONSIBILITIES (Continued)

4.12 Public Affairs - The Director of Public Affairs (or his designee) is responsible to assist the AEDO in determining the event classification, and whether to report event information to the public and/or plant neighbors. The Director of Public Affairs is responsible for coordinating news releases, announcements, statements prepared for response to query, and information to be provided to neighbors with permission of WMCO management and the DOE/ORO Assistant to the Manager for Public Information.

5.0 GENERAL

5.1 All alarms and/or detection devices used to indicate spills, leaks, emissions, and abnormal discharges shall be tested and maintained on a regular basis in accordance with plant operational and maintenance standards. Each plant area shall be provided with a phone clearly marked "Emergency Reporting", or an alternative mode of communication to the Communications Officer for spill notification purposes.

5.2 All plant employees shall be familiar with the use of the applicable departmental and FMPC emergency procedures, and provide adequate and pertinent information when reporting an event. Such information, when provided, will save valuable time, prevent possible confusion, and aid in the proper classification of the event.

5.3 A flow chart (see Attachment A) is provided which shows the FMPC notification and response sequences for both DOE-ORO emergency and non-routine events (as classified by the FMPC Emergency Plan).

6.0 PROCEDURE

6.1 Reporting/Cleanup of a Spill Incident

<u>RESPONSIBILITY</u>	<u>ACTION</u>
EMPLOYEE	<p>A. Take steps, if possible, upon the discovery of a spill or leak to immediately control the situation, such as valving off or blocking the spill or leak.</p> <p>B. Promptly notify your Immediate Supervisor (or AEDO through the Communications Operator in supervisor's absence) of the magnitude, location, status, and type of material spilled, as well as any other pertinent information.</p>

NUMBER: FMPC - 503	REVISION: 0	ISSUE DATE: 10/25/88
-----------------------	----------------	-------------------------

6.0 PROCEDURES (Continued)6.1 Reporting/Cleanup of a Spill Incident (Continued)RESPONSIBILITYACTION

NOTE: Unless dangerous conditions exist, a personal observation should be made in order to provide adequate information for purposes of the notification.

LINE SUPERVISOR

- C. Determine the nature and magnitude of the incident.
- D. Report the incident to the AEDO through the Communications Operator or directly via radio or telephone, as soon as accurate information is available.
- E. Secure and isolate the affected area.
- F. Notify the plant or area manager of the event.

NOTE: The AEDO may be contacted as follows:
Through the Communications Operator at: Ext. 6295
Or Telephone: Ext. 6431
Radio: Unit 202
Cellular Phone: 535-1365 or 535-2197

LINE MANAGER

- G. Conduct a further evaluation to determine the extent and seriousness of the event.
- H. Provide updates of the initial evaluation of the event to the Communications Officer or the AEDO, as necessary.
- I. Notify the appropriate staff manager.
- J. Complete an Event Report form, including as much information as is available.
- K. Notify the AEDO of the event.

COMMUNICATIONS
OPERATOR

NUMBER:

FMPC - 503

REVISION:

0

ISSUE DATE:

10/25/88

6.0 PROCEDURES (Continued)6.1 Reporting/Cleanup of a Spill Incident (Continued)RESPONSIBILITY

AEDO

ACTION

- L. Log and classify the event following the "Duty Officer Guideline Procedure", and the FMPC Emergency Plan.
- M. Notify the EDO of a reportable non-routine or an unusual event. Activate the Emergency Operations Center (EOC) in an emergency event.
- N. Provide the necessary information to the Emergency Duty Officer (EDO) and designated Environmental Compliance (EC) Spill Reporting Advisor to determine if a potentially-reportable event must be reported to off-site regulatory agencies.
- O. Provide a Log Event number to the Line Supervisor to enter on the Minor Event Report form FMPC-QA-2689, if the event is to be documented as an MER.
- P. Direct OS&H to assign Industrial Hygiene & Safety and/or Radiological Safety technicians to perform monitoring and analyses of the spill, as necessary.
- Q. Activate the Emergency Response Team, if necessary, by contacting the Emergency Chief.

NUMBER: FMPC - 503	REVISION: 0	ISSUE DATE: 10/25/88
-----------------------	----------------	-------------------------

6.0 PROCEDURES (Continued)

6.1 Reporting/Cleanup of a Spill Incident (Continued)

RESPONSIBILITY

ACTION

EMERGENCY CHIEF

- R. Assemble and direct the Emergency Response Team (ERT) to the incident area in an emergency event, based on the information provided by the Communications Operator or the AEDO.
- S. Direct and coordinate the emergency field response, reporting to the AEDO.
- T. Supervise efforts to contain the spill, leak, or discharge in accordance with established requirements and OS&H procedures.

OS&H TECHNICIAN

- U. Sample and monitor the spilled substance in accordance with OS&H procedures.
- V. Report the monitoring results to the AEDO.

EDO

- W. Advise the AEDO and oversee the spill response.
- X. Contact the designated Environmental Compliance (EC) Spill Reporting Advisor, to determine if the event is reportable to regulatory agencies.

SPILL ADVISOR

- Y. Classify a spill as reportable to regulatory agencies, using guidelines established in RCECW2 "Regulatory Reporting Requirements for Spills" (Regulatory Compliance Guide), and information provided by the EDO or AEDO.
- Z. Advise the EDO of this determination.

NUMBER: FMPC - 503	REVISION: 0	ISSUE DATE: 10/25/88
-----------------------	----------------	-------------------------

6.0 PROCEDURES (Continued)6.1 Reporting/Cleanup of a Spill Incident (Continued)RESPONSIBILITYACTION

NOTE: In events when the reportability requirements are difficult to determine, the EDO and DOE Site Manager shall jointly make the reportability determination.

EDO	AA. Communicate the determination of reporting requirements for the spill event to the AEDO.
AEDO	AB. Communicate WMCO's determination and recommendation of spill event regulatory reporting requirements to DOE.
	AC. Confirm that DOE has made appropriate notifications to regulatory agencies.
	AD. Instruct the Communications Officer to notify local authorities, as directed by the EDO or Emergency Operations Center.
EDO	AE. Notify the DOE Site Manager, and WMCO President, Office of Counsel and Director of Public Affairs of a reportable event.
	AF. Assure that Westinghouse Corporate Environmental Affairs has been notified of a reportable event.
PUBLIC AFFAIRS	AG. Coordinate and issue any necessary news releases, announcements, statements prepared for response to query, and information to be provided to neighbors about the spill event.

NUMBER: FMPC - 503	REVISION: 0	ISSUE DATE: 10/25/88
-----------------------	----------------	-------------------------

6.0 PROCEDURES (Continued)6.1 Reporting/Cleanup of a Spill Incident (Continued)RESPONSIBILITYACTION

LINE MANAGER

- AH. Assure that spill cleanup efforts are conducted and completed in accordance with applicable procedures and regulatory requirements.
- AI. Complete a UOR in accordance with FMPC-703 "Unusual Occurrence Reporting System" within ten days after the occurrence of the event and follow-up action, if the event is to be documented as a UOR.

LINE SUPERVISOR

- AJ. Complete a preliminary MER in accordance with FMPC-704 "Minor Event Reporting System" prior to end of the shift when the incident occurred, if the event is to be documented as a MER.

STAFF MANAGER

- AK. Review MERs and UORs for compliance with applicable procedures.
- AL. Direct an investigation of any UOR to determine sequence of events causing the incident.
- AM. Initiate any necessary corrective action(s).
- AN. Assign written follow-up reporting for spills, as required by regulatory agencies, specified by the Environmental Compliance Spill Reporting Advisor.

BMP COMMITTEE

- AO. Convene meetings with WMCO management, when necessary, to determine resolution of problems and trends related to spills, leaks, and abnormal discharges.

NUMBER: FMPC - 503	REVISION: 0	ISSUE DATE:
-----------------------	----------------	-------------

6.0 PROCEDURES (Continued)

6.1 Reporting/Cleanup of a Spill Incident (Continued)

RESPONSIBILITY

BMP COMMITTEE (Continued)

ACTION

AP. Recommend corrective actions to management, as necessary, to prevent recurrence of similar events.

7.0 APPLICABLE DOCUMENTS

FMPC-2046, "FMPC Emergency Plan"

EP-1 "FMPC Offsite Emergency Warning System Procedure"

EP-2 "FMPC Joint Public Information Center procedure"

EP-3 "Duty Officer Guideline Procedures (Incident Notification)"

RCG-RCECW2 "Regulatory Reporting Requirements"

RCG-RCECSW2 "TSCA Spill Management"

FMPC-703, "Unusual Occurrence Reporting"

FMPC-704, "Minor Event Reporting System"

FMPC-2065, "Spill Prevention Control and Countermeasures Plan"

FMPC-SUB-011, "Best Management Practices Plan"

FMPC-210, "Best Management Practices Committee Charter"

8.0 FORMS USED

None

9.0 ATTACHMENTS

Attachment A - Spill Response and Notification Flow Chart

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 1 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: (SOF) W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

1.0 POLICY

Westinghouse Environmental Management Company of Ohio (WEMCO) shall maintain an Emergency Management Program at the Fernald Environmental Management Project (FEMP). The program shall be in compliance with all applicable orders, laws and regulations.

2.0 SCOPE

This document states the emergency management policy and establishes the responsibilities for the development, coordination, and direction of FEMP planning, preparedness, and readiness assurance for emergencies at the FEMP or requiring FEMP assistance.

3.0 DEFINITIONS

- 3.1 Assistant Emergency Duty Officer (AEDO) - The emergency management authority onsite when the Emergency Operations Center is not operational. Field Commander of the FEMP emergency response activities.
- 3.2 Emergency - Any significant deviation from planned or expected behavior or course of events which could endanger or adversely affect people, property, and/or the environment.
- 3.3 Emergency Duty Officer (EDO) - Trained senior management personnel responsible for management and oversight of FEMP emergency response activities until the FEMP Emergency Operations Center (EOC) is declared operational.
- 3.4 Emergency Management Program - A program for the development, coordination, and direction of emergency planning, preparedness, response, and readiness assurance.
- 3.5 Emergency Management Organization - The FEMP EOC Staff, Emergency Duty Officers, Assistant Emergency Duty Officers, and the Offsite Emergency Management Organization.
- 3.6 Emergency Operations Center (EOC) - The command and control center designed and equipped for directing and coordinating emergency response actions.
- 3.7 Emergency Planning - The development, preparation, and documentation of emergency plans and procedures and the determination of availability of resources to provide an effective response to an emergency.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 2 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

3.0 DEFINITIONS (cont.)

- 3.8 Emergency Preparedness - The training of personnel, acquisition of resources and facilities, and testing of emergency plans and procedures to ensure an effective response. Also the section of IRS&T with emergency management responsibilities.
- 3.9 Emergency Readiness Assurance - The actions taken to verify that WEMCO implements emergency management program policies and requirements as established by DOE Orders and state and federal regulations.
- 3.10 Emergency Response - The action(s) taken to cope with and minimize the effects of any emergency.
- 3.11 Emergency Response Team (ERT) - A group of professional and volunteer personnel trained for on-scene event mitigation including emergency response to fire, hazardous materials release, radiological release, and medical emergencies.
- 3.12 Hazardous Material - Any substance that is toxic, flammable, radioactive, corrosive, chemically reactive, unstable upon prolonged storage, or is identified as such in the Clean Water Act (CWA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the Superfund Amendments and Reauthorization Act (SARA), and applicable Department of Transportation regulations.
- 3.13 Joint Public Information Center (JPIC) - The WEMCO facility for receiving, coordinating, and disseminating emergency information to the media from the state, counties, and the FEMP.
- 3.14 Spill - An unplanned leaking, pumping, pouring, injecting, escaping, emitting, emptying, leaching, releasing, dumping, discharging, or disposing of hazardous substance, extremely hazardous substance, hazardous material, hazardous waste, toxic pollutant, hazardous air pollutant, radioactive substance, oil, or Toxic Substance Control Act chemical substance or mixture onto the land, into the water or into the air within or beyond the boundaries of the FEMP.

4.0 RESPONSIBILITIES

- 4.1 President, WEMCO shall be responsible for the following:
 - 4.1.1 Assuming overall authority for emergency management at the FEMP.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 3 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

4.0 RESPONSIBILITIES (cont.)

4.1.2 Acting as the Emergency Director (ED) or delegates an ED in his absence to assume emergency management responsibilities.

4.2 Manager, Emergency Preparedness shall be responsible for the following:

4.2.1 Emergency planning, preparedness, and readiness assurance.

4.2.2 Developing and maintaining the FEMP Emergency Plan in compliance with all applicable DOE Orders and state and federal regulations through an annual review of the plan and revisions as necessary.

4.2.3 Establishing the criteria for FEMP EOC Staff and Duty Officer training.

4.2.4 Developing and conducting EMO training.

4.2.5 Reviewing EMO training annually.

4.2.6 Developing and maintaining the sitewide building/area emergency procedure.

4.2.7 Reviewing the sitewide building emergency procedure biannually.

4.2.8 Ensuring that all FEMP employees are trained per the sitewide building emergency procedure.

4.2.9 Developing procedures, in accordance with federal criteria, for the operation and maintenance of the FEMP Outdoor Emergency Warning System.

4.2.10 Ensuring that corrective actions are taken when outdoor emergency warning system repairs are required and that reliability improvements are made.

4.2.11 Developing criteria for emergency response drills and exercises involving the Emergency Operations Center (EOC) Staff.

4.2.12 Coordinating and reviewing plans for conducting drills/exercises that involve EOC Staff.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 4 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

2343

4.0 RESPONSIBILITIES (cont.)

- 4.2.13 Developing procedures for the activation of the EOC and/or Mobile EOC.
- 4.2.14 Maintaining historical documentation of EOC/Mobile EOC activation.
- 4.2.15 Maintaining the EOC and Mobile EOC in a 24-hour state of operational readiness.
- 4.2.16 Testing and maintaining off-site Emergency Warning System reliability.
- 4.3 **Manager, Performance Assessment** shall be responsible for conducting audits to ensure overall WEMCO compliance with the requirements established by this procedure.
- 4.4 **Manager, Nuclear, Fire and Systems Safety** shall be responsible for the following:
 - 4.4.1 Forwarding new and/or updated Safety Analysis Reports for all facilities, operations and/or activities at the FEMP to the Emergency Preparedness Section for possible use in developing site accident scenarios.
 - 4.4.2 Testing and maintaining the Honeywell Detection and Alarm System reliability.
- 4.5 **Manager, Industrial Hygiene (IH)** shall be responsible for the following:
 - 4.5.1 Providing 24-hour, fully trained personnel to ensure IH capability for all credible emergencies at the FEMP.
 - 4.5.2 Providing and maintaining the necessary field response equipment and vehicles.
 - 4.5.3 Ensuring that surveillances of necessary emergency field response equipment are conducted to verify equipment operability and availability of adequate, detailed instruction in the use of the equipment.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 5 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

4.0 RESPONSIBILITIES (cont.)

4.6 Manager, Safety Engineering and Fire Services shall be responsible for the following:

- 4.6.1 Providing 24-hour, fully-trained field Emergency Response Team/Emergency Responder capability for all credible emergencies at the FEMP.
- 4.6.2 Providing and maintaining the necessary field response equipment and vehicles.
- 4.6.3 Ensuring that surveillances of necessary emergency field response equipment are conducted to verify equipment operability and availability of adequate, detailed instruction in the use of the equipment.
- 4.6.4 Developing and maintaining procedures for Emergency Response Team (ERT) and Emergency Responder operations.
- 4.6.5 Coordinating with Butler and Hamilton County emergency response forces to develop and maintain emergency procedures, mutual aid agreements, and training for fire fighting, emergency medical, rescue, and hazardous materials assistance for onsite and offsite emergencies.

4.7 Manager, Radiological Safety shall be responsible for the following:

- 4.7.1 Providing a Radiological Monitoring Team of fully-trained and equipped personnel that are available for immediate deployment both onsite and offsite.
- 4.7.2 Providing and maintaining the necessary field response equipment and vehicles.
- 4.7.3 Developing and maintaining procedures for the calibration, inspection, and operation of radiological emergency field response equipment.
- 4.7.4 Ensuring that radiological emergency field response equipment is frequently checked to verify equipment operability.
- 4.7.5 Ensuring the availability of adequate, detailed instructions on the use of equipment.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 6 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

4.0 RESPONSIBILITIES (cont.)

4.8 Manager, Medical Services shall be responsible for the following:

- 4.8.1 Ensuring that emergency medical response capability is maintained onsite 24 hours a day through Medical staff and ERT.
- 4.8.2 Maintaining emergency response capability through training and emergency procedures.
- 4.8.3 Providing medical facilities, emergency medical equipment, and supplies for response to credible emergencies at the FEMP.
- 4.8.4 Developing and maintaining agreements with local health care facilities to provide treatment for FEMP personnel injuries.

4.9 Manager, Environmental Compliance shall be responsible for the following:

- 4.9.1 Providing fully trained Release Evaluators to support prompt assessment and establish the regulatory reporting requirements for all spills, as requested by the AEDO/EDO.
- 4.9.2 Ensuring the timely submittal of documents necessary to satisfy reporting requirements in accordance with SARA, Title III.
- 4.9.3 Providing a meteorological tower that feeds data directly into the EOC for immediate assessment.

4.10 Manager, Safeguards and Security shall be responsible for the following:

- 4.10.1 Providing trained security personnel to assist in all operational emergencies for access control, traffic control, 24-hour communications/notification capability, and the maintenance of the site security posture.
- 4.10.2 Ensuring that security personnel are trained to respond to security incidents.
- 4.10.3 Developing memoranda of understanding with local, state, and federal law enforcement agencies.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE 2343 Page 7 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

4.0 RESPONSIBILITIES (cont.)

4.11 Manager, Public Affairs shall be responsible for the following:

- 4.11.1 Establishing and maintaining a proactive emergency public information program, including the Joint Public Information Center (JPIC), in a constant state of response readiness.
- 4.11.2 Developing and maintaining procedures for the timely and controlled release of information to the public for all emergency events at the FEMP.
- 4.11.3 Developing and maintaining procedures for the operation of the JPIC.
- 4.11.4 Conducting training for all JPIC staff on procedures and operations annually.
- 4.11.5 Participating in drills/exercises annually to reinforce training and ensure response capability.

4.12 Manager, Communication Services shall be responsible for the following:

- 4.12.1 Developing and maintaining the Vital Records Protection Procedure in compliance with applicable DOE Orders through periodic reviews of the procedure and revisions as necessary.
- 4.12.2 Coordinating placement of the sitewide Emergency Message System (EMS).
- 4.12.3 Maintaining EMS operability.

4.13 Manager, Centralized Training shall be responsible for ensuring that training required by responsible WEMCO managers (for compliance with applicable DOE Orders and, federal, state and local regulations) meets all site specific training requirements.

4.14 Manager, Information Systems shall be responsible for developing and maintaining emergency procedures to ensure protection of site-wide information systems during credible emergencies at the FEMP.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 8 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

4.0 RESPONSIBILITIES (cont.)

4.15 WEMCO Managers/Supervisors shall be responsible for the following:

- 4.15.1 Ensuring that departmental emergency procedures are developed and maintained to fully implement the emergency management program.
- 4.15.2 Training employees on emergency procedures.
- 4.15.3 Ensuring that subcontractors and visitors are informed of, and understand, their responsibilities when personnel accountability is directed.

5.0 GENERAL

Not Applicable

6.0 PROCEDURE

- 6.1 The specific responsibilities and procedures for WEMCO emergency management at the FEMP are contained in the following documents:
 - 6.1.1 The emergency management program description and general response guidance are contained in the "FMPC Emergency Plan," FMPC-2046. This plan includes hazard analysis information and details emergency planning, emergency preparedness, and emergency response. The plan also provides Emergency Action Level general response guidance.
 - 6.1.2 Written and verbal reporting and notifications required by the DOE (per Orders 5500.2B, "Emergency Categories, Classes, and Notification and Reporting Requirements" and 5000.3A, "Occurrence Reporting and Processing of Operations Information") to be completed within 24 hours of event discovery and categorization are described in OM-FMPC-0001, "Event Notification and Reporting".
 - 6.1.3 Instructions for accounting for personnel at the FEMP, including WEMCO employees, DOE employees, subcontractors/temporary employees, and visitors, are provided by "Personnel Accountability," OM-FMPC-0002. The procedure addresses in-place and rally point accountability and directs the initiation of search and rescue operations.

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 9 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

2343

7.0 APPLICABLE DOCUMENTS

7.1 Drivers

- 7.1.1 DOE 1280.1, "Memoranda of Understanding"
- 7.1.2 DOE 5000.3A, "Occurrence Reporting and Processing of Operations Information"
- 7.1.3 DOE 5480.8, "Contractor Occupational Medical Program"
- 7.1.4 DOE 5481.1B, "Safety Analysis and Review System"
- 7.1.5 DOE 5500.1B, "Emergency Management System"
- 7.1.6 DOE 5500.2B, "Emergency Categories, Classes, and Notification and Reporting Requirements"
- 7.1.7 DOE 5500.3A, "Planning and Preparedness for Operational Emergencies"
- 7.1.8 DOE 5500.4, "Public Affairs Policy and Planning Requirements for Emergencies"
- 7.1.9 DOE 5500.7A, "Vital Records Protection Program"
- 7.1.10 DOE 5500.10, "Emergency Readiness Assurance Program"
- 7.1.11 DOE 5632.1A, "Protection Program Operations"
- 7.1.12 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response"
- 7.1.13 NFPA 471, "Recommended Practice on Handling Hazardous Materials Incidents"
- 7.1.14 The Emergency Planning and Community Right-to-Know Act of 1986
- 7.1.15 FMPC-503, "Spill Incident Reporting and Cleanup"
- 7.1.16 FMPC-2065, "Spill Prevention Control and Countermeasures Plan"
- 7.1.17 FMPC RCRA Contingency Plan
- 7.1.18 RC EC W2, "Regulatory Compliance Guide for Spill Reporting Requirements"

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 10 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

2343

7.0 APPLICABLE DOCUMENTS (cont.)

7.2 References

7.2.1 FMPC-2046, "FMPC Emergency Plan"

7.2.2 OM-FMPC-0001, "Event Notification and Reporting"

7.2.3 OM-FMPC-0002, "Personnel Accountability"

8.0 FORMS USED

None

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT COMPANY OF OHIO SITE DOCUMENT PROGRAM		SITE POLICY AND PROCEDURE Page 11 of 11
Title: EMERGENCY MANAGEMENT		DOCUMENT NO: PP-0125 REVISION NO. 0
Authorization: W. H. Britton, President	Supersedes: FMPC-125, Dated 2-26-90, Rev. 0	Issue Date: 09-06-91

2343

RECORD OF ISSUE/REVISIONS

<u>DATE</u>	<u>REV. NO</u>	<u>DESCRIPTION AND AUTHORITY</u>
09-06-91	0	Procedure requirement to provide current requirements for Emergency Management per Request No. P91-168, initiated by S. Cornwell.

DEC 01 1988

2343

8406

U.S. Department of Energy

ORDER

Washington, D.C.

DOE 5820.2A

9-26-88

SUBJECT: RADIOACTIVE WASTE MANAGEMENT

1. PURPOSE. To establish policies, guidelines, and minimum requirements by which the Department of Energy (DOE) manages its radioactive and mixed waste and contaminated facilities.
2. CANCELLATION. DOE 5820.2, RADIOACTIVE WASTE MANAGEMENT OF 2-6-84.
3. SCOPE. The provisions of this Order apply to all DOE elements and, as required by law and/or contract and as implemented by the appropriate contracting officer, all DOE contractors and subcontractors performing work that involves management of waste containing radioactivity and/or radioactively contaminated facilities for DOE under the Atomic Energy Act of 1954, as amended (Public Law 83-703).
4. EXCLUSION. This Order does not apply to the management by the Department of commercially generated spent nuclear fuel or high-level radioactive waste, nor to the geologic disposal of high-level waste produced by the Department's activities and operations. Such materials are managed by the Office of Civilian Radioactive Waste Management under the requirements of the Nuclear Waste Policy Act of 1982, as amended (Public Law 97-425).
5. POLICY. Radioactive and mixed wastes shall be managed in a manner that assures protection of the health and safety of the public, DOE, and contractor employees, and the environment. The generation, treatment, storage, transportation, and/or disposal of radioactive wastes, and the other pollutants or hazardous substances they contain, shall be accomplished in a manner that minimizes the generation of such wastes across program office functions and complies with all applicable Federal, State, and local environmental, safety, and health laws and regulations and DOE requirements.
6. REFERENCES. (See Attachment 1.)
7. DEFINITIONS. (See Attachment 2.)
8. RESPONSIBILITIES.
 - a. Assistant Secretary for Defense Programs (DP-1) has authority for establishing policy for the management of DOE waste and assuring that DOE waste generated by operations and activities under DP-1 cognizance, or any other waste within the purview of DP-1, is managed according to the requirements of this Order. DP-1 also has general responsibility for assuring that

DISTRIBUTION:

PSI
All Departmental Elements

INITIATED BY:

123
Office of Defense Waste and
Transportation Management

9-26-88

DP-1 programmatic decisions include waste management considerations when appropriate. Specific responsibilities include:

- (1) Assuring the safe storage and disposal of all DOE waste other than that managed by NE-1 and RW-1;
 - (2) Implementing new and alternative technologies and processes to improve management of DP waste;
 - (3) Developing and operating the Waste Isolation Pilot Plant, a facility near Carlsbad, New Mexico, for conducting research and development to demonstrate the safe disposal of radioactive waste from defense activities and programs of the United States exempted from regulation by the Nuclear Regulatory Commission;
 - (4) Conducting research and development for DOE waste transportation systems and providing for safe, efficient, and economic transport of materials, pursuant to DOE 1540.1;
 - (5) Managing DP contaminated facilities, including those that are surplus to program needs;
 - (6) Assuring that the environmental, safety, health, transportation, quality assurance, unusual occurrence, construction project management, real estate management, and facility design requirements set forth in DOE Orders are implemented for DP-1 waste management programs; and
 - (7) Supporting the information needs of the Integrated Data Base program on defense program activities and jointly managing and funding the program in cooperation with NE-1 and RW-1 (see Attachment 1, page 3, paragraph 23).
- b. Director of Defense Waste and Transportation Management (DP-12) is charged with carrying out DP-1 waste management responsibilities for oversight of the waste management complex, for interpreting waste management policy, and for implementing the requirements of this Order for waste management facilities and operations funded by DP-12. Specific responsibilities include:
- (1) Management of storage, treatment, and disposal operations for defense waste;
 - (2) Managing defense contaminated facilities that are excess to programmatic needs;
 - (3) Reviewing and approving new or alternative waste management practices;

9-26-88

- (4) Conducting research and development for DOE waste transportation systems and providing for safe, efficient, and economic transport of materials, pursuant to DOE 1540.1;
 - (5) Conducting independent health, safety, and quality assurance audits of field waste management organizations, in cooperation with EH-1, to assess compliance with the requirements of this Order;
 - (6) Issuing, in consultation with EH-1, approval of exemptions from the requirements of this Order (paragraph 9) that are proposed by other Headquarters or field organizations;
 - (7) Issuing in consultation with EH-1 and Headquarters program organizations updated waste management guidance; and
 - (8) Approving documents, reports, and plans, as required by this Order, for DP programs and activities.
- c. Director of Civilian Radioactive Waste Management (RW-1) is responsible for selected research and development, siting, construction, operation, and management activities assigned to the Secretary of Energy by the Nuclear Waste Policy Act of 1982 (Public Law 97-425) for the interim storage and disposal of high-level waste and spent nuclear fuel. Specific responsibilities include the following:
- (1) The long-term care, in cooperation with NE-1, of closed commercial low-level waste sites transferred to DOE;
 - (2) Lead responsibility, in cooperation with NE-1 and DP-1, for the Integrated Data Base program (see Attachment 1, page 3, paragraph 23);
 - (3) Assurance that the requirements of DOE Orders are met for all waste management activities under RW-1 purview; and
 - (4) Independent health, safety, and quality assurance audits of field waste management organizations in cooperation with EH-1, to assess compliance with the requirements of this Order.
- d. Assistant Secretary for Nuclear Energy (NE-1) is responsible for assuring that waste generated by operations funded by NE-1 is managed according to the requirements of this Order and that NE-1 program decisions include waste management considerations, as appropriate. Specific responsibilities include:
- (1) Managing DOE wastes from NE-1 operations and activities, including the breeder reactor, space nuclear, naval reactor, and remedial action programs, as well as the Three Mile Island and West Valley projects;

9-26-88

- (2) Managing waste generated by DOE enrichment operations and disposed at sites located at the Oak Ridge, Portsmouth, and Paducah gaseous diffusion plants;
 - (3) Managing any greater than Class C low-level waste, as defined in Section 3(b)(1)(D) of Public Law 99-240, which may be accepted by the Department for disposal in cooperation with DP-1;
 - (4) Developing and implementing alternative technologies and processes to support storage and disposal of waste or spent fuel generated by NE-1 operations;
 - (5) Managing NE-1 contaminated facilities, including those that are surplus to program needs, and waste storage/disposal sites;
 - (6) Developing and implementing commercial applications for waste byproducts;
 - (7) Assuring that environmental, safety, health, transportation, quality assurance, unusual occurrence, construction project management, real estate management, and facility design requirements set forth in DOE Orders, are implemented for NE-1 waste management programs;
 - (8) Conducting independent health, safety, and quality assurance audits of field waste management operations in cooperation with EH-1 to assess compliance with the requirements of this Order; and
 - (9) Supporting the information needs of the Integrated Data Base program on civilian nuclear program activities in cooperation with DP-1 and RW-1 (see Attachment 1, page 3, paragraph 23).
- e. Assistant Secretary for Environment, Safety and Health (EH-1) is responsible for providing an independent overview of DOE radioactive waste management and decommissioning programs to determine compliance with DOE environment, safety, and health requirements and applicable Environmental Protection Agency (EPA) and state regulations. Specific responsibilities include:
- (1) Advising the Secretary of the status of Departmental compliance with the requirements of this Order and applicable provisions of DOE 5480.1B, and EH Orders.
 - (2) Conducting independent appraisals and audits of DOE waste management and decommissioning programs consistent with the requirements of DOE 5482.1B.
 - (3) Reviewing site Waste Management Plans and Decommissioning Project Plans with regard to compliance with DOE environment, safety, and health requirements.

9-26-88

- f. Director, Naval Nuclear Propulsion Program: Executive Order 12344, statutorily prescribed by PL 98-525 (42 USC 7158 note), establishes the responsibilities and authority of the Director, Naval Nuclear Propulsion Program (who is also the Deputy Assistant Secretary for Naval Reactors within the Department) over all facilities and activities which comprise the Program, a joint Navy-DOE organization. The policy principle promoted by these executive and legislative actions is cited in the Executive Order as "...preserving the basic structure, policies and practices developed for this Program in the past...". Accordingly, The Naval Propulsion Program is exempt from the provisions of this Order. The Director shall maintain an environmental protection program to assure compliance with applicable environmental statutes and regulations. The Director and EH-1 shall exchange information and cooperate as appropriate to facilitate exercise of their respective responsibility.
- g. Directors of other Headquarters Program Organizations are responsible for implementing the requirements of this Order for all DOE waste generated by their programs until it is transferred to a DOE or licensed storage/disposal site. For all contaminated facilities under their jurisdiction, they are responsible for assuring that their programmatic decisions include waste management considerations, as appropriate, and for implementing the requirements of other applicable DOE Orders for their waste management programs.
- h. Office of General Counsel (GC-1) provides legal advice to program organizations regarding DOE waste management and decommissioning activities involving DOE-owned and privately owned sites; renders legal opinion on DOE authority to undertake remedial action and other waste management activities; and renders legal opinions on, and concurs in, program actions to comply with the National Environmental Policy Act, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Superfund Amendments and Reauthorization Act, and other legal authorities in conjunction with proposed waste management and decommissioning activities.
- i. Assistant Secretary, Management and Administration (MA-1) is responsible for providing contractual and business advice to program organizations regarding DOE waste management activities, including use of DOE management and operating contractors in such activities.
- j. Heads of Field Organizations are responsible for all activities that affect the treatment, storage, or disposal of waste in facilities under their jurisdiction regardless of where the waste is generated. Heads of field organizations with treatment, storage or disposal facilities responsibility have the authority for establishing waste management requirements at that facility (e.g., setting waste acceptance criteria, waste certification, verification of contents of waste shipped or to be shipped, concurring in waste reduction plans). In addition, they are responsible for assuring that the day-to-day waste management and surplus facility

9-26-88

operations at their sites are conducted in compliance with the requirements of this Order and comply with all applicable Federal, State, and local statutes. Specific responsibilities include the following:

- (1) Preparing annual updates of the Waste Management Plans for all operations under their purview according to the format in the Waste Management Plan Outline, Chapter VI. These Plans shall be submitted in December of each year and be distributed to DP-12, EH-1, and other appropriate Headquarters organizations for review and comment.
- (2) Preparing supplements to this Order that identify specific detailed requirements for waste management practices and procedures conducted at their sites.
- (3) Overseeing fiscal responsibility for transporting waste and establishing of fees to recover the incremental costs for storage and disposal of DOE waste at their sites.
- (4) Establishing waste acceptance criteria and reviewing waste minimization plans of other field organization's facilities that generate radioactive, hazardous, or mixed waste that will be treated, stored or disposed of at facilities under their purview.
- (5) Auditing any waste generating organization that ships waste to their sites for treatment, storage, or disposal to assure compliance with established waste acceptance criteria.
- (6) Maintaining environmental, safety, and health programs for all DOE waste management operations under their purview.
- (7) Managing contaminated facilities under their purview according to the requirements of this Order and guidance provided by Headquarters program offices, providing program secretarial officers with the necessary characterizational and engineering data for contaminated facilities, and developing site-specific priorities, schedules, and costs for remedial actions.
- (8) Assuring that the requirements of the Order, applicable to contractors and subcontractors whose contracts fall within the scope of the Order, are properly reflected in the contract document.
- (9) Defining and assuring that required quality assurance activities are established and implemented for all waste management activities under their purview, pursuant to the requirements of DOE 5700.6B and reporting unusual occurrences pursuant to the requirements of DOE 5000.3.
- (10) Providing information, as requested, to the Integrated Data Base Program, Oak Ridge National Laboratory, for all types of waste under

9-26-88

their purview, including: high-level waste; transuranic waste; low-level waste; naturally occurring and accelerator produced radioactive material; mixed waste; and wastes from decommissioning activities (see Attachment 1, page 3, paragraph 23).

- k. Manager of Albuquerque Operations Office is responsible, in addition to the responsibilities identified in paragraph 8j, for use of certified packaging, standard containers, transportation, waste acceptance criteria, and all other aspects related to transuranic waste emplacement at the Waste Isolation Pilot Plant. Within the Albuquerque Operations Office, a standing committee, the Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee, is responsible for review, audit, and approval of generator transuranic waste certification programs and activities. The Manager of the Albuquerque Operations Office, as Head of the Waste Isolation Pilot Plant project office, also has responsibility for the design, construction, technology development, and operational activities leading to permanent isolation of transuranic waste from the biosphere.
9. EXEMPTIONS. Exemptions from the requirements of this Order may be granted only with the approval of DP-12 in consultation with EH-1. New or alternate waste management practices that are based on appropriate documented safety, health protection, and economic analyses may be proposed by field organizations and adopted with the approval of DP-12 and EH-1.
10. IMPLEMENTING PROCEDURES AND REQUIREMENTS. Within 6 months of the date of issuance of this Order, Heads of Field Elements shall prepare and submit to appropriate Headquarters program organizations an implementation plan describing schedules, costs, and quality assurance activities for compliance with the requirements of this Order with copies to EH-1 for review and comment. Specific guidance for the plan will be issued by DP-12 under separate cover. Thereafter, the status of compliance with the requirements of this Order shall be reported to the appropriate Headquarters program organization in the annual update of the Waste Management Plans.
11. CLEARANCE UNDER THE PAPERWORK REDUCTION ACT OF 1980. This directive has been determined to contain information collections under the provisions of 5 CFR 1320, "Controlling Paperwork Burdens on the Public." The Office of Management and Budget (OMB) has issued a clearance to the Department (OMB No. 1910-0900) for these information collections.

BY ORDER OF THE SECRETARY OF ENERGY :



LAWRENCE F. DAVENPORT
Assistant Secretary
Management and Administration

9-26-88

REFERENCES

1. DOE 1332.1A, UNIFORM REPORTING SYSTEM, of 10-15-85, establishes the content and format of plans and reports to be obtained from the Department's contractors and stipulated as a contract requirement.
2. DOE 1430.1A, MANAGEMENT OF THE DEPARTMENT'S SCIENTIFIC AND TECHNICAL INFORMATION, of 9-10-86, which establishes the policy that scientific and technical information developed during work supported by DOE shall be promptly and fully reported to the Technical Information Center (MA-28), located in Oak Ridge, Tennessee, for inclusion in the Department's information data base.
3. DOE 1540.1, MATERIALS TRANSPORTATION AND TRAFFIC MANAGEMENT of 5-3-82, establishes the Department's policies for management of materials transportation activities.
4. DOE 1540.2, HAZARDOUS MATERIAL PACKAGING FOR TRANSPORTATION ADMINISTRATIVE PROCEDURES of 9-30-86, establishes administrative procedures for the certification and use of radioactive and other hazardous materials packaging by the Department of Energy.
5. DOE 2110.1, PRICING OF DEPARTMENTAL MATERIALS AND SERVICES of 2-16-84, which establishes the Department's policy for establishing prices and charges for materials and services provided to outside persons and organizations.
6. DOE 4300.1B, REAL PROPERTY AND SITE DEVELOPMENT PLANNING of 7-1-87, establishes Department policies and procedures for planning the development and utilization of sites and their facilities and for the acquisition, use, inventory, and disposal of real property or interests therein.
7. DOE 4700.1, PROJECT MANAGEMENT SYSTEM, of 3-6-87, establishes the DOE Project Management System (PMS), provides implementing instructions, formats and procedures and sets forth requirements which govern the development, approval and execution of DOE's outlay program acquisition as embodied in the PMS.
8. DOE 5000.3, UNUSUAL OCCURRENCE REPORTING SYSTEM of 11-7-84, establishes the Department's policy and provides instructions for reporting, analyzing, and disseminating information on programmatically significant events.
9. DOE 5400.2, ENVIRONMENTAL COMPLIANCE ISSUE COORDINATION, of 8-13-87, establishes DOE requirements for coordination of significant environmental compliance issues.
10. DOE 5440.1C, NATIONAL ENVIRONMENTAL POLICY ACT of 4-9-85, establishes the Department's policy for implementation of the National Environmental Policy Act of 1969 (Public Law 91-190).

9-26-88

11. DOE 5480.1B, ENVIRONMENTAL SAFETY, AND HEALTH PROGRAM FOR DEPARTMENT OF ENERGY OPERATIONS of 9-23-86, establishes an overall framework of program requirements for safety, environmental, and health protection, including criteria for radiation exposure and radioactive effluent releases for operating facilities and sites.
12. DOE 5480.3, SAFETY REQUIREMENTS FOR THE PACKAGING AND TRANSPORTATION OF HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES AND HAZARDOUS WASTES, of 7-9-85, establishes requirements for the packaging and transportation of hazardous materials, hazardous substances, and hazardous wastes.
13. DOE 5481.1B, SAFETY ANALYSIS AND REVIEW SYSTEM of 9-23-86, establishes uniform requirements for the preparation and review of safety analyses of DOE operations.
14. DOE 5482.1B, ENVIRONMENT, SAFETY AND HEALTH APPRAISAL PROGRAM of 9-23-86, establishes an environment safety and health appraisal program for DOE.
15. DOE 5484.1, ENVIRONMENTAL, SAFETY, AND HEALTH PROTECTION INFORMATION REPORTING REQUIREMENTS of 2-24-81, establishes requirements and practices for reporting environmental, health, and safety information for DOE operations.
16. DOE 5700.6B, QUALITY ASSURANCE of 9-23-86, sets forth principles and assigns responsibilities for establishing, implementing, and maintaining programs of plans and actions to assure quality achievement in the Department's programs.
17. DOE 6430.1, GENERAL DESIGN CRITERIA of 12-12-83, establishes general design criteria for use in acquisition of the Department's facilities and to establish responsibilities and authorities for the development and maintenance of those criteria.
18. WIPP-DOE-069, rev. 2, of 9-85, "Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant" of 9-81, as updated, specifies basic requirements for disposal of contact-handled and remote-handled transuranic waste at the Waste Isolation Pilot Plant. Copies of this and other DOE Waste Isolation Pilot Plant reports may be obtained from the Albuquerque Operations Office.
19. WIPP-DOE-120, rev. 1, of 1-83, "Quality Assurance" establishes the Quality Assurance requirements to ensure that each site's transuranic waste certification program will perform satisfactorily.
20. WIPP-DOE-157 rev. 1, of 9-85, "Data Package Format for Certified Transuranic Waste for the Waste Isolation Pilot Plant" specifies the arrangement of data which are required to be reported to the Waste Isolation Pilot Plant for transuranic waste to be received.

9-26-88

21. DOE/LLW-63T of 9-87, "Guidance for Conduct of Waste Management Systems Performance Assessment" provides information on meeting the systems performance requirement of Chapter III 3b(2) of DOE 5820.2A.
22. DOE-JIO-025 of 9-87, "Comprehensive Implementation Plan for the DOE Defense Buried Transuranic-Contaminated Waste Program," describes long term management alternatives for all DOE sites with buried transuranic waste.
23. DOE/RW-0006, rev. 3, "Integrated Data Base for 1987: Spent Fuel and Radioactive Waste Inventories, Projections, and Characteristics" of 9-87, with annual updates, summarizes data in the Integrated Data Base program on all domestic spent fuel and radioactive waste. Copies may be obtained from the Office of Nuclear Energy, Germantown, or the Technical Information Center, Oak Ridge.
24. DOE/DP/0020/1 "An Evaluation of Commercial Respository Capacity for the Disposal of Defense High Level Waste," of 6-85, evaluates the use of civilian repository capacity for the disposal of high level waste resulting from Defense activities, and provided to the President as one analytical input for his evaluation as required under the Nuclear Waste Policy Act.
25. Nuclear Waste Policy Act of 1982, as amended, (Public Law 97-425) provides for the development of repositories for the disposal of high-level waste and spent nuclear fuel.
26. Uranium Mill Tailings Radiation Control Act of 1978 (Pubic Law 95-604) establishes national policy for control of uranium mill tailings.
27. Energy Reorganization Act of 1974 (Public Law 93-438), in Section 202, assigns licensing and related regulatory authority to the Nuclear Regulatory Commission for facilities authorized for the express purpose of long-term storage of defense high-level waste.
28. Department of Energy National Security and Military Applications of Nuclear Energy Authorization Act of 1980 (Public Law 96-164), Section 213(a) authorizes the Waste Isolation Pilot Plant.
29. Low-Level Radioactive Waste Policy Amendments Act of 1985 (Public Law 99-240) makes the Federal Government responsible for disposal of commercially generated greater than class C waste as defined in Section 3(b)(1)(D) of the Act.
30. Resource Conservation and Recovery Act of 1976, as amended, (Public Law 94-580) establishes safe and environmentally acceptable management practices for solid wastes.

9-26-88

31. Comprehensive Environment Response, Compensation, and Liability Act of 1980, as amended, (Public Law 96-510) to provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment, and the cleanup of inactive hazardous waste disposal sites.
32. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-270) provides for a fund (Superfund) which may be utilized by the Environmental Protection Agency, State, and local governments to clean up hazardous waste sites listed on the National Priorities List.
33. National Environmental Policy Act of 1969 (Public Law 91-190) requires the preparation of a statement which considers environmental impacts, alternatives, and resource commitments for any major Federal action that significantly affects the quality of the human environment.
34. Title 5 CFR 1320, Controlling Paperwork Burdens on the Public serves as the implementing regulation for Public Law 96-511, Paperwork Reduction Act of 1980 and directs the identification and clearance of information collections levied on the public, including contractors, State and local government units, and persons who perform services for the Department on an individual basis.
35. Title 10 CFR Part 60, of 2-25-81, Disposal of High-Level Wastes in Geologic Repositories, prescribes rules governing the licensing of the Department of Energy to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area.
36. Title 10 CFR Part 61, of 12-27-82, Licensing Requirements for Land Disposal of Radioactive Waste, establishes technical requirements for the land disposal of commercial low-level waste including site selection, site design, and facility operation and closure.
37. Title 10 CFR Part 71, of 8-5-83, Packaging and Transportation of Radioactive Material, establishes (1) requirements for packaging, preparation for shipment, and transportation of licensed material and (2) procedures and standards for NRC approval of packaging and shipping procedures for fissile material and for a quantity of other licensed material in excess of a Type A quantity.
38. Title 10 CFR Part 962, of 5-1-87, Radioactive Waste; Byproduct Material establishes the policy that all DOE radioactive waste which is hazardous under the Resource Conservation and Recovery Act will be subject to regulation under both the Resource Conservation and Recovery Act and Atomic Energy Act.
39. Title 40 CFR Part 61, of 7-1-87 National Emission Standards for Hazardous Air Pollutants, establishes standards for atmospheric emissions of hazardous air pollutants and radionuclides.

9-26-88

40. Title 40 CFR Part 191, of 9-19-85, Environmental Radioactive Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and transuranic Radioactive Waste, establishes radiation protection standards governing the management and storage of spent nuclear fuel or high-level or transuranic wastes at any disposal facility operated by DOE.
41. Title 40 CFR Part 192, of 1-5-83, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, concerns the control of residual radioactive material at designated processing or disposal sites.
42. Title 40 CFR Part 261, of 5-19-80, Identification and Listing of Hazardous Waste identifies those solid wastes that are subject to regulation as hazardous waste.
43. Title 40 CFR 262, of 5-19-80, Standards Applicable to Generators of Hazardous Waste, establishes manufacturing, packaging, labeling, record keeping, and reporting requirements for generators of hazardous waste.
44. Title 40 CFR Part 263, of 5-19-80, Standards Applicable to Transporters of Hazardous Waste, establishes manufacturing, record keeping, spill reporting and cleanup requirements for transporters of hazardous waste.
45. Title 40 CFR Part 264, of 5-19-80, Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, establishes minimum national standards defining the acceptable management of hazardous waste.
46. Title 40 CFR Part 265, of 5-19-80, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, establishes minimum national standards that define the acceptable management of hazardous waste during the period of interim status and until certification of final closure.
47. Title 49 CFR Parts 100-178, of 10-1-86, Other Regulations Relating to Transportation: Chapter I-Research and Special Programs Administration, Department of Transportation, prescribes the requirements of the DOT governing the transportation of hazardous material and the manufacture and testing of packaging and containers.
48. ANSI/ASME NQA-1 "American National Standards Institute/American Society of Mechanical Engineers Nuclear Quality Assurance-1," sets forth requirements for the establishment and execution of quality assurance programs for the design, construction, operation, and decommissioning of nuclear facilities.
49. Atomic Energy Act of 1954, as amended 42 U.S.C. § § 2011-2292 (1982) which authorizes and directs the Atomic Energy Commission to produce special nuclear material in its own facilities to produce atomic weapons or atomic weapons parts and to research and develop military applications of atomic energy.

50. Nuclear Waste Policy Amendments Act of 1987 (part of the Budget Reconciliation Act for FY 1988 Public Law 100-203), of December 22, 1987, streamlines and focuses the high level waste management program established by the Nuclear Waste Policy Act.

9-26-88

DEFINITIONS

1. Below Regulatory Concern. A definable amount of low-level waste that can be deregulated with minimal risk to the public.
2. Buffer Zone. The smallest region beyond the disposal unit that is required as controlled space for monitoring and for taking mitigative measures, as may be required.
3. Byproduct Material. (Attachment 1, pages 4 and 5, paragraphs 38 and 49.)
 - a. Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident or to the process of producing or utilizing special nuclear material. For purposes of determining the applicability of the Resource Conservation and Recovery Act to any radioactive waste, the term "any radioactive material" refers only to the actual radionuclides dispersed or suspended in the waste substance. The nonradioactive hazardous waste component of the waste substance will be subject to regulation under the Resource Conservation and Recovery Act.
 - b. The tailings or waste produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. Ore bodies depleted by uranium solution extraction operations and which remain underground do not constitute "byproduct material."
4. Certified Waste. Waste that has been confirmed to comply with disposal site waste acceptance criteria (e.g., the Waste Isolation Pilot Plant-Waste Acceptance Criteria for transuranic waste) under an approved certification program.
5. Closure.
 - a. Operational Closure. Those actions that are taken upon completion of operations to prepare the disposal site or disposal unit for custodial care, (e.g., addition of cover, grading, drainage, erosion control).
 - b. Final Site Closure: Those actions that are taken as part of a formal decommissioning or remedial action plan, the purpose of which is to achieve long-term stability of the disposal site and to eliminate to the extent practical the need for active maintenance so that only surveillance, monitoring, and minor custodial care are required.
6. Contact-Handled Transuranic Waste. Packaged transuranic waste whose external surface dose rate does not exceed 200 mrem per hour.
7. Decommissioning. Actions taken to reduce the potential health and safety impacts of DOE contaminated facilities, including activities to stabilize, reduce, or remove radioactive materials or to demolish the facilities.

9-26-88

8. Decontamination. The removal of radioactive contamination from facilities, equipment, or soils by washing, heating, chemical or electrochemical action, mechanical cleaning, or other techniques.
9. Department of Energy Waste. Radioactive waste generated by activities of the Department (or its predecessors), waste for which the Department is responsible under law or contract, or other waste for which the Department is responsible. Such waste may be referred to as DOE waste.
10. Disposal. Emplacement of waste in a manner that assures isolation from the biosphere for the foreseeable future with no intent of retrieval and that requires deliberate action to regain access to the waste.
11. Disposal Facility. The land, structures, and equipment used for the disposal of waste.
12. Disposal Site. That portion of a disposal facility which is used to dispose of waste. For low-level waste, it consists of disposal units and a buffer zone.
13. Disposal Unit. A discrete portion (e.g., a pit, trench, tumulus, vault, or bunker) of the disposal site into which waste is placed for disposal.
14. DOE Reservation. A location consisting of a DOE-controlled land area including DOE-owned facilities (e.g., the Oak Ridge Reservation) in some cases referred to as a Site, such as the Nevada Test Site, the Hanford Site; or as a Laboratory, such as the Idaho National Engineering Laboratory; or as a Plant, such as Rocky Flats Plant; or as a Center, such as the Feed Materials Production Center.
15. Free Liquids. Liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.
16. Engineered Barrier. A man-made structure or device that is intended to improve the performance of a disposal facility.
17. Hazardous Wastes. Those wastes that are designated hazardous by EPA regulations (40 CFR 261).
18. High-Level Waste. The highly radioactive waste material that results from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid waste derived from the liquid, that contains a combination of transuranic waste and fission products in concentrations requiring permanent isolation.
19. Institutional Control. A period of time, assumed to be about 100 years, during which human institutions continue to control waste management facilities.

9-26-88

20. Low-Level Waste. Waste that contains radioactivity and is not classified as high-level waste, transuranic waste, or spent nuclear fuel or 11e(2) byproduct material as defined by this Order. Test specimens of fissionable material irradiated for research and development only, and not for the production of power or plutonium, may be classified as low-level waste, provided the concentration of transuranic is less than 100 nCi/g.
21. Monitoring. The making of observations and measurements to provide data to evaluate the performance of a waste management operation.
22. Mixed Waste. Waste containing both radioactive and hazardous components as defined by the Atomic Energy Act and the Resource Conservation and Recovery Act, respectively.
23. Natural Barrier. The physical, chemical, and hydrological characteristics of the geological environment at the disposal site that, individually and collectively, act to retard or preclude waste migration.
24. Naturally Occurring and Accelerator Produced Radioactive Material. Any radioactive material that can be considered naturally occurring and is not source, special nuclear, or byproduct material or that is produced in a charged particle accelerator.
25. Near Surface Disposal. Disposal in the upper 30 meters of the earth's surface, (e.g. shallow land burial).
26. Performance Assessment. A systematic analysis of the potential risks posed by waste management systems to the public and environment, and a comparison of those risks to established performance objectives.
27. Pyrophoric Material. A material which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation, handling or disposal hazard.
28. Quality Assurance. All those planned and systematic actions necessary to provide adequate confidence that a facility, structure, system, or component will perform satisfactorily and safely in service. Quality assurance includes quality control, which comprises all those actions necessary to control and verify the features and characteristics of a material, process, product, or service to specified requirements.
29. Radioactive Waste. Solid, liquid, or gaseous material that contains radio-nuclides regulated under the Atomic Energy Act of 1954, as amended and of negligible economic value considering costs of recovery.
30. Remedial Action. Activities conducted at DOE facilities to reduce potential risks to people and/or harm to the environment from radioactive and/or hazardous substance contamination.

9-26-88

31. Remote-Handled Transuranic Waste. Packaged transuranic waste whose external surface dose rate exceeds 200 mrem per hour. Test specimens of fissionable material irradiated for research and development purposes only and not for the production of power or plutonium may be classified as remote-handled transuranic waste.
32. Repository. A facility for the permanent deep geologic disposal of High Level or Transuranic Waste.
33. Spent Nuclear Fuel. Fuel that has been withdrawn from a nuclear reactor following irradiation, but that has not been reprocessed to remove its constituent elements.
34. Storage. Retrievable retention of waste pending disposal.
35. Storage Facility. Land area, structures, and equipment used for the storage of waste.
36. Storage Unit. A discrete part of the storage facility in which waste is stored.
37. Surplus Facility. Any facility or site (including equipment) that has no identified or planned programmatic use and is contaminated with radioactivity to levels that require controlled access.
38. Transuranium Radionuclide. Any radionuclide having an atomic number greater than 92.
39. Transuranic Waste. Without regard to source or form, waste that is contaminated with alpha-emitting transuranium radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of assay. Heads of Field Elements can determine that other alpha contaminated wastes, peculiar to a specific site, must be managed as transuranic waste.
40. Treatment. Any method, technique, or process designed to change the physical or chemical character of waste to render it less hazardous, safer to transport, store or dispose of, or reduced in volume.
41. Treatment Facility. The specific area of land, structures, and equipment dedicated to waste treatment and related activities.
42. Waste Container. A receptacle for waste, including any liner or shielding material that is intended to accompany the waste in disposal.
43. Waste Management. The planning, coordination, and direction of those functions related to generation, handling, treatment, storage, transportation, and disposal of waste, as well as associated surveillance and maintenance activities.

9-26-88

44. Waste Package. The waste, waste container, and any absorbent that are intended for disposal as a unit. In the case of surface contaminated, damaged, leaking, or breached waste packages, any overpack shall be considered the waste container, and the original container shall be considered part of the waste.

9-26-88

TABLE OF CONTENTS

	<u>Page</u>
<u>CHAPTER I HIGH-LEVEL WASTE</u>	
1. PURPOSE	I-1
2. POLICY	I-1
3. REQUIREMENTS	I-1
a. Design	I-1
b. Storage Operations - Doubly Contained Systems	I-2
c. Storage Operations - Singly Contained Tank Systems	I-6
d. Disposal	I-7
<u>CHAPTER II MANAGEMENT OF TRANSURANIC WASTE</u>	
1. PURPOSE	II-1
2. POLICY	II-1
3. REQUIREMENTS	II-1
a. Waste Classification	II-1
b. Transuranic Waste Generation and Treatment	II-2
c. Transuranic Waste Certification	II-3
d. Transuranic Waste Packaging	II-4
e. Temporary Storage at Generating Sites	II-4
f. Transportation/Shipping to the Waste Isolation Pilot Plant	II-5
g. Interim Storage	II-6
h. Waste Isolation Pilot Plant	II-9
i. Buried Transuranic-Contaminated Waste	II-10
j. Quality Assurance	II-11
<u>CHAPTER III MANAGEMENT OF LOW-LEVEL WASTE</u>	
1. PURPOSE	III-1
2. POLICY	III-1
3. REQUIREMENTS	III-1
a. Performance Objectives	III-1
b. Performance Assessment	III-2
c. Waste Generation	III-2
d. Waste Characterization	III-3
e. Waste Acceptance Criteria	III-3
f. Waste Treatment	III-4
g. Shipment	III-5
h. Long Term Storage	III-5
i. Disposal	III-6

TABLE OF CONTENTS (CONTINUED)

	<u>Page</u>
j. Disposal Site Closure/Post Closure	III-9
k. Environmental Monitoring	III-9
l. Quality Assurance	III-10
m. Records and Reports	III-10

CHAPTER IV MANAGEMENT OF WASTE CONTAINING NATURALLY OCCURRING AND ACCELERATOR PRODUCED RADIOACTIVE MATERIAL

1. PURPOSE	IV-1
2. POLICY.	IV-1
3. REQUIREMENTS.	IV-1
a. Waste Management	IV-1
b. Quality Assurance	IV-2

CHAPTER V DECOMMISSIONING OF RADIOACTIVELY CONTAMINATED FACILITIES

1. PURPOSE	V-1
2. POLICY.	V-1
3. REQUIREMENTS	V-1
a. General	V-1
b. Facility Design	V-2
c. Post-Operational Activities	V-2
d. Decommissioning Project Activities	V-3
e. Quality Assurance	V-6

CHAPTER VI WASTE MANAGEMENT PLAN OUTLINE

1. PURPOSE	VI-1
2. DISCUSSION.	VI-1
3. FORMAT FOR WASTE MANAGEMENT PLANS	VI-1
a. Executive Summary	VI-1
b. General Site Information	VI-2
c. Radioactive and Mixed Waste Management	VI-2
d. Hazardous Waste Management (DP Facilities)	VI-3
e. Schedule and Cost Summary	VI-4
f. Environmental Monitoring Programs	VI-4
h. Related Subjects	VI-4
ATTACHMENT VI-I - WASTE MANAGEMENT DOCUMENTATION REQUIREMENTS	VI-5

9-26-88

CHAPTER I

HIGH-LEVEL WASTE

1. PURPOSE. To establish policies and guidelines for managing the Department of Energy's (DOE) high-level waste and any other materials which, because of their highly radioactive nature (level of health risk, longevity of health risk and thermal activity), require similar handling. (Unless demonstrated to the contrary, all high-level waste shall be considered to be radioactive mixed waste and subject to the requirements of the Atomic Energy Act, as amended, and the Resource Conservation and Recovery Act.)
2. POLICY. All high-level waste generated by DOE operations shall be safely stored, treated, and disposed of according to requirements set forth in this Order. Storage operations shall comply with applicable EPA standards and EPA/State regulations. Geologic disposal shall comply with both Nuclear Regulatory Commission regulations and EPA standards.
3. REQUIREMENTS.
 - a. Design.
 - (1) Requirements for New Facilities.
 - (a) Design objectives for new facilities will assure protection of the public and operating personnel from hazards associated with normal high-level waste operations, accident conditions, and the effects of natural phenomena. Other objectives are compliance with DOE policies regarding nuclear safety, quality assurance, fire protection, pollution control, and safeguards and security protection for high-level waste and protection of essential operations from the effects of potential accidents.
 - (b) Designs for new storage and treatment facilities shall meet the requirements of DOE 6430.1, applicable EH Orders and 40 CFR 264.
 - (c) Designs for new storage facilities shall incorporate features to facilitate retrieval capability.
 - (2) Design Review for Existing Facilities. Uniform requirements for the preparation of safety analysis reports for high-level waste operations, detailed in DOE 5481.1B, include the review of existing operational facilities based on current technical criteria. When hazards are identified that should be eliminated, controlled, or mitigated, appropriate upgrading, actions in accordance with paragraph 3a(1) above, shall be identified and implemented according to the requirements of DOE 5481.1B.

9-26-88

b. Storage Operations - Doubly Contained Systems.

(1) Waste Characterization.

- (a) Liquid and solidified high-level waste shall be characterized consistent with radiation protection requirements to determine its hazardous components, per 40 CFR 261 and 40 CFR 264. Characterization shall satisfy requirements of paragraph 3b(1)(b) and may reflect knowledge of waste generating processes, laboratory testing results, and/or the results of periodic sampling and analysis. Examples of required information are chemical composition, physical properties, radionuclide concentrations, and pH.
- (b) Waste characteristics and compatibility information shall be documented in a safety analysis report (see DOE 5481.1B) and be used as a basis for designing new facilities.

(2) Storage and Transfer Operations.

- (a) All new high-level waste handling, transfer, and storage facilities (e.g., tanks, bins, pipelines, and capsules) shall be doubly contained.
- (b) Singly contained pipelines may be used routinely for liquid waste that has a total radioactivity concentration of less than 0.05Ci/gal (4.9×10^{11} Bq/m³). They may be used on a temporary basis for higher activity waste, if appropriate design and administrative controls are in place to mitigate adverse effects from a pipeline failure.
- (c) Leaking waste storage systems shall not be used to receive waste unless secondary containment is maintained (e.g., liquid level maintained below leak point) and it can be shown with the support of formal documentation (e.g., Safety Analysis Reports, Operational Safety Requirements, Operating Standards) that temporary operation can be performed without releasing radioactive liquid to the environment.
- (d) Secondary containment systems shall be capable of containing liquids that leak into them from the primary system and shall be equipped with transfer capability to retrieve the leaked liquid. Secondary containment systems for solidified high-level waste shall provide for physical isolation of the waste from the environment.
- (e) To the extent practical, waste shall be segregated by type (sludge, salt, high activity, and low activity) to make accessibility for future processing easier.

9-26-88

- (f) Where required, ventilation and filtration systems shall be provided to maintain radionuclide releases within the guidelines specified in DOE 5481.1B and applicable EH Orders. Ventilation systems shall be provided where the possibility exists for generating flammable and explosive mixtures of gases (e.g., hydrogen/air or organics/air).
 - (g) Facilities using cathodic corrosion protection systems shall include engineered features that protect against abnormal conditions such as stray currents or system failure. The cathodic protection systems shall be calibrated annually, and all sources of impressed current shall be inspected and/or tested at least every other month.
 - (h) Engineering controls shall be incorporated to provide liquid volume inventory data and to prevent spills, leaks, and overflows from tanks or containment systems. Examples are level-sensing devices, liquid level alarms, and maintenance of sufficient freeboard. The high-level waste shall be stored at pressures lower than those of ancillary systems (e.g., cooling water).
 - (i) Nuclear criticality safety considerations and controls shall be evaluated for normal operations and, before any significant operational changes are made, to protect against an uncontrolled nuclear criticality incident (e.g., dissolution of sludges for removal from tank).
 - (j) Each facility shall utilize remote maintenance features and other appropriate techniques to minimize personnel radiation exposure in accordance with DOE 5481.1B.
 - (k) Upon loss and subsequent recovery of normal electrical power, high-level waste transfer equipment shall not have the capability to restart without active operator action.
- (3) Monitoring, Surveillance, and Leak Detection.
- (a) Monitoring and leak detection capability shall be incorporated in the engineering systems (e.g., liquid level sensing devices and alarms for high-level waste liquid systems) to provide rapid identification of failed containment, and measurement of abnormal temperatures. The following, at a minimum, shall be monitored: temperature; pressure; radioactivity in ventilation exhaust; and liquid effluent streams associated with high-level waste facilities. Where the possibility exists for the generation of flammable and explosive mixtures of gases, monitoring shall be conducted. For facilities storing liquid high-level waste, the following should also be monitored: liquid levels; sludge volume; tank chemistry; condensate and cooling water.

9-26-88

- (b) Leak detection systems (e.g., conductivity probes) shall be designed and operated so that they will detect the failure of the primary containment boundary, the occurrence of waste release, or accumulated liquid in the secondary containment system.
- (c) A method for periodically assessing waste storage system integrity (e.g., coupons for corrosion testing, photographic and periscopic inspections, leak detectors, liquid level devices) shall be established, documented, and reported as required in the Waste Management Plan.
- (d) Electrical monitoring and leak detection devices essential to safe operations shall be provided with backup power, as appropriate, to ensure operability under emergency conditions.
- (e) Surface water systems associated with the high-level waste storage area shall be monitored according to applicable National Pollution Discharge Elimination System permits and EH Order requirements.
- (f) A system of ground water or vadose zone monitoring wells meeting the Resource Conservation and Recovery Act requirements per 40 CFR 264 shall be installed, as a minimum, around clusters of liquid waste storage tanks.

(4) Contingency Actions.

- (a) A tank or secondary containment system from which there has been a leak or a spill to the surrounding soil, or which is otherwise unfit for use, shall be removed from service until conditions can be evaluated fully.
- (b) Upon detection of released radioactive materials, steps shall be taken to prevent further migration of the release to soil or surface water. Major contamination in the soil shall be removed or stabilized unless compliance with this requirement would cause greater harm to human health or the environment.
- (c) If a release results from a spill and the integrity of the system is not damaged, the system may be returned to service as soon as action to correct the condition is completed.
- (d) For emergency situations involving liquid high-level waste, spare capacity with adequate heat dissipation capability shall be maintained to receive the largest volume of liquid contained in any one tank. Adequate transfer pipelines also shall be maintained in operational condition. Interconnected tank farms with adequate transfer capabilities and spare capacity may be considered as a single tank farm for purposes of this requirement.

9-26-88

- (e) A schedule and procedure shall be developed for monitoring, surveillance, and calibration checks. The frequency of these activities shall be based on the potential rate of equipment deterioration and the possibility of an environmental or human health incident, assuming that a malfunction from equipment failure or human error is not detected between checks. Schedules, procedures, and performance requirements shall be documented in the operating and maintenance documentation.
 - (f) Each high-level waste facility shall have response procedures for credible emergencies, as identified in the Safety Analysis Reports.
- (5) Training.
- (a) Operator training and qualification standards shall be developed and an up-to-date record of training status shall be maintained.
 - (b) Worker safety training must comply with the requirements of DOE 5480.1B and applicable EH Orders.
- (6) Quality Assurance. Consistent with DOE Order 5700.6B, high-level waste operations shall be conducted in accordance with applicable requirements of the American National Standards Institute/American Society of Mechanical Engineers Nuclear Quality Assurance-1 and other appropriate national consensus standards. (See Attachment 1, page 5, paragraph 48).
- (7) Waste Treatment and Minimization.
- (a) For the purpose of economy and enhancing the safety of high-level waste storage, processing programs shall be developed and implemented at the generating site to reduce the quantity of waste being sent to storage, and techniques (e.g., evaporation) shall be implemented to reduce further the waste volume in storage.
 - (b) Programs should be developed and implemented to treat high-level waste in storage to prepare it for eventual conversion to suitable disposal forms, as such forms are developed. This may include separation of high-level waste into other waste categories, such as transuranic waste or low-level waste.
 - (c) The chemistry of liquid high-level waste shall be adjusted to control corrosion within design limits for the storage system.
 - (d) Treatment reagents shall not be placed in a tank system without proven effective mitigative action if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, or otherwise fail.

9-26-88

- (e) Waste generation and waste management systems that significantly change the chemical and physical forms of the waste shall be technically assessed to assure compatibility and retrievability.

c. Storage Operations - Singly Contained Tank Systems.

- (1) Waste Characterization. The contents of singly contained tank systems shall be characterized consistent with radiation protection requirements and the needs associated with safe storage to determine its hazardous components consistent with 40 CFR 261, 40 CFR 264, and State requirements. Characterization may reflect knowledge of waste generating processes, laboratory testing results, and/or the results of periodic sampling and analysis.
- (2) Storage and Transfer Operations.
- (a) Singly contained tank systems shall not be used to store fresh high-level waste from fuel reprocessing operations except under emergency conditions as determined by the Operations Office Manager.
- (b) Storage and transfer operations shall be conducted within the limits defined in the Safety Analysis Reports according to DOE 5481.1B.
- (c) Engineered systems shall be incorporated to provide waste volume inventory data, consistent with the nature of the specific waste stored in singly contained tanks. Examples are surface level sensing devices and interstitial liquid level sensing devices.
- (d) Singly contained pipelines: (see paragraph 3b(2)(b)).
- (e) Where active ventilation is required, systems shall be provided to maintain radionuclide releases at the point of discharge within the guidelines specified in applicable EH Orders for offsite concentrations and DOE 5480.1B for onsite dose commitment considerations.
- (f) Nuclear criticality safety (see paragraph 3b(2)(i)).
- (g) Each facility shall use remote maintenance features and other appropriate techniques to maintain personnel radiation exposure as low as reasonably achievable.
- (h) Electrical power loss (see paragraph 3b(2)(k)).

DOE 5820.2A

9-26-88

(3) Monitoring, Surveillance, and Leak Detection.

- (a) Monitoring and surveillance capability shall exist to provide liquid volume, waste inventory data, and identification of failed containment.
- (b) A method for periodically assessing waste storage tank integrity (e.g., coupons, photographic inspections, leak detectors, liquid level devices) shall be established and documented.
- (c) Emergency power (see paragraph 3b(3)(d)).
- (d) Monitoring wells (see paragraph 3b(3)(f)).

(4) Contingency Action.

- (a) A contingency action plan shall be maintained to respond to spills or leaks and other credible emergencies as identified in the Safety Analysis Reports.
- (b) Leak mitigation (see paragraph 3b(4)(b)).
- (c) For emergency situations involving pumpable liquid in singly contained tanks, appropriate equipment (e.g., pumps) shall be maintained to provide removal of liquid.

(5) Training. (see paragraphs 3b(5)(a) and (b)).(6) Quality Assurance. (see paragraphs 3b(6)(a)).

d. Disposal. New and readily retrievable waste shall be processed and the high-level waste fraction disposed of in a geologic repository according to the requirements of the Nuclear Waste Policy Act of 1982 (Public Law 97-425) as amended. Options for permanent disposal of other waste, such as single shell tank waste, shall be evaluated and include such methods as in-place stabilization as well as retrieval and processing, as required for new and readily retrievable waste. Analytic predictions of disposal system performance shall be prepared and incorporated in the National Environmental Policy Act process.

(1) New and Readily Retrievable. New and readily retrievable existing high-level waste shall be processed to a final immobilized form in facilities such as the Defense Waste Processing Facility and the Hanford Waste Vitrification Plant preparatory to permanent disposal in a deep geologic repository.

- (a) Waste acceptance specifications and criteria based upon the requirements outlined in 10 CFR 60.113, 10 CFR 60.131(b)(7), 10 CFR 60.135, 10 CFR 71.87, and 40 CFR 191 shall be developed for

9-26-88

high-level waste forms prior to startup of facilities that generate the disposal waste form. Specifications and criteria shall be approved by RW-20 and DP-12 for Defense Programs high-level waste forms and by RW-20 and NE-20 for West Valley Demonstration Project product. As examples, specifications and criteria for the Defense Waste Processing Facility vitrified high-level waste form are documented in DOE/RW-0125; those for the West Valley Demonstration Project high-level waste form are documented in DOE/RW-0136.

- (b) Interim storage for solidified high-level waste awaiting transport to the designated geologic repository shall comply with applicable requirements in paragraph 3b.
- (2) Other Waste. High-level waste that is not readily retrievable shall be monitored periodically in situ. Field offices shall reevaluate the safety of such waste to determine the need for corrective measures as necessary. Options for permanent disposal of singly contained tank waste shall be evaluated and include such methods as in-place stabilization as well as retrieval and processing, as required for new and readily retrievable waste in paragraph 3d(1).

9-26-88

CHAPTER IIMANAGEMENT OF TRANSURANIC WASTE

1. PURPOSE. To establish policies and guidelines for managing DOE transuranic waste starting with its generation, continuing through closure of the Waste Isolation Pilot Plant, and finally the management of buried transuranic waste as defined in Attachment 1, page 3, paragraph 22. Transuranic wastes that are also mixed wastes are subject to the requirements of the Atomic Energy Act and the Resource Conservation and Recovery Act. Additionally, buried transuranic wastes are subject to the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act, and the Superfund Amendments and Reauthorization Act.
2. POLICY. Transuranic waste shall be managed to protect the public and worker health and safety, as well as the environment, and performed in compliance with applicable radiation protection standards and environmental regulations. Practical and cost effective methods shall be used to reduce the volume and toxicity of transuranic waste.
 - a. Transuranic waste shall be certified in compliance with the Waste Isolation Pilot Plant-Waste Acceptance Criteria, placed in interim storage (if required), and sent to the Waste Isolation Pilot Plant.
 - b. Transuranic waste that the Department of Energy has determined, with the concurrence of the EPA Administrator, does not need the degree of isolation provided by a geologic repository or, transuranic waste that cannot be certified or otherwise approved for acceptance at the Waste Isolation Pilot Plant, shall be disposed of by alternative methods. Alternative disposal methods shall be approved by DOE Headquarters (DP-12 and EH-1) and shall comply with the National Environmental Policy Act requirements and EPA/State regulations.
3. REQUIREMENTS.
 - a. Waste Classification.
 - (1) Any material that is known to be, or suspected of being contaminated with transuranium radionuclides shall be evaluated as soon as possible in the generating process, and determined to be either recoverable material, transuranic waste, low-level waste, mixed waste, or non-radioactive trash in order to avoid commingling the various material streams.
 - (2) The lower concentration limit for transuranic waste (>100 nCi/g of waste) shall apply to the contents of any single waste package at the time of assay. The mass of the waste container including shielding shall not be used in calculating the specific activity of the waste.

9-26-88

- (3) Radioactive wastes with quantities of transuranic radionuclides in concentrations of 100 nCi/g of waste or less shall be considered to be low-level waste, and shall be managed according to the requirements of Chapter III of this Order.
- (4) Mixed transuranic waste:
 - (a) Mixed transuranic waste meeting the requirements of the Waste Isolation Pilot Plant-Waste Acceptance Criteria shall be sent to the Waste Isolation Pilot Plant.
 - (b) The Data Package prepared by the generators for the Waste Isolation Pilot Plant shall include information on the kinds and quantities of hazardous components contained in a waste package in accordance with applicable Resource Conservation and Recovery Act regulations.
 - (c) The determination whether the transuranic waste exhibits any hazardous characteristics or contains listed hazardous components may be based on knowledge of the waste generating process when the performance of a chemical analysis would significantly increase the radiation hazard to personnel.

b. Transuranic Waste Generation and Treatment.

- (1) Technical and administrative controls shall be directed to reducing the gross volume of waste generated and/or the amount of radioactivity requiring disposal. Transuranic waste reduction efforts shall be based on the implementation of techniques such as process modification, process optimization, materials substitution, decontamination, assay of suspect waste, and new technology development. Volume reduction techniques, such as incineration, compaction, extraction, and shredding, shall be implemented wherever cost effective and practical. Treatment facilities shall be permitted by the appropriate regulatory authority.
- (2) Transuranic waste shall be assayed or otherwise evaluated to determine the kinds and quantities of transuranic radionuclides present prior to storage. Additionally, hazardous waste components shall be estimated or analyzed, whichever is appropriate.
- (3) Mixed transuranic waste shall be treated, where feasible and practical, to destroy the hazardous waste component.
- (4) Transuranic waste that is classified for security reasons shall be treated to remove or destroy the classified characteristic(s) prior to certification. Declassification should be performed by the generator.

9-26-88

c. Transuranic Waste Certification.

- (1) Transuranic waste shall be certified, pursuant to the Waste Isolation Pilot Plant-Waste Acceptance Criteria, placed in interim storage, and sent to the Waste Isolation Pilot Plant when it becomes operational.
- (2) Uncertified transuranic waste shall not be sent to the Waste Isolation Pilot Plant except by special permission granted in response to a formal, documented request to the Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee and the Waste Isolation Pilot Plant Waste Operations.
- (3) All transuranic waste certification sites shall prepare a certification plan which describes how the waste meets each waste acceptance criterion described in the WIPP-DOE-069 (see Attachment 1, page 3, paragraph 18).
- (4) Each certification plan shall define controls and other measures to ensure that each element of the certification plan is performed adequately as described. Requirements for these quality assurance activities are described in the WIPP-DOE-120 (see Attachment 1, page 2, paragraph 19).
- (5) Certification plans, including associated quality assurance plans, shall be submitted for review, comment, and approval by the Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee.
- (6) The Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee shall submit certification and associated quality assurance plans to the state of New Mexico's Environmental Evaluation Group for review and comment prior to granting formal approval of such plans.
- (7) The Environmental Evaluation Groups's comments on certification and associated quality assurance plans shall be resolved between the affected site and the Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee prior to granting formal approval of the plans.
- (8) Approved certification and associated quality assurance plans shall be implemented by the generating sites using specific, written operational procedures.
- (9) Certification activities conducted under approved plans and procedures shall be audited periodically, in accordance with a written audit program plan on a continuing basis by the Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee. An Environmental Evaluation Group representative may accompany the Waste Isolation

9-26-88

Pilot Plant-Waste Acceptance Criteria Certification Committee audit team as an observer during site audits. The Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee may grant certifying authority to the site following successful completion of an audit.

- (10) The Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee shall issue a formal audit report to the responsible field organization following the completion of an audit. The audit report shall describe the activities of the Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee audit team and include a record of any findings, observations, and recommendations. Corrective actions taken as a result of a finding shall be verified on subsequent audits. The Waste Isolation Pilot Plant-Waste Acceptance Criteria Certification Committee shall institute a tracking system to ensure timely resolution of findings, observations, recommendations, and the resultant corrective actions.
- (11) Failure to resolve and close out previous audit findings and recommendations or sending noncomplying waste to the Waste Isolation Pilot Plant when judged by the Waste Acceptance Criteria Certification Committee to be a serious violation, shall result in suspension of certifying authority, pending satisfactory resolution.

d. Transuranic Waste Packaging.

- (1) Newly generated transuranic waste shall be placed in noncombustible packaging that meets DOT requirements.
- (2) All Type A transuranic waste containers shall be equipped with a method to prevent pressure buildup. Acceptable pressure-relief devices include permeable gaskets, vent clips, and filtered vents.
- (3) The waste packages shall be marked, labeled, and sealed in accordance with the Waste Isolation Pilot Plant-Waste Acceptance Criteria, EPA, and DOT requirements, as defined in the WIPP-DOE-069, 40 CFR 262, Subpart C, and 49 CFR 172, Subparts D, E, and 49 CFR 173, Subpart I, where applicable, prior to shipping.

e. Temporary Storage at Generating Sites. The following activities shall be performed to assure the safe storage of transuranic wastes consistent with the requirements of applicable Resource Conservation and Recovery Act regulations:

- (1) Transuranic waste shall be segregated or otherwise clearly identified to avoid the commingling of transuranic waste streams with high-level waste or low-level waste.

DOE 5820.2A

9-26-88

- (2) Certified transuranic waste shall not be commingled with noncertified transuranic waste and shall be stored in a manner unlikely to alter its certification status.
- (3) Transuranic waste in storage areas shall be protected from unauthorized access.
- (4) Transuranic wastes in storage shall be monitored periodically to ensure that the wastes are not releasing their radioactive and/or hazardous constituents.
- (5) Transuranic waste storage facilities shall be designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or accidental release of radioactive and/or hazardous components of the waste to the environment.
- (6) Facilities which store transuranic waste shall have a contingency plan designed to minimize the adverse impacts of fire, explosion, or accidental release of hazardous components of the waste to the environment.
- (7) Transuranic waste shall be stored in such a way so as to maintain radiation exposures as low as reasonably achievable.

f. Transportation/Shipping to the Waste Isolation Pilot Plant.

- (1) Transuranic waste shipments shall comply with the provisions of DOE and DOT regulations, pursuant to DOE 1540.1.
- (2) Transuranic waste shipments by truck shall be by a DOE-controlled carrier system. All transuranic waste shall be transported in certified Type B packaging.
- (3) Shipping papers shall provide the information required by DOT (49 CFR 172, Subpart C), the Waste Isolation Pilot Plant Data Package (WIPP-DOE-157), and, as necessary, the manifest required by EPA (40 CFR 261, and 262).
- (4) Distribution of the shipping papers shall be as follows:
 - (a) Shipper - one copy (or more);
 - (b) Carrier - one copy; and
 - (c) Waste Isolation Pilot Plant - two copies.

A copy of the papers will be returned by the Waste Isolation Pilot Plant to the shipper after emplacement of the waste at the Waste Isolation Pilot Plant.

9-26-88

- (5) Appropriate EPA and State authorizations/permits shall be obtained for the transport system, as applicable.
- (6) Placarding of shipments shall be carried out, as required by the regulations of DOT (contained in 49 CFR 172, Subpart F).
- (7) All shipments of transuranic waste shall be in or on "exclusive use" vehicles, as defined in 49 CFR 173. Shipments shall be made as expeditiously as possible and shall be tracked from origin to destination using a real-time tracking communications system. Deviations from "preferred routes," delays and other irregularities detected by the system shall be investigated by the responsible traffic manager and a report sent to the Waste Isolation Pilot Plant within 90 days.
- (8) The Albuquerque Operations Office shall develop a transuranic waste transportation management and operations plan which addresses, but is not limited to, the following considerations:
 - (a) Communication between transport vehicle and traffic management;
 - (b) Shipment tracking in transit;
 - (c) Security;
 - (d) Emergency notification/response;
 - (e) Shipment routing;
 - (f) Shipment notification as appropriate;
 - (g) Driver training and qualifications;
 - (h) Vehicle maintenance and inspection;
 - (i) State surveillance and inspection; and
 - (j) Inspection and recertification of transport packagings.

g. Interim Storage.

- (1) Interim storage sites have been designated for storage of:
 - (a) Waste certified by off site generators;
 - (b) Waste certified by on site generators;
 - (c) Waste certified by interim storage personnel; and
 - (d) Uncertified waste received from on site and/or off site generators that is awaiting processing and certification.

9-26-88

- (2) New interim storage facilities shall be sited, designed, constructed, and operated consistent with the requirements of applicable Resource Conservation and Recovery Act regulations and in a manner which satisfactorily addresses the following considerations at a minimum:
- (a) Proximity to ground water and areas of seismic activity or flood plains shall be identified, and potential impacts shall be evaluated.
 - (b) The facility shall be designed and operated to minimize the run on and run off of precipitation. The run off control system shall provide for collecting and sampling run off, which may come in contact with the waste packages, prior to releasing the water for discharge.
 - (c) An environmental monitoring system shall be provided to detect any release and migration of major radioactive and hazardous components. Background levels of primary radioactive and hazardous waste components shall be determined.
 - (d) The storage facility design shall minimize the possibility for the unauthorized entry of persons.
 - (e) Incompatible wastes types shall be placed in separate packages and stored in segregated areas to prevent accidental ignition or chemical reaction.
 - (f) Waste storage facilities shall be designed and operated to minimize the exposure of personnel to radiation and chemicals.
 - (g) The storage facility operator shall inspect or verify routinely the condition of waste packages at the storage site for deterioration that may threaten human health or cause release of hazardous or radioactive components to the environment.
 - (h) The storage facility operator shall prepare plans that identify and describe how the site will be closed at the end of its active life. These plans shall address sampling, testing, and monitoring for major radioactive and hazardous waste components in soil and groundwater.
 - (i) Sites that use underground storage tanks for the storage of transuranic waste shall comply with the requirements of the Resource Conservation and Recovery Act, as applicable.
 - (j) Permits shall be acquired, as necessary, from appropriate regulatory entities for all the interim storage facility activities listed above.

9-26-88

- (3) Existing interim storage sites shall be reviewed for consistency with the items in paragraph 3g(2). Any necessary corrective actions shall be performed based on a compliance schedule approved by appropriate regulatory authorities.
- (4) Certified waste shall be stored in a manner unlikely to alter the certification of the waste package.
- (5) Operators of interim storage facilities shall receive data package information (see Attachment 1, page 2, paragraphs 18 and 20) for each waste package from the generator. The operator shall store the waste generator's data and shall use the data to prepare a new Data Package at the time of shipment to the Waste Isolation Pilot Plant.
- (6) Certified waste from off site generators does not require additional waste analysis or interim inspection, either upon receipt at the storage site or at the time of shipment to the Waste Isolation Pilot Plant. The generator of the certified waste is responsible for describing the waste form and waste package content.
- (7) Waste that has been certified by a generator and shipped to an interim storage site shall be reshipped to the Waste Isolation Pilot Plant by the interim storage site in the following manner:
 - (a) The generator/certifier shall be identified as the generator/certifier and shipping originator.
 - (b) The interim storage site shall be identified as the reshipper.
 - (c) The shipping originator is responsible for certifiability of the waste form, waste package content, waste container procurement documentation, related Data Package information, and proper marking, labeling and placarding of the shipment. The shipping originator is responsible for any problems or discrepancies relating to the above-mentioned items that may occur during shipment to or emplacement at the Waste Isolation Pilot Plant.
 - (d) The reshipper is responsible for complete data package assembly, transmittal, proper marking, labeling, placarding, verifying the adequacy of the exterior condition of the container (e.g., no significant deterioration, bulging) and for proper shipment loading. The reshipper shall perform radiation dose rate and contamination surveys on each package. The reshipper is responsible for any problems or discrepancies involving the items mentioned above.
- (8) The interim storage site is the shipping originator for stored waste certified at that site. Agreements may need to be developed between offsite waste generators and interim storage site operators/certifiers to define clearly their respective responsibilities.

9-26-88

h. Waste Isolation Pilot Plant.

- (1) The Waste Isolation Pilot Plant is a defense activity of the DOE for the express purpose of providing a research and development facility to demonstrate the safe disposal of radioactive wastes resulting from defense activities.
- (2) After the successful demonstration of the safe disposal of defense transuranic wastes, the Waste Isolation Pilot Plant will be the planned destination for all certified contact-handled and remote-handled transuranic waste, including mixed transuranic waste.
- (3) Prior to shipment of waste, the Waste Isolation Pilot Plant shall validate the data package for that waste shipment.
- (4) Upon receipt of waste, Waste Isolation Pilot Plant activities shall include, but not be limited to, the following:
 - (a) Verification of the package or assembly identification numbers against the Data Package;
 - (b) Measurement of the external radiation dose rate of the package and shipping container;
 - (c) Verification that contamination levels on the package and shipping container surfaces are within acceptable limits; and
 - (d) Review and proper processing of all shipping papers and manifests.
- (5) During a period of up to 5 years from the first emplacement of waste in the Waste Isolation Pilot Plant, the waste shall be stored retrievably. This phase is called the Operations Demonstration Period.
- (6) The decision for or against permanent disposal will be made at the end of the Operations Demonstration Period. If the decision is against using the Waste Isolation Pilot Plant as the repository, the stored waste shall be retrieved, repackaged, if necessary, and handled as directed by DOE. At that time, the Waste Isolation Pilot Plant shall be decontaminated, decommissioned, and closed, per agreement with the State of New Mexico.
- (7) If the Waste Isolation Pilot Plant is designated a repository, the underground portion of the Waste Isolation Pilot Plant shall be sealed upon completion of all planned transuranic waste disposal activities. Surface facilities shall be decontaminated and decommissioned, and the Waste Isolation Pilot Plant will be closed, per agreement with the state of New Mexico.

9-26-88

- (8) Following closure, the salt tailings will be disposed of in an environmentally acceptable manner and the site shall be returned to its natural state. Waste burial record shall be stored securely, and permanent markers shall be installed to minimize the possibility of future human intrusion.

i. Buried Transuranic-Contaminated Waste.

- (1) Alternatives for the long term management of buried transuranic-contaminated waste at inactive DOE waste sites are addressed in Attachment 1, page 3, paragraph 22. The inactive waste sites are located at Idaho National Engineering Laboratory, Los Alamos National Laboratory, Oak Ridge National Laboratory, Savannah River Plant, and the Hanford Site. The program will lead to the closure of each waste site, in compliance with the National Environmental Policy Act requirements, the Comprehensive Environmental Response, Compensation, and Liability Act, the Superfund Amendments and Reauthorization Act, and other applicable DOE, EPA, and State requirements.
- (2) Each waste site shall be characterized to include information on types and quantities of radioactive and hazardous chemicals. This information shall be verified by appropriate sampling/analysis/monitoring techniques. The characterization and verification activities will also include determination of waste migration from the burial sites and potential environmental and health impacts.
- (3) Each DOE site will develop a closure strategy for the waste site(s), utilizing the waste characterization data. Basic site-closure strategies which could be a combination of (a), (b), and (c) depending on site-specific and regulatory requirements, are as follows:
 - (a) Leave waste in place with enhanced monitoring.
 - (b) Leave waste in place, use enhanced confinement or in-situ immobilization techniques, and provide enhanced monitoring.
 - (c) Retrieve, process, and dispose of the transuranic waste at the Waste Isolation Pilot Plant.
- (4) Each DOE site will develop a site closure plan, which will include, as a minimum, the following:
 - (a) National Environmental Policy Act requirements;
 - (b) Applicable Federal, State and local regulations (e.g., DOE, EPA, State);
 - (c) Permits required;

9-26-88

- (d) Selected closure strategy and justification;
- (e) A waste retrieval strategy:
 - 1 Methodology for segregating transuranic and low-level waste,
 - 2 Identification of mixed waste components,
 - 3 Certification of transuranic waste for disposal at the Waste Isolation Pilot Plant,
 - 4 Management of low-level waste and mixed waste, and
 - 5 Plans for maintaining exposures as low as reasonably achievable;
- (f) Budget requirements by fiscal year;
- (g) Schedule for closure strategy completion; and
- (h) Post-closure monitoring and controls.
- j. Quality Assurance. Consistent with DOE Order 5700.6B, transuranic waste operations shall be conducted in accordance with applicable requirements of the American National Standards Institute/American Society of Mechanical Engineers Nuclear Quality Assurance-1 (see Attachment 1, page 5, paragraph 48) and other appropriate national consensus standards.

9-26-88

CHAPTER III

MANAGEMENT OF LOW-LEVEL WASTE

1. PURPOSE. To establish policies, requirements and guidelines, for managing the Department's solid low-level waste.
2. POLICY.
 - a. DOE-low-level waste operations shall be managed to protect the health and safety of the public, preserve the environment of the waste management facilities, and ensure that no legacy requiring remedial action remains after operations have been terminated.
 - b. DOE-low-level waste shall be managed on a systematic basis using the most appropriate combination of waste generation reduction, segregation, treatment, and disposal practices so that the radioactive components are contained and the overall system cost effectiveness is maximized.
 - c. DOE-low-level waste shall be disposed of on the site at which it is generated, if practical, or if on-site disposal capability is not available, at another DOE disposal facility.
 - d. DOE-low-level waste that contains non-radioactive hazardous waste components (mixed waste) shall conform to the requirements of this order, applicable EH Orders, and shall also be regulated by the appropriate regional authorities under the Resource Conservation and Recovery Act.
3. REQUIREMENTS.
 - a. Performance Objectives. DOE-low-level waste that has not been disposed of prior to issuance of this Order shall be managed on the schedule developed in the Implementation Plan (See page 7, paragraph 10) to accomplish the following:
 - (1) Protect public health and safety in accordance with standards specified in applicable EH Orders and other DOE Orders.
 - (2) Assure that external exposure to the waste and concentrations of radioactive material which may be released into surface water, ground water, soil, plants and animals results in an effective dose equivalent that does not exceed 25 mrem/yr to any member of the public. Releases to the atmosphere shall meet the requirements of 40 CFR 61. Reasonable effort should be made to maintain releases of radioactivity in effluents to the general environment as low as is reasonably achievable.

9-26-88

- (3) Assure that the committed effective dose equivalents received by individuals who inadvertently may intrude into the facility after the loss of active institutional control (100 years) will not exceed 100 mrem/yr for continuous exposure or 500 mrem for a single acute exposure.
- (4) Protect ground water resources, consistent with Federal, State and local requirements.

b. Performance Assessment.

- (1) Field organizations with disposal sites shall prepare and maintain a site specific radiological performance assessment for the disposal of waste for the purpose of demonstrating compliance with the performance objectives stated in paragraph 3a.
- (2) Each field organization shall, for each DOE reservation within its cognizance, prepare and maintain an overall waste management systems performance assessment supporting the combination of waste management practices used in generation reduction, segregation, treatment, packaging, storage, and disposal. Background and guidance on waste management systems performance assessment is provided in Attachment 1, page 3, paragraph 21.
- (3) Where practical, monitoring measurements to evaluate actual and prospective performance should be made at locations as required, within and outside each facility and disposal site. Monitoring should also be used to validate or modify the models used in performance assessments.

c. Waste Generation.

- (1) Technical and administrative controls shall be directed to reducing the gross volume of waste generated and/or the amount of radioactivity requiring disposal. Waste reduction efforts shall include consideration of process modification, process optimization, materials substitution and decontamination.
- (2) Waste Generation Reduction. All DOE-low-level waste generators shall establish auditable programs (goals, incentives, procedures, and reports) to assure that the amount of low-level waste generated and/or shipped for disposal is minimized.
- (3) Waste Segregation. Each DOE-low-level waste generator shall separate uncontaminated waste from low-level waste to facilitate cost effective treatment and disposal.

9-26-88

- (4) Waste Minimization. Each DOE-low-level waste generator preparing a design for a new process or process change shall incorporate principles into the design that will minimize the generation of low-level waste.

d. Waste Characterization.

- (1) Low-level waste shall be characterized with sufficient accuracy to permit proper segregation, treatment, storage, and disposal. This characterization shall ensure that, upon generation and after processing, the actual physical and chemical characteristics and major radionuclide content are recorded and known during all stages of the waste management process.
- (2) Waste characterization data shall be recorded on a waste manifest, as required by paragraph 3m, and shall include:
- (a) The physical and chemical characteristics of the waste.
 - (b) Volume of the waste (total of waste and any solidification or absorbent media).
 - (c) Weight of the waste (total of waste and any solidification or absorbent media).
 - (d) Major radionuclides and their concentrations.
 - (e) Packaging date, package weight, and external volume.
- (3) The concentration of a radionuclide may be determined by direct methods or by indirect methods such as use of scaling factors which relate the inferred concentration of one radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurements.

e. Waste Acceptance Criteria.

- (1) Waste shipped from one field organization to another for treatment, storage or disposal shall be done in accordance with the requirements established by the operations office having responsibility for operations of the receiving facility.
- (2) Waste acceptance criteria shall be established for each low-level waste treatment, storage, and disposal facility, and submitted to the cognizant field organization.
- (3) Generators of waste shall implement a low-level waste certification program to provide assurance that the waste acceptance criteria for

9-26-88

any low-level waste treatment, storage, or disposal facility used by the generator are met. Generators and facilities receiving the waste are jointly responsible for assuring compliance with waste acceptance criteria. Generators are financially responsible for actions required due to nonconformance.

- (4) Generator low-level waste certification programs shall be subject to a periodic audit by operators of facilities to which the waste is sent by the generator.
- (5) The waste acceptance criteria for storage, treatment, or disposal facilities shall address the following issues:
 - (a) Allowable quantities/concentrations of specific radioisotopes to be handled, processed, stored or disposed of;
 - (b) Criticality safety requirements (waste forms and geometries);
 - (c) Restrictions regarding low-level waste classified for security reasons;
 - (d) External radiation and internal heat generation;
 - (e) Restrictions on the generation of harmful gases, vapors, or liquids in waste;
 - (f) Chemical and structural stability of waste packages, radiation effects, microbial activity, chemical reactions, and moisture;
 - (g) Restrictions for chelating and complexing agents having the potential for mobilizing radionuclides; and
 - (h) Quantity of free liquids.

f. Waste Treatment.

- (1) Waste shall be treated by appropriate methods so that the disposal site can meet the performance objectives stated in paragraph 3a.
- (2) Waste treatment techniques such as incineration, shredding, and compaction to reduce volume and provide more stable waste forms shall be implemented as necessary to meet performance requirements. Use of waste treatment techniques to increase the life of the disposal facility and improve long-term facility performance, by improved site stability and reduction of infiltrating water, is required to the extent it is cost effective.

9-26-88

- (3) The development of large scale waste treatment facilities shall be supported by appropriate the National Environmental Policy Act documentation in addition to the following:
 - (a) A document shall be prepared that analyzes waste streams needing treatment, treatment options considered and a rationale for selection of proposed treatment processes;
 - (b) A construction design report including projected waste throughputs and treatment methods, construction and operating cost estimates; and
 - (c) A Safety Analysis Report.
- (4) Operation of waste treatment facilities shall be supported by adequate documentation including the following:
 - (a) Operation and maintenance procedures;
 - (b) Personnel training and qualification procedures;
 - (c) Monitoring and emergency response plans; and
 - (d) Records shall be maintained for each package of low-level waste that enters and leaves the treatment facility.

g. Shipment.

- (1) The volume of waste and number of shipments of low-level waste shall be minimized and the shipments will be conducted based on plans developed by field organizations. Off site shipment of low-level waste shall be in compliance with DOE 1540.1.
- (2) Generators shall provide an annual forecast in the third quarter of the fiscal year to the field organizations managing the off-site disposal facility to which the waste is to be shipped.
- (3) Generators must receive advance approval from the receiving facility and shall certify prior to shipment that waste meets the receiving facility waste acceptance criteria. The certification program shall be auditable and able to withstand independent review.
- (4) Each package of waste must comply with the labeling requirements of DOE 1540.1.

h. Long-Term Storage.

- (1) Low-level waste shall be stored by appropriate methods, to achieve the performance objectives stated in paragraph 3a.

9-26-88

- (2) Records shall be maintained for all low-level waste that enters and leaves the storage facility, (see paragraph 3m).
- (3) The development and operation of a waste storage facility shall be supported by the following documentation (two or more of these may be combined for convenience):
 - (a) An analysis which identifies the need for the storage facility;
 - (b) A Construction Design Report, including projected waste planned for storage; construction and operating cost estimates;
 - (c) A Safety Analysis Report and appropriate National Environmental Policy Act documentation; and
 - (d) Operational procedures and plans.
- (4) Storage of waste to allow for nuclides to decay or storage of wastes until they can be disposed of by approved methods are acceptable.

i. Disposal.

- (1) Low-level waste shall be disposed of by methods appropriate to achieve the performance objectives stated in paragraph 3a, consistent with the disposal site radiological performance assessment in paragraph 3b.
- (2) Engineered modifications (stabilization, packaging, burial depth, barriers) for specific waste types and for specific waste compositions (fission products, induced radioactivity, uranium, thorium, radium) for each disposal site shall be developed through the performance assessment model (see paragraph 3b(1)). In the course of this process, site specific waste classification limits may be developed if operationally useful in determining how specific wastes should be stabilized and packaged for disposal.
- (3) An Oversight and Peer Review Panel of DOE, contractor, and other specialists in performance assessments will be selected by DP-12, with participation by EH-1 and operations office representatives. Through consultation and review, this panel shall ensure consistency and technical quality around the DOE complex in the development and application of performance assessment models that include site specific geohydrology and waste composition.
- (4) Disposition of waste designated as greater-than-class C, as defined in 10 CFR 61.55, must be handled as special cases. Disposal systems for such waste must be justified by a specific performance assessment through the National Environmental Policy Act process and with the concurrence of DP-12 for all DP-1 disposal facilities and of NE-20 for those disposal facilities under the cognizance of NE-1.

9-26-88

- (5) The following are additional disposal requirements intended either to improve stability of the disposal site or to facilitate handling and provide protection of the health and safety of personnel at the disposal site:
 - (a) Waste must not be packaged for disposal in cardboard or fiberboard boxes, unless such boxes meet DOT requirements and contain stabilized waste with a minimum of void space. For all types of containers, void spaces within the waste and between the waste and its packaging shall be reduced as much as practical.
 - (b) Liquid wastes, or wastes containing free liquid, must be converted into a form that contains as little freestanding and noncorrosive liquid as is reasonably achievable, but, in no case, shall the liquid exceed 1 percent of the volume of the waste when the waste is in a disposal container, or 0.5 percent of the volume of the waste processed to a stable form.
 - (c) Waste must not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures, or of explosive reaction with water.
 - (d) Waste must not contain, or be capable of generating, quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste. This does not apply to radioactive gaseous waste packaged as identified in paragraph 3i(5)(e).
 - (e) Waste in a gaseous form must be packaged at a pressure that does not exceed 1.5 atmospheres at 20°C.
 - (f) Waste must not be pyrophoric. Pyrophoric materials contained in waste shall be treated, prepared, and packaged to be nonflammable.
- (6) Waste containing amounts of radionuclides below regulatory concern, as defined by Federal regulations, may be disposed without regard to radioactivity content.
- (7) Disposal Site Selection.
 - (a) Disposal site selection criteria (based on planned waste confinement technology) shall be developed for establishing new low-level waste disposal sites.
 - (b) Disposal site selection shall be based on an evaluation of the prospective site in conjunction with planned waste confinement technology, and in accordance with the the National Environmental Policy Act process.

9-26-88

- (c) The disposal site shall have hydrogeologic characteristics which, in conjunction with the planned waste confinement technology, will protect the groundwater resource.
 - (d) The potential for natural hazards such as floods, erosion, tornadoes, earthquakes, and volcanoes shall be considered in site selection.
 - (e) Site selection criteria shall address the impact on current and projected populations, land use resource development plans and nearby public facilities, accessibility to transportation routes and utilities, and the location of waste generation.
- (8) Disposal Facility and Disposal Site Design.
- (a) Design criteria shall be established prior to selection of new disposal facilities, new disposal sites, or both. These design criteria shall be based on analyses of physiographic, environmental, and hydrogeological data to assure that the policy and requirements of this Order can be met. The criteria shall be also based on assessments of projected waste volumes, waste characteristics, and facility and disposal site performance.
 - (b) Disposal units shall be designed consistent with disposal site hydrology, geology, and waste characteristics and in accordance with the National Environmental Policy Act process.
- (9) Disposal Facility Operations.
- (a) Field organizations shall develop and implement operating procedures for low-level waste disposal facilities that protect the environment, health and safety of the public, and facility personnel; ensure the security of the facility; minimize the need for long-term control; and meet the requirements of the closure/post-closure plan.
 - (b) Permanent identification markers for disposal excavations and monitoring wells shall be emplaced.
 - (c) Operating procedures shall include training for disposal facility operating personnel, emergency response plans, and a system of reporting unusual occurrences according to DOE 5000.3.
 - (d) Waste placement into disposal units should minimize voids between containers.
 - (e) Operations are to be conducted so that active waste disposal operations will not have an adverse effect on filled disposal units.

9-26-88

j. Disposal Site Closure/Post Closure.

- (1) Field organizations shall develop site-specific comprehensive closure plans for new and existing operating low level waste disposal sites. The plan shall address closure of disposal sites within a 5-year period after each is filled and shall conform to the requirements of the National Environmental Policy Act process. Performance objectives for existing disposal sites shall be developed on a case-by-case basis as part of the National Environmental Policy Act process.
- (2) During closure and post closure, residual radioactivity levels for surface soils shall comply with existing DOE decommissioning guidelines.
- (3) Corrective measures shall be applied to new disposal sites or individual disposal units if conditions occur or are forecasted that could jeopardize attainment of the performance objectives of this Order.
- (4) Inactive disposal facilities, disposal sites, and disposal units shall be managed in conformance with the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Superfund Amendments and Reauthorization Act, or, if mixed waste is involved, may be included in permit applications for operation of contiguous disposal facilities.
- (5) Closure plans for new and existing operating low-level waste disposal facilities shall be reviewed and approved by the appropriate field organization.
- (6) Termination of monitoring and maintenance activity at closed facilities or sites shall be based on an analysis of site performance at the end of the institutional control period.

k. Environmental Monitoring.

- (1) Each operational or non-operational low-level waste treatment, storage, and disposal facility shall be monitored by an environmental monitoring program that conforms with DOE 5484.1 and, at a minimum, meet the requirements of paragraph 3K(2) through 3K(4).
- (2) The environmental monitoring program shall be designed to measure:
(a) operational effluent releases; (b) migration of radionuclides;
(c) disposal unit subsidence; and (d) changes in disposal facility and disposal site parameters which may affect long-term site performance.
- (3) Based on the characteristics of the facility being monitored, the environmental monitoring program may include, but not necessarily be limited to, monitoring surface soil, air, surface water, and, in the subsurface, soil and water, both in the saturated and the unsaturated zones.

9-26-88

- (4) The monitoring program shall be capable of detecting changing trends in performance sufficiently in advance to allow application of any necessary corrective action prior to exceeding performance objectives. The monitoring program shall be able to ascertain whether or not effluents from each treatment, storage, or disposal facility or disposal site meet the requirements of applicable EH Orders.
- l. Quality Assurance. Consistent with DOE 5700.6B, the low-level waste operational and disposal practices shall be conducted in accordance with applicable requirements of American National Standards Institute/American Society of Mechanical Engineers Nuclear Quality Assurance-1 (See Attachment 1, page 5, paragraph 48) and other appropriate national consensus standards.
- m. Records and Reports.
- (1) Each field organization shall develop and maintain a record keeping system that records the following: a historical record of waste generated, treated, stored, shipped, disposed of, or both, at the facilities under its cognizance. The data maintained shall include all data necessary to show that the waste was properly classified, treated, stored, shipped, and/or disposed of. The data maintained in the system shall be based on the data recorded on waste manifests.
- (2) Waste Manifest. Records shall be kept and accompany each waste package from generator through final disposal. The manifest shall contain data necessary to document the proper classification, and assist in determining proper treatment, storage, and disposal of the waste. Waste manifests will be kept as permanent records. At a minimum, the following data will be included:
- (a) Waste physical and chemical characteristics,
 - (b) Quantity of each major radionuclide present,
 - (c) Weight of the waste (total of waste and any solidification or absorbent media),
 - (d) Volume of the waste (total of waste and any solidification or absorbent media), and
 - (e) Other data necessary to demonstrate compliance with waste acceptance criteria.

9-26-88

CHAPTER IV

MANAGEMENT OF WASTE CONTAINING AEA 11e(2) BYPRODUCT MATERIAL AND NATURALLY OCCURRING AND ACCELERATOR PRODUCED RADIOACTIVE MATERIAL

1. PURPOSE. To establish policies and guidelines for managing DOE waste containing byproduct material, as defined by section 11e(2) of the Atomic Energy Act of 1954, as amended, and Naturally Occurring and Accelerator Produced Radioactive Material.
2. POLICY. DOE waste containing naturally occurring and accelerator produced radioactive material or byproduct material as defined by section 11e(2) of the Atomic Energy Act, as amended, or similarly contaminated residues derived from DOE remedial actions, shall be stored, stabilized in-place, and/or disposed of consistent with the requirements of the residual radioactive material guidelines contained in 40 CFR 192. Small volumes of DOE waste containing 11e(2) byproduct material or naturally occurring and accelerator produced radioactive material may be managed as low-level waste in accordance with the requirements of Chapter III of this Order. If the waste is classified as mixed waste, management also must be in compliance with the requirements of the Resource Conservation and Recovery Act.
3. REQUIREMENTS.
 - a. Waste Management.
 - (1) Waste covered under this chapter in quantities too large for acceptance at DOE low-level waste disposal sites shall be managed according to the requirements of 40 CFR 192, and disposed of at specially designated DOE sites or tailing disposal sites established under the Uranium Mill Tailings Radiation Control Act of 1978 (Public Law 95-604). These disposal sites should be identified and developed as needed in support of DOE remedial actions, and will normally be located in the State in which the wastes are generated.
 - (2) With the approval of the appropriate field organization, small volumes of 11(e) byproduct material and naturally occurring and accelerator produced radioactive material waste may be disposed of at DOE low-level waste sites in accordance with the requirements of Chapter III of this Order.
 - (3) All DOE waste containing:
 - (a) Naturally occurring and accelerator produced radioactive material mixed with the Resource Conservation and Recovery Act hazardous chemicals shall be managed as hazardous waste under the Resource Conservation and Recovery Act.

9-26-88

- (b) Byproduct 11e(2) (or a combination of 11e(2) byproduct and naturally occurring and accelerator produced radioactive material) mixed with the Resource Conservation and Recovery Act hazardous chemicals, shall be managed consistent with both the Resource Conservation and Recovery Act and 40 CFR Part 192.
- b. Quality Assurance. Consistent with DOE 5700.6B, waste management practices shall be conducted in accordance with applicable requirements of American National Standards Institute/American Society of Mechanical Engineers Nuclear Quality Assurance-1 (reference 48) and other appropriate national consensus standards.

9-26-88

CHAPTER V

DECOMMISSIONING OF RADIOACTIVELY CONTAMINATED FACILITIES

1. PURPOSE. To establish policies and guidelines for the management, decontamination, and decommissioning of radioactively contaminated facilities under DOE ownership or control.
2. POLICY. Radioactively contaminated facilities for which DOE is responsible shall be managed in a safe, cost-effective manner to assure that release of, and exposure to, radioactivity and other hazardous materials comply with Federal and State standards. Facilities, equipment, and valuable materials shall be recovered and reused when practical.
3. REQUIREMENTS. DOE organizations shall develop and document their programs to provide for the surveillance, maintenance, and decommissioning of contaminated facilities. The decommissioning programs shall be implemented as follows:
 - a. General.
 - (1) Each field organization shall prepare and maintain a complete list of contaminated facilities both operational and excess under its jurisdiction. A continuous record of jurisdictional program responsibility for all contaminated facilities shall be maintained by the cognizant field organization for use in assigning decommissioning responsibility.
 - (2) Operational records (e.g., facility design drawings and modifications, characterization data on contamination levels, prior decontamination activities, and incident reports required by DOE Orders) for all contaminated facilities shall be maintained by the cognizant field organization for use in preparing decommissioning plans.
 - (3) Planning for facility decommissioning shall be initiated during the design phase for new facilities and prior to termination of operations for existing operational facilities. Such plans shall consider the 2-year budget cycle to assure adequate funding availability.
 - (4) Program offices shall be responsible for placing the facility in a safe storage condition, providing surveillance and maintenance, and decommissioning the facilities under their jurisdiction when they become excess to programmatic needs, or for finding another programmatic sponsor for them. For multiple user facilities, the program office shall determine decommissioning liability for user program offices based on each program's overall contribution to the contamination or some other mutually acceptable basis. This cost sharing formula may be applied when the facility is placed in safe storage or during surveillance and maintenance, when appropriate.

9-26-88

- (5) Responsibility for contaminated facilities may be transferred from one program organization to another by mutual agreement of the programs involved. The program organization to which a facility is transferred shall accept full responsibility for surveillance, maintenance, and decommissioning of the facility according to the requirements of this Order. Agreements to transfer facilities for functional purposes shall be in writing and shall identify explicitly the concurrent transfer of responsibility for surveillance, maintenance, and decommissioning.
 - (6) The DP and NE decommissioning programs exist for the primary purpose of managing and decommissioning the contaminated facilities currently assigned to them. Other contaminated facilities that have no programmatic sponsor, or that are excess to program needs and have a current sponsor, shall be assigned to the DP and NE programs for management and decommissioning with the approval of the program secretarial officers involved or their designees.
 - (7) Decommissioning expertise gained by DOE and its contractors is available at most major DOE facilities, and should be utilized by DOE programs. A computerized Decommissioning Technology data base is maintained at the Richland Operations Office. Published reports on nuclear facility decommissioning may be obtained from the Remedial Action Program Information Center at Oak Ridge National Laboratory.
- b. Facility Design. Facilities in which radioactive or other hazardous materials are utilized shall be designed to simplify decontamination and decommissioning and/or increase the potential for reuse. Features and procedures that simplify and facilitate decommissioning shall be identified during the planning and design phase based upon a proposed decommissioning method or conversion to other use. Examples of features to be incorporated are identified in DOE 6430.1.
- c. Post-Operational Activities.
- (1) DOE Program organizations shall identify contaminated facilities under their jurisdiction, document the potential for reuse and recovery of materials and equipment, and develop schedules for decommissioning them. Projects consisting of one or more facilities shall be identified as appropriate, and priorities shall be developed based on:
 - (a) Maintaining employee and public health and safety,
 - (b) Protection of the environment,
 - (c) Compliance with the National Environmental Policy Act, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act,

9-26-88

the Superfund Amendments and Reauthorization Act, and other contractual or legal requirements,

- (d) Cost effective program management (e.g., maintaining manpower pools, selecting economical decommissioning alternatives), and
- (e) Future site plans.

- (2) Program organizations shall assure that, prior to initiation of decommissioning activities, adequate surveillance and maintenance is performed for their surplus facilities to meet applicable radiation protection (DOE 5480.1B), hazardous chemical and safety standards, to maintain physical safety and security, and to reduce potential public and environmental hazards. All high-level waste and stored hazardous materials should be removed by the operator as part of the last operational activities prior to entering into the decommissioning phase.

d. Decommissioning Project Activities.

- (1) Characterization. Baseline data for each project shall be collected to support a thorough physical, chemical, and radiological characterization to fulfill the requirements of the National Environmental Policy Act reviews, the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation, and Liability Act, the Superfund Amendments and Reauthorization Act preliminary assessment/site investigations, and detailed engineering. The baseline data shall include:
 - (a) Drawings, photographs, and other records reflecting the as-built and as-modified condition of the facility and grounds;
 - (b) The condition of all structures, existing protective barriers, and systems installed to ensure public, occupational, and environmental safety;
 - (c) The type, form, quantity, and location of hazardous chemical and radioactive material from past operations at the site; and
 - (d) Information on factors that could influence the selection of decommissioning alternatives (safe storage, entombment, dismantlement) such as potential future use, long-range site plans required by DOE 4300.1B, facility condition, and potential health, safety, and environmental hazards.
- (2) Environmental Review Process. The Comprehensive Environmental Response, Compensation, and Liability Act, the Superfund Amendments and Reauthorization Act and/or the Resource Conservation and Recovery

9-26-88

Act status of each project shall be identified and a remedial investigation/feasibility study performed if required. Based on the results of the remedial investigation/feasibility study and any additional data deemed necessary by the responsible field organization, an appropriate environmental review shall be performed according to the requirements of the National Environmental Policy Act, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Superfund Amendments and Reauthorization Act. Candidate decommissioning alternatives shall be identified, assessed, and evaluated, and a preferred decommissioning alternative selected based on the results of the environmental review.

- (3) Engineering. Technical engineering planning for each project shall be conducted during the environmental review process to assure that alternative actions and associated environmental issues are identified and assessed, and to support preparation of environmental documentation. Detailed engineering will be initiated after a preferred alternative is selected. A Decommissioning Project Plan shall be prepared for approval by the appropriate program office in compliance with DOE 4700.1. The Plan shall include the following:
- (a) Physical, chemical, and radiological characterizational data or references to such data;
 - (b) A summary evaluation of decommissioning alternatives for the facility including the preferred alternative;
 - (c) Plans for meeting requirements from the environmental review process (National Environmental Policy Act, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Superfund Amendments and Reauthorization Act) and all necessary permits;
 - (d) Radiological criteria to be used (modifications, if any, to guidance presented in applicable EH Orders must be approved by the Headquarters program organization and EH-1);
 - (e) Projections of occupational exposure;
 - (f) Estimated quantities of radioactive waste to be generated; and
 - (g) Detailed administrative, cost, schedule, and management information.

9-26-88

(4) Decommissioning Operations.

- (a) The decommissioning project shall be conducted in accordance with guidance from Headquarters program offices and the Decommissioning Project Plan. Significant deviations shall be approved by the responsible field organization in consultation with the appropriate program office.
- (b) Approval of MA-22 (Office of Project and Facilities Management) shall be obtained before initiating activities to demolish a DOE-owned facility, per the requirements of DOE 4300.1B.
- (c) Status reports on project activities shall be prepared in accordance with the requirements of DOE 1332.1A or 4700.1, as appropriate.
- (d) Information on waste generation shall be provided to the Integrated Data Base Program, as required.
- (e) Decommissioning operations shall be considered a waste generator and shall meet generator requirements contained in the previous chapters of this Order.

(5) Post Decommissioning Activities.

- (a) After decommissioning operations have been completed, a final radiological and chemical survey report (or an independent verification survey report, at remote sites) and a project final report shall be prepared. The final report shall include a description of the project, the final status of the property, and the lessons learned from the project.
- (b) The responsible field organization shall compile a Project Data Package consisting of, as a minimum: the Record of Completion; the final radiological and chemical survey report; the Project Final Report; and for remote sites, an independent verification survey report, Certification Docket, and appropriate public notices. The Project Data Package shall be retained permanently in the field organization archives.
- (c) The responsible program organization shall assure that any necessary long-term maintenance and surveillance or other safety controls are provided for the decommissioned property.
- (d) The decommissioned property may be released from DOE ownership according to the requirements of DOE 4300.1B, if the responsible program organization, in consultation with the Office of the Assistant Secretary EH-1, certifies that the property meets

9-26-88

applicable release criteria for residual radioactivity and hazardous chemicals, and the property is identified properly by notation in the legal land records of the local government entity.

- (e) The decommissioned property may be reused for other program activities that may or may not involve radioactivity or hazardous chemicals. If appropriate release criteria are not met, the property may be reused for other program activities that may or may not involve radioactivity or hazardous chemicals provided that adequate safety controls are maintained.

- e. Quality Assurance. Consistent with DOE 5700.6B, waste management practices shall be conducted in accordance with applicable requirements of American National Standards Institute/American Society of Mechanical Engineers Nuclear Quality Assurance-1 (Attachment 1, page 5, paragraph 48) and other appropriate national consensus standards.

9-26-88

CHAPTER VI

WASTE MANAGEMENT PLAN OUTLINE

1. PURPOSE. To provide guidance on the development and maintenance of a waste management plan for each site that generates, treats, stores, or disposes of DOE waste.
2. DISCUSSION. The Order for radioactive waste management emphasizes accountable operational requirements set forth in a prescriptive style. Each site that generates, treats, stores, or disposes of DOE radioactive waste, or decommissions contaminated facilities, is responsible for complying with these requirements in terms of how operations are conducted and how these activities are documented. The documentation serves as the written word that the actual operations are being conducted within the framework of the Order.

The primary purpose of the Waste Management Plan is to compile and consolidate an annual report on how waste management operations are conducted, what facilities are being used to manage wastes, what forces are acting to change current waste management systems, and what plans are in store for the coming fiscal year. The scope of the plan includes the management of both radioactive and hazardous constituents in the Department's waste, whether these are separated or mixed. The body of the Waste Management Plan should not include descriptions of Environmental Restoration activities, as this information is provided under a separate program. However, several documents prepared with Environmental Restoration funding may be cited in Attachment VI-1 to the Waste Management Plan; this preserves consistency in accounting for documentation. Also, the Waste Management Plan includes the management of the DOE's liquid low-level waste which is not governed specifically by this Order.

The waste management plan provides a vehicle to report current waste management practices and plans for the coming year. It serves as the core document in the site's waste management operations and should reference supporting documentation as appropriate. The attachment to the Waste Management plan allows sites to account for major documentation as required by the Order.

3. FORMAT FOR WASTE MANAGEMENT PLANS.
 - a. Executive Summary. An Executive Summary is mandatory for each Waste Management Plan.
 - (1) As a rule of thumb, limit the length of the executive summary to 10 percent or less of the length of the Waste Management Plan. Summarize the past year in waste management including the principal regulatory/environmental issues and the degree to which planned activities were accomplished.

9-26-88

- (2) Provide a forecast of the coming year and discuss project startups, facility modifications, regulatory issues, and the waste management budget.

b. General Site Information.

- (1) Organization and Administration. Indicate the DOE field organization(s) and contractor(s) responsible for managing waste treatment, storage and disposal operations; discuss approval authorities, and clarify DOE/contractor interfaces. Include relationships between contractor's operations if multiple contractors are involved.
 - (a) Use charts to enhance text descriptions of organizational structure. Describe lead responsibilities of functional groups including the organization responsible for preparing this plan.
 - (b) Show the relationships, in a separate section, between documents that guide and support the waste management program at the site. Identify the organization responsible for maintaining up-to-date copies of all reference documents at the field organization level.
- (2) Site Description. Include a brief description of site location, demography size, geographic features, climate, geologic and hydro-geologic conditions, and primary mission where waste management operations are conducted.

- c. Radioactive and Mixed Waste Management. This section of the plan describes radioactive and mixed waste management operations at the site and includes descriptions of the waste management systems and facilities, the characteristics of wastes managed, and discussion of the problems, recommendations, and the future direction of the site operations. The top-level divisions of this section should be by waste type; i.e., high-level, transuranic, and low-level. These categories should be subdivided further by waste phase, liquid, solid, or gaseous (where appropriate).

(1) System and Facility Descriptions.

- (a) Overview. For each of the categories of waste provide an overview of the systems that treat, store, and dispose of these wastes. Use flowcharts to indicate waste sources, intermediate processing steps, and ultimate disposition of waste streams. Identify which waste streams are classified as mixed waste.
- (b) Facility Descriptions. Identify the facilities that comprise the waste management systems according to waste type and waste phase and describe the facilities in the following order: Treatment Facilities; Storage Facilities; and Disposal Facilities. Detailed descriptions of facility operations are not required, but enough explanation should be given to support the discussion of planned

9-26-88

activities. Examples of appropriate information include location maps, radiological and chemical characteristics of waste treated/stored/disposed, facility operating parameters, unique or special equipment used, and status of permitting activities. Include facility layout drawings and flow sheets where appropriate.

- (2) Current and Future Plans. This section is used to document the planning efforts at the site and indicate the direction of radioactive and mixed waste management activities. It should be organized to reflect site-specific situations. In general, it should: define problems with, and/or new requirements for, waste management systems; cite specific recommendations and strategy for making improvements; identify actions to achieve compliance with regulations; and discuss plans to modify current waste management systems such as construction of new facilities, plant upgrades, facility decommissioning/closure. Remedial actions should indicate how the findings of system performance assessments were factored into recommendations and plans. They should clearly indicate the driving forces behind their stated plans, such as: to achieve disposal of waste currently in storage; to enhance systems performance; to meet regulatory requirements; and to increase worker protection/safety.
- (3) Implementation Requirements. This section is used to document the implementation status by updating the "Implementation Summary Table" from the Implementation Plan. It should present these data in similar tabular format. It should also report progress realized during the past year, remaining actions to complete, remaining costs, and estimated completion dates. In addition it should indicate any variances from original cost and schedule projections in the Implementation Plan, and discuss reasons for variances.

d. Hazardous Waste Management (DP Facilities).

(1) System and Facility Descriptions.

- (a) Overview. Provide an overview of the system used to treat, store, and dispose of hazardous wastes at the site. Use flow sheets and location maps where appropriate.
- (b) Facility Description. Organize according to treatment facilities, storage facilities, and disposal. Describe the combination of facilities used to manage hazardous wastes at the site and include a discussion of current methods of disposal. Indicate the kinds of hazardous wastes generated and their sources. (Facility drawings and location maps should be included as appropriate.) Indicate status of permitting activities and other actions to achieve compliance with the Resource Conservation and Recovery Act

9-26-88

and the Comprehensive Environmental Response, Compensation, and Liability Act, and the Superfund Amendments and Reauthorization Act.

- (2) Current and Future Plans. Indicate recent and planned changes in waste management practice as well as actions to minimize hazardous waste generation; e.g., materials substitution and treatment to render waste nonhazardous. Identify plans for new facility construction, modifications, upgrades, or closures.
- e. Schedule and Cost Summary. Show current FY costs and operational schedule for the waste management program. In a separate set of tables, show a 5-year (FY + 4) cost and schedule projection and indicate major milestones to be accomplished during that period.
- f. Environmental Monitoring Programs. Describe the status of environmental monitoring that supports waste management operations, with discussion of monitoring installations, media sampled, and constituents analyzed. (This section of the plan should focus on the environmental monitoring systems installed to meet regulatory compliance at the individual waste management facilities. It is not necessary to describe the site-wide monitoring program that reports directly to EH.) Provide descriptions of planned system upgrades and modifications and key these to applicable discussions in paragraphs 3c and d. Include facility maps where appropriate.
- g. Related Subjects. Use this section to report on related topics of significant interest to waste management planning efforts at the site. Examples include preparation/review of major National Environmental Policy Act documentation; personnel training; quality assurance; technology demonstrations; and decommissioning projects.

9-26-88

WASTE MANAGEMENT DOCUMENTATION REQUIREMENTS

DISCUSSION. To identify principal documentation requirements as identified, sites are required to list and describe (where appropriate) the waste management documentation indicated below. Each of the following paragraphs refer to specific sections of this Order that require the preparation of waste management documentation. Reporting is limited to documents issued in the previous FY, unless the most recent revision of an existing document was issued earlier. Where possible, this Attachment should retain a standard bibliographical format.

(1) Chapter I - High-Level Waste.

- (a) Paragraph 3a. List titles and dates of issue of Safety Analysis Reports. Forecast schedule for preparation and issue date of planned Safety Analysis Reports.
- (b) Paragraph 3b(3)(c). List titles and dates of documents supporting the periodic assessment of waste storage tank integrity.
- (c) Paragraph 3b(4). Cite documentation of contingency actions of the past year. List schedule for completion of corrective actions.

(2) Chapter II - Transuranic Waste.

- (a) Paragraph 3c(3). Cite the Transuranic Waste Certification Plan and date of issue. If not issued, give schedule for preparation.
- (b) Paragraph 3g(2)(h). Cite the closure plan for interim storage facilities. If not issued, give schedule for preparation.
- (c) Paragraph 3(i). Index major documentation developed under the Buried Transuranic - Contaminated Waste Program. Show schedule for preparation of documents in the current fiscal year.

(3) Chapter III - Low-Level Waste.

- (a) Paragraph 3b(1). Cite documentation on radiological performance assessment of disposal facilities. If not issued, provide schedule for preparation in paragraph 3 of the Waste Management Plan.
- (b) Paragraph 3e(1). Cite Waste Acceptance Criteria for each low-level waste treatment storage and disposal facility. List anticipated additions to this list for the current fiscal year.
- (c) Paragraph 3e(3). Report the status of audits of certification activities by operators of disposal facilities. Report status of follow-up reports.

9-26-88

- (d) Paragraph 3g(2). List document(s) forecasting waste to be shipped by generators to off-site disposal facilities.
 - (e) Paragraph 3i(4)(d). List reports justifying on-site disposal of waste exceeding Class C limits. Such disposal cases anticipated for the next year should be forecast.
 - (f) Paragraph 3i(8). Cite major National Environmental Policy Act documentation (e.g., Environmental Impact Statement, Environmental Assessment) supporting selection of any new disposal sites. Give schedule of preparation for appropriate documentation for the next year.
 - (g) Paragraph 3j(1). Cite closure plans for low-level waste disposal sites and dates of issue. Give schedule of preparation for anticipated reports.
- (4) Decommissioning of Radioactively Contaminated Facilities.
- (a) Paragraphs 3a(1). Cite field organization documentation where the complete listing and the jurisdictional program responsibility for all contaminated facilities is recorded.
 - (b) Paragraph 3c(1). Cite the post-operational documentation that records the potential for reuse and recovery of materials and equipment and the schedule for decommissioning contaminated facilities.
 - (c) Paragraph 3d(3). List Decommissioning Project Plans and dates of issue. Show a schedule for preparation of Plans in the current fiscal year.
 - (d) Paragraph 3d(5). List final radiological and chemical survey reports and project final reports, and show dates of issue. Show anticipated additions to this list for the coming year.

781

NON-CONTROLLED COPY

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF OHIO
WESTERN DIVISION

STATE OF OHIO,)	DRAFT # 5
)	DOE 10/1/90
Plaintiff,)	
)	
v.)	CIVIL NO. C-1-86-0217
)	Judge Spiegel
UNITED STATES DEPARTMENT)	
OF ENERGY, et al.,)	
)	
Defendants.)	

10/1/90
STIPULATED AMENDMENT TO CONSENT DECREE ENTERED
 DECEMBER 2, 1988, AND PARTIAL SETTLEMENT OF CHARGES IN CONTEMPT

WHEREAS, on December 2, 1988, the District Court for the Southern District of Ohio entered a Consent Decree in this matter:

WHEREAS, on April 5, 1990, Ohio filed Charges in Contempt of Court, alleging violations of the Consent Decree by the U.S. Department of Energy ("DOE") and Westinghouse Materials Company of Ohio ("WMCO");

WHEREAS, in April, 1990, after negotiations involving DOE, Ohio and the U.S. Environmental Protection Agency (USEPA) a Consent Agreement under CERCLA sections 106 and 120 was signed by DOE and USEPA which updated and amended the Federal Facility Compliance Agreement entered into on July 18, 1986 (the "1990 Consent Agreement"), under which DOE will continue to perform, among other actions, a Remedial Investigation and Feasibility

0-02-90 01:00PM DOJ ENVIRN DEF

P04/17

2343 (1)

Study, removal actions, and a Remedial Design and Remedial Action at the FMPC:

WHEREAS, the parties desire to amend the Decree to reflect DOE's updated Agreement with U.S. EPA and to partially resolve Ohio's Charges in Contempt of Court, and, therefore, have agreed to this amendment of the Decree;

WHEREAS, DOE, through its Hazardous Waste Management Unit Review ("HWMUR"), is in the process of re-evaluating ~~all of the potential waste units and waste streams~~ at the FMPC to ~~determine which of them contain hazardous and/or mixed waste~~ whether they are regulated hazardous waste management units;

NOW, THEREFORE, it is hereby ordered, adjudged and decreed as follows:

I.

Paragraph 3.5 of the Consent Decree is amended by the addition of the following Paragraph 3.5.1:

3.5.1 Hazardous Waste Evaluations

(a). DOE has notified OEPA that certain drummed materials require evaluation pursuant to OAC Section 3745-52-11 and 40 C.F.R. 262.11 to determine whether the material is hazardous or mixed waste. Within sixty (60) days of the entry of this amendment DOE shall submit for OEPA approval a waste determination plan setting forth the process and procedures to be followed in performing hazardous waste determinations pursuant to OAC Section 3745-52-11 and 40 C.F.R. 262.11. DOE shall implement the waste determination plan on the schedules set forth below.

Provided, that DOE shall have the right to request extensions in these schedules from OEPA if such schedules are affected by any changes in the plan that are required by OEPA or in the event OEPA's review is not completed within thirty (30) days of the submittal of the waste determination plan.

(b). DOE shall, in accordance with the approved waste determination plan, complete evaluation of the approximate 16,000 drums of materials identified on Attachment 1, ~~and which are currently located on the Plant's Pad~~, in accordance with the following schedule:

(i). For the approximate 8,000 drums which will not be affected by the HWMUR, DOE shall complete process knowledge evaluations by September 30, 1990; the report describing the results of sampling and analysis of such materials shall be submitted to OEPA issued by November, 30 1991.

(ii). For the approximate 8,000 drums which will be affected by the HWMUR, DOE shall complete process knowledge evaluations by March 30, 1991; the report describing the results of sampling and analysis of such materials shall be submitted to OEPA by July 30, 1991.

(c). For any analyses that may be required on the approximate 1800 drums identified on Attachment 2, DOE shall, in accordance with the approved waste determination plan, completed all sampling by August 30, 1990, and shall issue the report describing the completed analysis as required by OAC 3745-65-13 and 40 CFR 265.13 by November 30, 1990. If the initial

0-02-90 01:01PM DOJ ENVIRN DEF

(2)

analytical results indicate the need for further sampling and/or analysis, DOE shall submit a schedule to OEPA for approval for such additional actions within thirty (30) days of determining such additional work is required.

(d). DOE shall, in accordance with the approved waste determination plan and the following schedule, evaluate all other materials, except thorium materials, located at the FMPC as of the date of this Amendment that are not located in appropriate hazardous waste storage units to determine if such materials are hazardous or mixed wastes by reason of the criteria established at 40 C.F.R. 262.11:

(i). For materials which will not be affected by the HWMUR, DOE shall complete process knowledge evaluations by December 31, 1991; the report describing the results of sampling and analysis of such materials shall be submitted to OEPA on at least 80% of such materials by March 30, 1992, and for the remainder of such materials by September 30, 1992.

(ii). For materials which will be affected by the HWMUR, DOE shall complete process knowledge evaluations by June 30, 1991; the report describing the results of sampling and analysis of such materials shall be submitted to OEPA by March 30, 1992.

(e). On or before November 30, 1990, DOE shall, pursuant to the waste determination plan approved pursuant to paragraph 9.5.1(a), above, and OAC Section 3745-52-11 and 40 C.F.R. 262.11,

complete process knowledge evaluations on all containers of thorium materials, and shall, on or before February 28, 1991, submit for OEPA review and approval a schedule for necessary overpacking and analysis of such materials. Such activities will be performed in a manner that adequately protects the health and safety of all personnel involved in such work and DOE shall have the right, as set forth in paragraph 3.1 of the Consent Decree, to request an extension in this schedule from OEPA based upon concerns with the health and safety of the personnel performing such activities.

(f). DOE shall, as soon as reasonably possible but in no event more than sixty (60) days from a determination that any drummed materials are hazardous or mixed waste, move such materials to units that are identified in the FMPC Part A Permit Application submitted September, 1989, or subsequent revisions. If storage space which meets RCRA and Ohio hazardous waste storage requirements is not available, DOE shall store such wastes in a manner as protective of human health and the environment as possible, shall perform daily leakage inspections on all such containers that are not located under cover, and shall, within sixty (60) days of a determination that sufficient hazardous waste storage space is not available, submit a plan and schedule for OEPA approval for short-term storage of such wastes. DOE shall perform weekly inspections in accordance with 40 C.F.R. 265.15 and 265.174, and OAC 3745-65-15 and 3745-66-74 on all such containers. DOE shall store backlog material which is being

(3)

0-02-90 01:02PM DOJ ENVIRN DEF

evaluated for the potential to be hazardous or mixed waste, but for which such evaluations have not been completed, on the best available hard surfaced facilities at the FMPC in such a manner that any leakage can be readily detected, and, ~~no-later-than~~ ~~September-30, 1990~~, will maintain aisle space meeting the requirements of 40 C.F.R. 265.35 and OAC 3745-65-35.

(g). DOE shall have the right to submit a schedule for OEPA approval to address circumstances in which either (i) the initial analyses results for particular samples indicate the need for re-sampling or further sampling and/or analysis, or (ii) there is insufficient qualified laboratory capacity to timely process and analyze samples taken by DOE in complying with this Consent Decree, as amended. DOE shall notify OEPA as soon as possible after discovering either such circumstance, and submit such a schedule within thirty (30) days of determining such circumstance exists.

II.

Paragraph 3.8 of the Consent Decree is deleted and replaced by the following paragraphs:

3.8 Plant 1 Pad

(a). ~~On or before September 30, 1990~~, DOE shall ensure that sufficient aisle space is maintained on the Plant 1 Pad to meet the requirements of 40 C.F.R. 265.35 and OAC 3745-65-35, except on the covered staging area.

(b). Until such time as the approximate 16,000 drums identified on Attachment 1 are removed from the Plant 1 Pad, or

such drums are determined not to contain hazardous or mixed waste, DOE shall perform daily leakage inspections on all such drums, and shall perform weekly inspections in accordance with 40 C.F.R. 265.15 and 265.174, and OAC 3745-65-15 and 3745-66-74. DOE shall perform daily leakage inspections on the remainder of the containers stored on the Plant 1 Pad until such time as these containers are removed from the Pad or are determined not to contain hazardous or mixed waste.

(c). Until such time as all containers evaluated under paragraph 3.5.1 above and all other containers of hazardous or mixed wastes are removed from the Plant 1 Pad, DOE shall maintain containment measures at the overpack covered staging area, such as the use of temporary dikes or liners, sufficient to ensure that any potential spillage or releases of material from drums are contained on the covered staging area of the Pad and are not released into any drains, soil, storm sewers, or other areas outside of the covered staging area. For any drums that are actually leaking in such a manner as to allow wastes to be released onto the pad DOE shall immediately contain the release or spill and shall manage the drum in accordance with OAC 3745-66-71 as soon as possible after detection, but in no event more than 24 hours after discovery. Within thirty (30) days after entry of this Amendment, DOE shall submit to OEPA for its approval a plan describing the actions DOE will perform in order to comply with this subsection.

0-02-90 01:03PM DOJ ENVIRN DEF

P.05 2343

P10/17

4

(d). The parties acknowledge that response actions under the 1990 Consent Agreement are currently being developed to respond to any release or threat of release of hazardous substances at the Plant 1 Pad, and that actions to address the Plant 1 Pad will take place under the 1990 Consent Agreement as well as under this Consent Decree as amended. Without waiving any provision or reservation of paragraph 5.4 of the Consent Decree, DOE shall, within sixty (60) days of the entry of this Amendment, provide to OEPA for review, comment and approval a submittal for the Plant 1 Pad setting forth the closure plan information and data, including a schedule, set forth under OAC 3745-66-10 through OAC 3745-66-20. It is DOE's intention that the information, data, and schedules in such submittal shall be consistent with information, data and schedules developed pursuant to the 1990 Consent Agreement, whereas it is the State's position that this submittal and OEPA's review of this submittal are not subject to or affected by the 1990 Consent Agreement. The parties specifically reserve their rights set forth in Article V of the Consent Decree to resolve any disagreement that they may have with any of these actions.

3.9 Pit 5

DOE shall submit a report containing the results of the HWMUR of Pit 5 to OEPA on or before June 30, 1991. The parties acknowledge that response actions under the 1990 Consent Agreement are currently being developed to respond to any release or threat of release of hazardous substances from Pit 5, and that

actions to address Pit 5 will take place under the 1990 Consent Agreement as well as under this Consent Decree as amended. Without waiving any provision or reservation of paragraph 5.4 of the Consent Decree, if the results of the HMUR demonstrates that Pit 5 is a hazardous waste management unit, DOE shall, within ninety (90) days of the date of the HMUR report on Pit 5, provide to OEPA for review, comment and approval a submittal for Pit 5 setting forth the closure plan information and data, including a schedule, set forth under OAC 3745-66-10 through OAC 3745-66-20. It is DOE's intention that the information, data, and schedules in such submittal shall be consistent with information, data and schedules developed pursuant to the 1990 Consent Agreement, whereas it is the State's position that this submittal and OEPA's review of this submittal are not subject to or affected by the 1990 Consent Agreement. The parties specifically reserve their rights set forth in Article V of the Consent Decree to resolve any disagreement that they may have with any of these actions.

3.10 Underground Storage Tank 5

The parties acknowledge that response actions under the 1990 Consent Agreement are currently being developed to respond to any release or threat of release of hazardous substances from Underground Storage Tank 5 ("UST 5"), and that actions to address UST 5 will take place under the 1990 Consent Agreement as well as under this Consent Decree as amended. Without waiving any provision or reservation of paragraph 5.4 of the Consent Decree,

10-02-90 01:04PM DOJ ENVIRN DEF

2343
P12/17

(5)

DOE shall, within sixty (60) days of the date of entry of this Amendment, provide to OEPA for review, comment and approval a submittal for UST 5 setting forth the closure plan information and data, including a schedule, set forth under OAC 1745-66-10 through OAC 3745-66-20. It is DOE's intention that the information, data, and schedules in such submittal shall be consistent with information, data and schedules developed pursuant to the 1990 Consent Agreement, whereas it is the State's position that this submittal and OEPA's review of this submittal are not subject to or affected by the 1990 Consent Agreement. The parties specifically reserve their rights set forth in Article V of the Consent Decree to resolve any disagreement that they may have with any of these actions.

3.11 Revisions to Part A and Part B Permit Applications

Within 90 days of the entry of this Amendment DOE shall submit to OEPA a report (the "90-Day Report") setting forth all hazardous waste management units subject to regulation under RCRA and the Ohio Solid and Hazardous Waste Disposal Law that have been identified as of that date. On or before June 30, 1991, DOE shall, subject to and on the basis of data available pursuant to scheduled information submissions under this Amendment, submit a complete and properly executed revision to its Part A Permit Application, and shall, on or before October 31, 1991, submit a properly executed revision to its Part B Permit Application. These applications shall comply with OAC 3745-50-43 and 3745-50-44, and shall be signed by DOE. The parties are in disagreement,

and do not resolve by this Amendment, the question of whether WMCO shall sign the Part A & Part B Permit Applications. Ohio and WMCO reserve their rights regarding this issue, including but not limited to the right to seek injunctive relief, and nothing in this Amendment shall constitute a waiver of any position by either party. Should the results of materials characterization received after October 31, 1991 indicate the need to revise the Part B Permit Application to include information on hazardous waste treatment unit(s) or to update information on hazardous wastes, DOE shall submit such revision(s) as soon as possible after determining the revision is necessary, provided that all such revisions or updates must be submitted no later than 180 days following the issuance of the last report required by paragraph 3.5.1(d).

3.12 Within sixty (60) days from the date of any report or revision to a permit application which identifies any additional hazardous waste management units or hazardous wastes not previously identified, DOE shall submit a schedule to UKPA for approval setting forth a timetable within which hazardous waste requirements shall be implemented with regard to such newly identified units or waste. Such schedule shall also set forth a timetable for submission of any application to modify the existing NPDES Permit that may be necessary because of the identification of additional hazardous waste management units or hazardous wastes.

10-02-90 01:05PM DOJ ENVIRN DEF

P. 07

2343
P44/17

⑥

3.13 The specific requirements spelled out in paragraphs 3.3 through 3.12 above do not replace or supersede any additional requirements which may be contained in the regulations cited in those paragraphs or in other hazardous waste laws or regulations, to the extent not inconsistent with the Atomic Energy Act.

III.

Paragraph 4.13 of the Consent Decree is hereby deleted and replaced by the following paragraph:

4.13 Beginning October 20, 1990, and continuing on the twentieth (20th) day of every third month thereafter, DOE shall submit a quarterly technical progress report to Ohio EPA describing the progress made to comply with the Consent Decree, as amended, during the previous three months, and identifying any hazardous waste management units or hazardous waste not previously listed in a report or permit application. DOE may combine this report with its ongoing reports being submitted pursuant to the Director's Findings and Orders issued June 4, 1987, provided that such reports shall hereafter be made quarterly and not bi-monthly.

IV.

Except as otherwise specified in this Amendment, the State hereby releases, covenants not to sue and not to bring any civil action or issue administrative findings and orders, against WMCO, the United States or any department or agency thereof, or any past or present officer, director, official, employee, agent, or

contractor (and any past or present official, officer, director, employee, agent or sub-contractor of such contractor), of WMCO or the United States, to obtain injunctive relief for the claims contained in the Charges in Contempt filed on April 5, 1990. Except for injunctive relief arising out of these charges, the State reserves all rights to seek any other relief or to bring any other actions.

V.

DOE agrees to advise the State of Ohio of its efforts to obtain the appropriated funding necessary to implement this Amendment to Consent Decree. The State of Ohio and DOE agree that in any judicial proceeding seeking to enforce the terms of this Amendment to Consent Decree and/or to find DOE in contempt for failure to comply or for delay in compliance with such terms, DOE may raise as a defense that its failure or delay was caused by circumstances beyond its control or that such failure or delay was caused by the unavailability of appropriated funds. While the State of Ohio disagrees that such defenses exist, the parties do agree and stipulate that it is premature at this time to raise and adjudicate the existence of such defenses.

VI.

This amendment shall be considered part of and subject to all provisions of the Consent Decree, except to the extent amended herein.

SO ORDERED this ___ day of _____, 1990.

AUG- 7-91 WED 13:49

SCHWARTZMAN A. M.

FAX NO. 5137388992

P. 08 2343

0-02-90 01:06PM DOJ ENVIRN DEPT

(7)

S. ARTHUR SPIEGEL
United States District Judge

202

DOB DRAFT 1 B
10/1/90

APPROVAL OF COUNSEL ON BEHALF OF THE PARTIES:

ANTHONY J. CELEBREZZE
Attorney General of Ohio

RICHARD B. STEWART
Assistant Attorney General
Environment & Natural Resources
Division
U.S. Department of Justice

D. MICHAEL CRITES
United States Attorney

JACK A. VAN KLEY, Trial Attorney
TIMOTHY J. KERN
Assistant Attorneys General
Environmental Enforcement Section
30 Broad Street, 17th Floor
Columbus, Ohio 43266-0410
(614) 466-2766

DONETTA WIETHE
Assistant United States Attorney
220 U.S. Post Ofc. & Courthouse
5th & Walnut Sts.
Cincinnati, OH 45202
(513) 684-3711

Attorneys for Plaintiff
State of Ohio

J. STEVEN ROGERS, Trial Attorney
MARTIN F. MCDERMOTT
Environmental Defense Section
Environment & Natural Resources
Division
U.S. Department of Justice
PO. Box 23986
Washington, D.C. 20026-3986
(202/FTS) 633-2219

VINCENT B. STAMP
Trial Attorney
Dinsmore & Shohl
2100 Fountain Square Plaza
511 Walnut Street
Cincinnati, Ohio 45202

Attorneys for Westinghouse
Materials Co. of Ohio, Inc.

TERRY RUSSELL
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Attorneys for Defendant:
U.S. Department of Energy

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 1 of 34 Revision No. 2
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101
		AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72 Issue Date: 6-16-89

1.0 PURPOSE

The purpose of this document is to establish the procedure for taking representative samples of residues and waste at Plant 1 and Resource Conservation and Recovery Act (RCRA) Storage facilities.

2.0 APPLICABILITY

This procedure is applicable to the methods and equipment for preparing and taking samples of dry, moist, and liquid materials by Waste Management.

3.0 RESPONSIBILITIES

3.1 Supervisors shall be responsible for the following:

- 3.1.1 Contacting Industrial Hygiene or Radiological Safety to determine the appropriate respiratory protection for the process being performed.
- 3.1.2 Providing operators with the required respiratory protection.
- 3.1.3 Ensuring that only trained personnel take samples.
- 3.1.4 Reporting exceptional circumstances not addressed by this SOP in a Minor Event Report (refer to FMPC-704) and notifying the AEDO of the circumstances.

3.2 Operators shall be responsible for complying with this procedure and reporting any unusual occurrences to the supervisor or, in the supervisor's absence, the Assistant Emergency Duty Officer (AEDO).

3.3 Radiological Safety shall be responsible for furnishing a copy of P-35-013 with a "Radiation Work Permit" when sampling Plutonium Out of Specification (POOS) material.

3.4 Waste Technology shall be responsible for the preparation of RCRA or suspect RCRA sampling plans, hazardous waste determination, and homogeneous determinations on an individual basis in accordance with required EPA sampling test methods.

3.5 Solid Waste Compliance shall be responsible for hazardous waste determination.

4.0 DEFINITIONS

4.1 DELETED

305

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 2 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101	
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89
		AREA: Plant 1	

4.0 DEFINITIONS (cont.)

4.2 DELETED

4.3 DELETED

4.4 DELETED

5.0 REFERENCES

5.1 1-C-701, "Plant 1 Dust Collectors"

5.2 1-C-904, "Operator Scale Checking in Plant 1"

5.3 20-C-601, "Packaging Low Level Waste for Offsite Disposal"

5.4 20-C-605, "Hazardous Waste Satellite Accumulation Areas"

5.5 20-C-905, "Ventilation Flow Indicators (VFI)"

5.6 FMPC-2178, "FMPC Lot Marking and Color-Coding System"

5.7 DELETED.

5.8 SOP 20-C-101, "Moving and Storing Nuclear Materials on Site at the FMPC"

5.9 SOP 20-C-102, "Nuclear Safety for Receiving, Storing, Repackaging, and Moving Enriched Uranium Materials <20% ²³⁵U from Offsite"

5.10 SOP 20-C-904, "General Nuclear Safety Requirements"

R 5.11 SOP 20-C-606, "Hazardous Material Spill Clean-Up"

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS

6.1 A defined safety system is not involved.

6.2 Operators shall wear respiratory protection provided by the supervisor when dusty conditions exist.

6.3 Leather-palm gloves shall be worn when handling drums, locking rings, lids, sharp or abrasive material, or when using tools.

6.4 Face shields and neoprene gloves and aprons shall be worn when taking samples of caustic material, acid slurries, or liquids.

5188

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 3 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS		SOP 1-C-101
			AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS (cont.)

- 6.5 Drums with noticeable bulging shall be opened under the direction of the supervisor and Safety and Fire Protection Engineering.
- 6.6 Protective equipment as directed by IS&H shall be worn when handling or sampling drums that are corroded, rusted, bulging, or deformed.
- 6.7 Material in damaged drums shall be placed in another correctly identified container.
- R 6.8 Any release of hazardous waste shall be reported and handled immediately per
R SOP 20-C-606.
- 6.9 Dust Collector G2-172 shall be turned on during the sampling operation at the Plant 1 sample line.
- 6.10 If POOS material is to be sampled, contact Radiological Safety.
- 6.11 Material shall be handled per the requirements of SOP 20-C-101, 20-C-102, and 20-C-904.
- 6.12 Any circumstance which could have resulted in an intake of radioactive materials by inhalation, ingestion or absorption shall immediately be reported to a supervisor. The supervisor shall immediately report the circumstance of possible radioactive materials intake to Radiological Safety for evaluation. The involved employees shall report to Medical Services at the end of their shift or as directed to submit a urine sample and again report at the start of their next shift to submit another urine sample. The supervisor shall consider the circumstances to be a minor event and shall immediately complete a minor Event Report per FMPC-704 and notify the AEDO of the circumstance.
- 6.13 Gloves shall be leak-checked prior to use.
- 6.14 A Radiation Work Permit shall be obtained prior to performing any sampling operation.

5188

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 4 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS		SOP 1-C-101
			AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE

- NOTE: A sampling plan, as required by EPA Document EPA SW-846, shall be prepared prior to sampling a hazardous waste or suspect hazardous waste stream.
- NOTE: Any sample collected for hazardous waste or residue material taken for verification of hazardous waste determination shall follow strict chain of custody guidelines in accordance with 7.12.
- NOTE: Any deviation from procedure shall be documented on a "Sampling Deviation/Special Handling Requirements", Form FMPC-PRO-3130 (See Figure 1).
- NOTE: DELETED.
- NOTE: When sampling a material for hazardous waste determination, a "clean" sampler must be used (Refer to Section 7.9).

7.1 Preparation for Sampling

- 7.1.1 At the start of the operating shift, check the scales to be used per SOP 1-C-904.
- 7.1.2 Move skids of material into the sampling area.
- 7.1.3 Prepare a composite sample drum.
 - 7.1.3.1 Tare weigh an empty, clean, color-coded 30-gallon drum. Stencil the tare weight and the lot marking number on the drum (Refer to "FMPC Lot Marking and Color-Coding System").
 - NOTE: The composite sample container shall be large enough to hold the entire composite sample. Use a larger container if necessary.
- 7.1.4 If the drum to be sampled was received from offsite, printweigh the drum per Item 7.2.
- 7.1.5 Remove the locking ring and drum lid from the drum to be sampled.
 - NOTE: To prevent contamination of the sample, only one drum at a time shall be open.
- 7.1.6 Visually inspect the waste material to be sampled to determine the physical characteristics (liquid, solid, dry, moist).

508

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 5 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101	
		AREA: Plant 1	
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

7.1.7 Select and obtain a clean sampler for the type of material to be sampled per recommendation of Table 1.

7.1.7.1 If assistance is required in determining the physical characteristics of the waste or the type of sampler to be used, contact Waste Technology.

NOTE: Clean samplers shall have a completed "Clean Equipment" tag affixed to the sampler and be sealed in plastic bags or tubes.

7.1.8 Sample the material using the procedure for the type sampler (Refer to Table 1).

NOTE: The supervisor will supply sampling requirements for nuclear materials and for suspected RCRA material based on published sampling plans. Sampling may also be specified using an approved "Sampling Deviation/Special Handling Requirements", Form FMPC-PRO-3130 (See Figure 1).

7.1.9 Replace the drum lid and lock ring following sampling.

7.1.9.1 If the drum lid and lock ring are damaged, replace with a new lid and ring.

7.1.10 Repeat Steps 7.1.4, 7.1.5, 7.1.8, and 7.1.9 for each drum in the lot.

7.1.11 After the lot has been sampled, weigh the 30-gallon composite sample drum. Record the weight on a "Sample Weight Ticket", Form FMPC-PRO-1579 (See Figure 3).

7.1.12 Take a secondary sample from the composite sample drum (Refer to Item 7.7 and 7.8).

7.1.13 Place a clean lid and locking ring on the 30-gallon composite sample drum.

7.1.14 Using a forklift, load the sampled drums and the composite sample drum onto skids.

7.1.15 Move the skids to the storage area designated by the supervisor.

7.1.16 Clean and store the sampling instrument per Items 7.9 and 7.10.

7.1.17 Complete the "Sample Weight Ticket", Form FMPC-PRO-1579 (See Figure 3).

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

7.0 PROCEDURE (cont.)

7.1.18 Send the documentation as completed in Item 7.11 and the secondary sample to the laboratory.

7.1.18.1 If the Chain of Custody form is being used, deliver listed samples directly to the Laboratory.

NOTE: The operator obtaining the samples shall deliver the samples to the Laboratory without the use of Transportation personnel.

7.2 Completing the Container Printweigh Card

7.2.1 If the drum to be sampled contains material from offsite, printweigh the drum on a "Container Printweigh Card", Form FMPC-PRO-1342 (See Figure 2).

7.2.2 Check that the gross weight is printed in the "WEIGHT" column.

7.2.3 Enter the drum tare weight in the column marked "CODE".

NOTE: Tare weight is stencilled on the drum.

7.2.4 After lot sampling has been completed, printweigh the composite sample drum.

7.2.5 Calculate the net weight of the composite sample drum.

NOTE: The net weight is the difference between the weight after sampling and the tare weight.

7.2.6 For each composite sample container, complete a "Container Printweigh Card" as follows:

7.2.6.1 Enter the gross and net weight of the composite sample container.

7.2.6.2 In Box #1, enter the type of material sampled.

7.2.6.3 In Box #2, enter the 15-digit lot number.

7.2.6.4 In Box #3, enter the specific sampling method.

7.2.6.5 In Box #4, enter the tare weight.

7.2.6.6 In Box #5, enter the vendor lot marking number, if available.

608

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 7 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101 AREA: Plant 1	
Authorization: (Signature on File) J. T. Grumski, Waste Management	Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89	

7.0 PROCEDURE (cont.)

- 7.2.6.7 In Box #6, enter the date and gross and net weights.
- 7.2.6.8 In Box #7, enter the date the sample was prepared.
- 7.2.6.9 In Box #10, enter the scale number.
- 7.2.6.10 In Box #13, enter the total number of containers (including the composite sample container).
- 7.2.6.11 In Box #15, enter when the sample was weighed.
- 7.2.6.12 In Box #16, enter the operator's name and badge number.
- 7.2.7 Affix the "Container Printweigh Card" to the composite sample drum.
- 7.2.8 DELETED.
- 7.2.9 DELETED.
- 7.2.10 DELETED.

7.3 Using the Automatic Closed Auger Sampler

- 7.3.1 After skids of material have been moved into the sampling area, place the drums on the Sampling Conveyor using a forklift.
- 7.3.2 Ensure Dust Collector G2-172 is in operation, and if not, start-up and operate per SOP 1-C-701.

NOTE: DELETED.

- 7.3.3 Check the Ventilation Flow Indicator (VFI) located on the auger enclosure. Notify supervisor and discontinue sampling if the VFI reads less than 2.2 inches differential (Refer to 20-C-905, "Ventilation Flow Indicators").
- 7.3.4 After the drum lid is removed, manually move the drum along the conveyor into the Auger Sampling Chamber.
- 7.3.5 Place the composite sample drum under the Sample Discharge Chute.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 8 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS		SOP 1-C-101 AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

7.3.6 Insert the auger sampler in the drum. Run the auger to the bottom of the drum.

NOTE: Vary the sampling location for each drum. Samples shall be taken from the center and off center points.

NOTE: Do not tilt the drum during sampling.

7.3.6.1 If the material type is different from that previously sampled (different lot, different material), take two samples from the first drum. Discard the samples to avoid cross contamination of samples.

NOTE: Use a separate container to collect the discarded samples. Discard samples can be returned to the drum after the drum has been sampled.

7.3.7 Withdraw the auger sampler.

NOTE: The auger sampler will automatically deposit the sample in the 30-gallon composite sample drum. Drum shall not be more than half filled to permit blending.

7.3.8 Check to ensure that the entire content of the auger was deposited in the sample container.

7.3.9 If specified by supervision, repeat Steps 7.3.9 thru 7.3.11 to take additional samples from other points in the drum.

7.3.10 When sampling is complete, move the drum along the conveyor to the lidding station.

7.3.11 Repeats steps 7.3.4 through 7.3.10 until all drums have been sampled.

7.4 Using the Grain Sampler

7.4.1 Ensure that the grain sampler is in the closed position with the slots in the outer tube face up.

7.4.2 Insert the sampler into the material being sampled.

NOTE: Insert the sampler at a point near the side of the container, through the center of the container, to a point opposite the entry point.

618

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 9 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS		SOP 1-C-101
			AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

- 7.4.3 Rotate the inner tube of the sampler to the open position.
- 7.4.4 Wiggle the sampler a few times to ensure that material enters the open slots.
- 7.4.5 Rotate the inner tube of the sampler to the closed position.
- 7.4.6 Withdraw the sampler from the drum of material.
- 7.4.7 Place the sampler in a horizontal position with the slots in the outer tube facing up.
- 7.4.8 Rotate the inner tube to the open position.
- 7.4.9 Slide the inner tube out of the outer tube.
- 7.4.10 Place the sample in the appropriate sample container as specified in Table 2 for residues and Table 3 for RCRA or suspect RCRA material.
- 7.4.11 Lid the sample container while obtaining the next sample.
- 7.4.12 If specified by supervision, repeat Steps 7.4.1 thru 7.4.11 to take additional samples from other points in the drum.
- 7.4.13 After adequate samples have been taken, sample the next drum.
- 7.4.14 Repeat steps 7.4.1 thru 7.4.13 until all drums in the lot have been sampled.

7.5 Using the Pipe Sampler

NOTE: The pipe sampler shall be long enough to reach the bottom of the container being sampled.

- 7.5.1 Insert the pipe sampler diagonally through the contents of the drum.
- 7.5.2 Rotate the pipe sampler once or twice to cut a core of material.
- 7.5.3 Ensure that the slot is face up and slowly withdraw the pipe sampler.
- 7.5.4 Check to ensure that the entire length of pipe contains material. If not, repeat Steps 7.5.1 thru 7.5.3.

6-16-89

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 10 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101	
		AREA: Plant 1	
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

7.5.5 Using a clean stainless steel spatula, push the material out of the sampler into the appropriate sample container as specified in Table 2 for residues and Table 3 for RCRA or suspect RCRA material.

7.5.5.1 If an organic analysis is required, refer to Table 4 for the appropriate sample container.

7.5.6 Lid the sample container while obtaining the next sample.

7.5.7 If specified by supervision, repeat Steps 7.5.1 thru 7.5.6 to collect samples from other points in the drum.

7.5.8 Repeat Steps 7.5.1 thru 7.5.7 until all the drums in the lot have been sampled.

7.6 Using the Composite Liquid Waste Sampler (COLIWASA)

7.6.1 Using the Disposable COLIWASA

7.6.1.1 Adjust the locking mechanism, if necessary, to ensure that the neoprene rubber stopper provides a tight closure.

7.6.1.2 Place the stopper rod handle in the T-position.

7.6.1.3 Push the rod down until the handle is against the locking block.

7.6.1.4 Slowly lower the COLIWASA vertically into the drum.

NOTE: Lower the COLIWASA so that the levels of liquid inside and outside the sampler tube remain even. If the liquid level in the sampler tube is lower than the level outside the sampler, the rate is too fast and will result in a nonrepresentative sample.

7.6.1.5 When the stopper hits the bottom of the drum, push the sampler tube downward against the stopper to close the sampler.

7.6.1.6 Turn the T-handle upright with one end tight on the locking block to lock the sampler closed.

7.6.1.7 Slowly withdraw the sampler with one hand while wiping the outside of the sampler with a clean disposable cloth.

7.6.1.7.1 Dispose of absorbent cloths and trash bags which have not come in contact with RCRA, or suspected RCRA, waste per SOP 20-C-601.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 11 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101	
		AREA: Plant 1	
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

7.6.1.7.2 Dispose of absorbent cloths and trash bags which have come in contact with RCRA, or suspected RCRA, waste per SOP 20-C-605.

7.6.1.8 Place the end of the COLIWASA into the appropriate composite sample container (Refer to Table 3).

7.6.1.8.1 If an organic analysis is required, complete Step 7.13.1 through Step 7.13.3 (Refer to Table 4 for appropriate sample container).

NOTE: Waste Technology shall determine if an organic analysis is required per the Sampling Plan.

7.6.1.9 Empty the sampler by slowly pulling the lower end of the T-handle away from the locking block.

7.6.1.10 If specified by supervision, repeat Steps 7.6.1.2 through 7.6.1.9 to collect samples from other points in the drum.

7.6.1.11 After changing drums, repeat Steps 7.6.1.2 through 7.6.1.10 until all the drums in the lot have been sampled.

7.6.2 Using the Glass COLIWASA

7.6.2.1 Check to ensure that the inner tubing and the outer sheath are not cracked.

7.6.2.2 Insert the inner tubing inside the sheath.

7.6.2.3 Raise the ground glass and the tubing several inches above the hole in the bottom of the sheath.

7.6.2.4 Slowly lower the COLIWASA vertically into the drum, keeping the ground glass end away from the hole in the bottom of the sheath.

NOTE: Lower the COLIWASA so that the levels of liquid inside and outside the sampler tube remain even. If the liquid level in the sampler tube is lower than the level outside the sampler, the rate is too fast and will result in a nonrepresentative sample.

RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101
		AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management	Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

- 7.6.2.5 When the sheath hits the bottom of the drum, push the inner tube downward so that the ground glass end seals the end of the sheath.
 - 7.6.2.6 Slowly withdraw the COLIWASA sampler with one hand ensuring the ground glass end is sealed against the tube bottom while wiping the outside of the sampler with a clean disposable cloth.
 - 7.6.2.6.1 Dispose of absorbent cloths and trash bags which have not come in contact with RCRA, or suspected RCRA, waste per SOP 20-C-601.
 - 7.6.2.6.2 Dispose of absorbent cloths and trash bags which have come in contact with RCRA, or suspected RCRA, waste per SOP 20-C-605.
 - 7.6.2.7 Place the end of the COLIWASA into the appropriate composite sample container (Refer to Table 3).
 - 7.6.2.7.1 If an organic analysis is required, complete steps 7.13.1 through 7.13.3 (refer to Table 4 for appropriate sample container).
- NOTE:** Waste Technology shall determine if an organic analysis is required per the Sampling Plan.
- 7.6.2.8 Empty the sampler by pulling the inner tube upward causing the ground glass end to separate from the outer tube bottom.
 - 7.6.2.9 If specified by supervision, repeat Steps 7.6.2.2 through 7.6.2.8 to collect samples from other points in the drum.
 - 7.6.2.10 After changing drums, repeat Steps 7.6.2.2 through 7.6.2.9 until all the drums in the lot have been sampled.

7.7 Collecting Secondary Samples of Dry Materials

- 7.7.1 Place the composite sample container on its side on the drum roller.
- 7.7.2 Set the drum roller timer for five minutes.
- 7.7.3 Turn on the drum roller.
- 7.7.4 Mix for five minutes and turn off the drum roller.
- 7.7.5 Place the drum in an upright position for five minutes to allow dust to settle.

RESTORATION
 PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
 J. T. Grumski, Waste Management

Supersedes:
 1-C-101, 06-29-72

Issue
 Date: 6-16-89

7.0 PROCEDURE (cont.)

7.7.6 Tare weigh a clean sample jar on the scale.

7.7.7 Remove the locking ring and lid from the composite sample container.

7.7.8 Using a clean grain sampler (Refer to Item 7.4), take a sample from the container.

7.7.9 Place the sample in the appropriate sample container (Refer to Table 2 or Table 3).

7.7.10 Repeat Steps 7.7.8 and 7.7.9 to collect samples from other points in the drum until an amount specified by supervision is collected.

NOTE: A minimum of two sample points is required.

7.7.11 Cap the sample jar after obtaining the secondary sample.

NOTE: No preservatives or other substances shall be added to the sample without the prior consent of the Analytical Laboratory.

7.7.12 Weigh the sample jar.

7.7.13 Complete the required records (Refer to Item 7.11).

7.7.14 Deliver the sample and completed documents to the Analytical Laboratory sample receiving room.

NOTE: All RCRA or suspected RCRA samples shall be delivered during the same shift in which they were collected.

7.7.14.1 If the Chain of Custody form is being used, deliver listed samples directly to the Laboratory.

NOTE: The operator obtaining the samples shall deliver the samples to the Laboratory without the use of Transportation personnel.

7.8 Collecting Secondary Samples - Moist or Sticky Materials

7.8.1 Tare weigh an appropriate sample jar (Refer to Table 2 or Table 3).

7.8.2 Open the composite sample container.

7.8.3 Using a pipe sampler, take a sample from the container per Steps 7.5.3 thru 7.5.5.

YIS

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 14 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS		SOP 1-C-101 AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

7.8.4 Using a stainless steel spatula, push the sample out of the pipe into a clean five gallon can.

7.8.5 Repeat Steps 7.8.3 and 7.8.4 to collect four more samples.

NOTE: For the remaining samples, insert the pipe sampler at different points at the side of the container.

7.8.6 Blend the five core samples using the stainless steel spatula.

7.8.7 Using the stainless steel spatula, take five equal portions from different areas of the blend and place the portions in the appropriate sample container (Refer to Table 2 or Table 3).

NOTE: Sampling shall continue until an amount specified by supervision is collected.

NOTE: No preservatives or other substances shall be added to the samples without the prior consent of the Analytical Laboratory.

7.8.8 Place the unused secondary sample in the primary composite sample container and return the container to the lot.

7.8.9 Complete the required records (Refer to Item 7.11).

7.8.10 Deliver the sample and completed documents to the Analytical Laboratory sample receiving room.

NOTE: All samples shall be delivered during the same shift in which they were collected.

7.8.10.1 If the Chain of Custody form is being used, deliver listed samples directly to the Laboratory.

NOTE: The operator obtaining the samples shall deliver the samples to the Laboratory without the use of Transportation personnel.

818

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

7.0 PROCEDURE (cont.)

7.9 Cleaning Sampling Equipment

NOTE: This cleaning procedure is not applicable to the automatic closed auger sampler.

NOTE: Cleaning shall be performed over a container marked with the appropriate 15-digit FMPC Lot Markings.

7.9.1 Using a warm detergent solution, wash sampling equipment thoroughly. Use a bottle brush to remove particulate matter, films, or other dirt as necessary.

CAUTION: THE LID SHALL BE KEPT ON THE DRUM CONTAINING THE USED RINSE SOLUTION WHEN NOT IN USE.

NOTE: Alquinox or Liquinox may be used as the cleaning detergent.

NOTE: Only non wire-wrapped brushes shall be used.

7.9.2 Rinse the sampler several times with tap water to remove detergent residues.

7.9.2.1 When the rinse container is full, process the contents as RCRA waste per SOP 20-C-605.

NOTE: The solution accumulated from rinsing the sampling equipment shall not be mixed except when directed by the supervisor.

7.9.3 Rinse the sampler with distilled water.

7.9.4 Drain excess water off the sampler.

7.9.5 Rinse the sampler with pesticide grade purity isopropanol and, if necessary, dry with clean dry cloth.

NOTE: Pesticide grade purity isopropanol is isopropanol that is below laboratory grade purity isopropanol.

7.9.6 Place the clean sampler into a clean plastic bag or wrap with aluminum foil.

7.9.7 Dispose of absorbent cloths and trash bags which have not come in contact with RCRA waste or suspected RCRA waste per SOP 20-C-601.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 16 of 34 Revision No. 2
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101
		AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72
		Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

- 7.9.8 Dispose of absorbent cloths and trash bags which have come in contact with RCRA waste or suspected RCRA waste per SOP 20-C-605.
- 7.9.9 Fill out and attach a "Clean Equipment" tag to sampler, Form No. FMPC-PRO-3128, (See Figure 4).
- 7.9.10 Store the sampler per item 7.10 unless the sampler is to be used immediately.
- 7.9.11 If directed by the supervisor, obtain a sample of the rinsate and forward to the Laboratory for analysis.
- 7.9.11.1 When an analysis is required, store rinsate container in a satellite accumulation container/area until the analysis results are received and disposition determined.

7.10 Storing Sampling Equipment

- 7.10.1 Place the clean samplers (except closed auger) in a clean polyethylene plastic bag or wrap with aluminum foil.
- 7.10.2 Seal the plastic bag with tape.
- 7.10.3 Place the samplers in a clean, protected area.

7.11 Record Requirements

NOTE: The following record requirements apply to all secondary samples collected by Plant 1 personnel.

NOTE: All data for RCRA or suspect RCRA materials shall be recorded in waterproof ink.

- 7.11.1 Record the following information on the "Enrichment Label", Form No. FMPC-PRO-306 M-145 (See Figure 6). Affix the completed label to the secondary sample container.
- 7.11.1.1 Sampling location.
- 7.11.1.2 Collector signature.
- 7.11.1.3 Type of material.
- 7.11.1.4 Type of sample.

81S

RESTORATION
 PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
 J. T. Grumski, Waste Management

Supersedes:
 1-C-101, 06-29-72

Issue
 Date: 6-16-89

7.0 PROCEDURE (cont.)

7.11.1.5 Lot number of material sampled.

7.11.1.6 Date sampled.

7.11.1.7 Time sampled (AM/PM or military time).

7.11.1.8 Net weight of the secondary sample.

7.11.1.9 Isotopic range (enriched, depleted).

7.11.2 DELETED.

7.11.2.1 DELETED.

7.11.2.2 DELETED.

7.11.2.3 DELETED.

7.11.2.4 DELETED.

7.11.2.5 DELETED.

7.11.2.6 DELETED.

7.11.2 Complete a "Report of Chemical Analyses", Form FMPC-T-200 (See Figure 8).

NOTE: Supervision shall specify analyses required.

7.11.2.1 If a sampling plan is in effect, do not complete Form FMPC-T-200 for RCRA Sampling.

7.12 Chain of Custody For Hazardous Determination Samples

NOTE: Plant 1 personnel shall be notified of all lots requiring Chain of Custody documentation.

7.12.1 Fill out an "Analytical Laboratory Sample Seal," Form No. FMPC-ES&H-2774 (See Figure 9) with the sample collector's name and badge number, date and time the sample was collected, and the drum and lot numbers.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 18 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS		SOP 1-C-101 AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

7.12.2 Place the sample seal over the lid of the sample container.

NOTE: Tamper guard tape may be used if a sample seal is not available.

NOTE: The sample seal (or tamper guard tape) shall be attached so that the seal will break when the sample container is opened.

NOTE: Each container must be sealed immediately after sample is collected and labeled using waterproof ink.

7.12.3 Ensure that record requirements (Refer to Item 7.11) are complete.

7.12.4 Complete the "Chain of Custody" sheet, Form No. FMPC-PRO-3112 (See Figure 10).

7.12.4.1 If the material is being sampled according to a sampling plan, write "See Sampling Plan No. XXXX" under "Analyses Requested" on the form.

NOTE: The "Chain of Custody" sheet shall be signed each time physical control of the samples is transferred.

NOTE: More than one sample can be included on the custody form. When more than one form is required for a large shipment, each form shall be completed entirely.

7.12.5 DELETED.

7.12.6 Record the following information in the "Field Log Book".

NOTE: Log entries shall be recorded using waterproof ink in a written manner which can be easily read and understood.

NOTE: The log book shall be protected and kept in a safe place.

7.12.6.1 Purpose of sampling (RCRA determination, MC&A sampling).

7.12.6.2 Location of sampling.

7.12.6.3 Name of field contact (person responsible for answering questions concerning the sample).

7.12.6.4 Generator of waste and address (if different from location).

7.12.6.5 Type of process producing waste (if known).

028

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 19 of 34 Revision No. 2
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101 <hr/> AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management	Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

7.0 PROCEDURE (cont.)

- 7.12.6.6 Type of waste.
 - 7.12.6.7 Declared/suspected waste components and concentrations.
 - 7.12.6.8 Number and volume of sample taken.
 - 7.12.6.9 Description of sampling point.
 - 7.12.6.10 Date and time of collection.
 - 7.12.6.11 Sample collector sample identification number(s).
 - 7.12.6.12 Type of container the sample was taken from.
 - 7.12.6.13 Drum inventory number (if available) as specified by MC&A (unique 4-digit number stenciled in white on the side of the waste drum).
 - 7.12.6.14 FMPC lot marking system number.
 - 7.12.6.15 Drum number (if available)
 - 7.12.6.16 All other numbers on the drum(s).
 - 7.12.6.17 Any written information on the drum describing the material contained in the drum.
 - 7.12.6.18 Sampling method used.
 - 7.12.6.19 Material description as observed by the collector.
 - 7.12.6.20 Preservatives used.
- NOTE:** No preservatives or other substances shall be added to the samples without the prior consent of the Analytical Laboratory.
- 7.12.6.21 Any field measurements made, such as pH.
 - 7.12.6.22 Signature of person recording the data.
 - 7.12.7 Deliver the sample and completed documents to the Analytical Laboratory sample receiving room.

NOTE: All samples shall be delivered to the lab for analysis during the same shift in which the samples were collected.

888

RESTORATION
 PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
 J. T. Grumski, Waste Management

Supersedes:
 1-C-101, 06-29-72

Issue
 Date: 6-16-89

7.0 PROCEDURE (cont.)

7.13 Liquid Organic Analysis

7.13.1 Carefully fill the septum bottle with the sample liquid.

NOTE: The liquid must reach the lip of the bottle.

7.13.2 Slide the teflon septum across the lip of the bottle covering the opening and then screw the plastic lid on the bottle.

7.13.3 Check the septum bottle for air bubbles by turning the bottle upside down.

NOTE: Organic analysis requires that no air bubbles be present in the septum bottle.

7.13.3.1 If air bubbles are present, empty the bottle and repeat steps 7.13.1 through 7.13.3 until the air bubbles are not present.

8.0 APPLICABLE FORMS

8.1 FMPC-PRO-3130, "Sampling Deviation/Special Handling Requirements"

8.2 FMPC-PRO-1342, "Container Printweigh Card"

8.3 FMPC-PRO-1579, "Sample Weight Ticket"

8.4 FMPC-PRO-3128, "Clean Equipment"

8.5 DELETED.

8.6 FMPC-PRO-306 M-145, "Enrichment Label"

8.7 DELETED.

8.8 FMPC-T-200, "Report of Chemical Analyses"

8.9 FMPC-OS&H-2774, "Sample Seal"

8.10 FMPC-PRO-3112, "Chain of Custody"

8.11 DELETED.

RESTORATION
 PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
 J. T. Grumski, Waste Management

Supersedes:
 1-C-101, 06-29-72

Issue
 Date: 6-16-89

TABLE 1
 SAMPLERS

MATERIAL	SAMPLER	PROCEDURE ITEM NUMBER
Dry, compacted solids	Auger	7.3
Dry, fluffy, solids	Grain	7.4
Moist solids	Pipe	7.5
Liquids, sludges	COLIWASA	7.6

TABLE 2
 SAMPLE CONTAINERS FOR RESIDUE SAMPLING

SAMPLER	TYPE OF SAMPLE CONTAINER
Auger	Glass or plastic
Grain	Glass or plastic
Pipe	Glass or plastic

RESTORATION
 PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
 J. T. Grumski, Waste Management

Supersedes:
 1-C-101, 06-29-72

Issue
 Date: 6-16-89

TABLE 3

SAMPLE CONTAINERS FOR RCRA OR RCRA SUSPECT SAMPLING

SAMPLER	TYPE OF SAMPLE CONTAINER
Grain	Shatterproof glass bottle with teflon cap liner
Pipe	Shatterproof glass bottle with teflon cap liner
Coliwasa	Shatterproof glass bottle with teflon cap liner

TABLE 4

SPECIAL SAMPLE CONTAINERS FOR ORGANIC ANALYSIS

SAMPLER	ANALYSIS	TYPE OF SAMPLE CONTAINER
Coliwasa	volatile	Septum Bottle (40 ml.)
Coliwasa	semi-volatile	Septum Bottle (40 ml.)
Pipe	volatile	Septum Bottle (40 ml.)
Pipe	semi-volatile	Septum Bottle (40 ml.)

FMPC
WESTINGHOUSE MATERIALS COMPANY OF OHIO
OPERATIONS DOCUMENT PROGRAM

Page 23 of 34
Revision No. 2

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

SAMPLING DEVIATION/SPECIAL HANDLING REQUIREMENTS

SAMPLING LOCATION: _____

DATE: _____

MATERIAL TYPE: _____

CONTAINER TYPE: _____

REASON FOR SAMPLING DEVIATION/SPECIAL HANDLING:

OUTLINE OF SPECIAL REQUIREMENTS:

APPROVALS:

MC&A Representative

Solid Waste Compliance Representative

Waste Operations Supervisor

Cognizant Engineer

SAMPLING DEVIATION/SPECIAL HANDLING REQUIREMENTS

FMPC-PRO-3130

Figure 1

VSS

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

FMPC-PRO-1342 (REV. 2/5/87)

PRODUCTION RECORDS - PLANT 1
CONTAINER PRINTWEIGH CARD

WO	CODE	WEIGHT	CONTR. NO.
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

1. MATERIAL TYPE

2. FMPC LOT NO.:

3. SAMPLING METHOD (CHECK ONE):
 PIPE
 Auger
 System

4. TARE WEIGHT SOURCE (CHECK ONE):
 Vendor
 FMPC
 Stet. Sample
 -lbs.

5. VENDOR LOT NO.:

WEIGHED: _____

Date: _____

Gross Tare _____

7. DATE SAMPLE PREPARED: _____

8. DATE OF MOISTURE DETERMINATION: _____

9. SAMPLE AMOUNT TO VENDOR: _____

10. SCALE NO.:

11. PLANT RPT. NO.:

12. MOISTURE CONTENT: _____

POS
GUIDES

13. TOTAL NO. CONTRS.: _____

14. REPORT COPIES REQ.: 6 12

15. WEIGHING INST.: _____

16. TEST SW: _____

17. DATA VERIFIED BY: _____

18. OPERATOR'S NAME: _____

Card No. _____ of _____

WO	CODE	WEIGHT	CONTR. NO.
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

CODES: TD - Test Drum
 SA - Scale Adjusted
 CS - Changed Scales
 R-SA - Reweigh-Scale Adjusted

NO.	DISTRIBUTION OF COPIES
1	Tabling Section
2	Production Records - Plant 1 (RECORD COPY)

CONTAINER PRINTWEIGH CARD
FMPC-PRO-1342
Figure 2

FMPC

WESTINGHOUSE MATERIALS COMPANY OF OHIO
OPERATIONS DOCUMENT PROGRAM

Page 25 of 34
Revision No. 2

2343

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

SAMPLING PLANT
SAMPLE WEIGHT TICKET

VENDOR:

LOT NO.:

DATE:

CHECK (✓) Partial Complete Sample Reject

GROSS

TARE

NET

WEIGHT

Gross

Tare

Net

RETURNED DRUM NO.:

PRO-1579 (9/4/59)

SAMPLE WEIGHT TICKET
FMPC-PRO-1579
Figure 3

228

055

R - MATERIAL REVISED, ADDED, OR DELETED.

FMPC, P.P.C. WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 26 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101	
		AREA: Plant 1	
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

CLEANED BY: _____

DATE: _____

Cleaned according to sop : _____

FMPC-OPR-3128 (6/22/89)

898

CLEAN EQUIPMENT
 FMPC-PRO-3128
 Figure 4

R - MATERIAL REVISED, ADDED, OR DELETED.

229

2 1 1 2

FMPC
WESTINGHOUSE MATERIALS COMPANY OF OHIO
OPERATIONS DOCUMENT PROGRAM

Page 27 of 34
Revision No. 2

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

DELETED

188

DELETED
DELETED
Figure 5

230

0100

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM	Page 28 of 34 Revision No. 2
---	---------------------------------

2343

RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101
		AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management	Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

FMPC-SAMPLE LABEL/RCRA MATERIAL-ENRICHED

SAMP. NG LOCATION		NO ENRICHMENT
COLLECTOR		
TYPE OF MATERIAL		
TYPE OF SAMPLE		
LOT NUMBER OR IDENT		
DATE	TIME	

FMPC FORM 306 M-145 (REV 11-78-88)

ENRICHMENT LABEL
FMPC-PRO-306 M-145
Figure 6

231

R - MATERIAL REVISED, ADDED, OR DELETED.

0100

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

DELETED

SES

DELETED
DELETED
Figure 7

232

FMPC
WESTINGHOUSE MATERIALS COMPANY OF OHIO
OPERATIONS DOCUMENT PROGRAM

Page 31 of 34
Revision No. 2

2343

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

ANALYTICAL LABORATORY SAMPLE SEAL	
Collector: _____ <small>SIGNATURE</small>	Lot No.: _____
Date Collected: _____	Drum No.: _____
Time Collected: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	FMPC-ES&H-2774 (3/18/87)

SES

SAMPLE SEAL
FMPC-OS&H-2774
Figure 9

234

R - MATERIAL REVISED, ADDED, OR DELETED.

RESTORATION
PROCEDURE

SAMPLING RESIDUE AND WASTE MATERIALS

SOP 1-C-101

AREA: Plant 1

Authorization: (Signature on File)
J. T. Grumski, Waste Management

Supersedes:
1-C-101, 06-29-72

Issue
Date: 6-16-89

FMPC
PRODUCTION OPERATIONS
CHAIN-OF-CUSTODY RECORD

Request No. _____

Company's Name: _____ Phone No.: _____ Carrier Way Bill No.: _____ Lab Destination: _____
and Address: _____

Name of Sampler(s): _____ Phone No.: _____ Badge No.: _____

SAMPLE NUMBER	SAMPLE LOCATION AND DESCRIPTION (Waste Type)	SAMPLED		SAMPLE TYPE	CONTAINER TYPE	ANALYSES REQUESTED (Please refer to last column)				SAMPLE COND. ON RECEIPT	TYPES OF ANALYSES	
		DATE	TIME									
												1 Complete Analysis
												2 Total U
												3 Total Th
												4 EP Toxicity
												5 Hologic
												6 Th-228
												7 Th-232
												8 Ra-226
												9 U/C/g Sampl (U Calculated)
												10 Th/C/g Sampl (Th Calculated)
												11
												12
												13
												14
												15

Field Information: _____

Possible Sample Hazards: _____

SIGNATURES.

1. Relinquished By: _____ Received By: _____
SIGNATURE TITLE COMPANY INCLUSIVE DATES

2. Relinquished By: _____ Received By: _____
SIGNATURE TITLE COMPANY INCLUSIVE DATES

3. Relinquished By: _____ Received By: _____
SIGNATURE TITLE COMPANY INCLUSIVE DATES

4. Relinquished By: _____ Received By: _____
SIGNATURE TITLE COMPANY INCLUSIVE DATES

NO.	DISTRIBUTION OF COPIES
1	To Accompany Samples
2	Field Copy

CHAIN OF CUSTODY
FMPC-PRO-3112
Figure 10

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 33 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS	SOP 1-C-101	
		AREA: Plant 1	
Authorization: (Signature on File) J. T. Grumski, Waste Management	Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89	

DELETED

DELETED
DELETED
Figure 11

YES

236

R - MATERIAL REVISED, ADDED, OR DELETED.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 34 of 34 Revision No. 2	2343
RESTORATION PROCEDURE	SAMPLING RESIDUE AND WASTE MATERIALS		SOP 1-C-101 AREA: Plant 1
Authorization: (Signature on File) J. T. Grumski, Waste Management		Supersedes: 1-C-101, 06-29-72	Issue Date: 6-16-89

RECORD OF ISSUE/REVISIONS

<u>DATE</u>	<u>REV NO.</u>	<u>DESCRIPTION AND AUTHORITY</u>
06-29-72	N/A	SOP has been revised to detail secondary sampling of both dry and wet materials as well as primary sampling.
10-30-84	N/A	Corrections in format made to Industrial Health and Safety and Environmental paragraphs, no text change. Changes made by Quality Control Department.
10-30-84	N/A	Quality Control Department replacement pages. List of Effective Pages added.
10-14-85	N/A	General update of SOP to reflect current operations per SOP Change Request No. 1009, initiated by R. C. Dicken.
04-23-87	N/A	Revised to implement Chain of Custody requirements for hazardous waste sampling of stored inventories to meet EPA requirements. Section 3 added per Request No. P87-092, initiated by D. J. Carr.
06-16-89	N/A	Reissued to update and reformat per Request No. P89-320, initiated by B. L. Krupa.
07-11-90	1	Revised to update RCRA requirements and incorporate references to SOP 20-C-101, 20-C-102, and 20-C-904 per Request No. P90-017, initiated by B. Krupa/J. Angert and Request P90-162, initiated by J. Angert.
03-11-91	2	Revised to incorporate CIOs C90-056 and C90-057 per Request Nos. P90-340 and P90-342.

089

R - MATERIAL REVISED, ADDED, OR DELETED.

237

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 1 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None Issue Date: 07-21-89

1.0 PURPOSE

The purpose of this procedure is to establish a set of guidelines and practices that are to be used by Motor Vehicle Operator (MVO) personnel when transporting RCRA and other hazardous wastes.

2.0 APPLICABILITY

This procedure is applicable to FMPC personnel involved in the transport of RCRA and other hazardous wastes.

3.0 RESPONSIBILITIES

- 3.1 The MVO shall be responsible for ensuring that available consignment documentation is complete and for transporting consignments in a safe and efficient manner.
- 3.2 The Generator shall be responsible for preparation of waste in such a manner that materials can be transported, stored, and identified, in accordance with applicable WMCO site procedures, SOP 20-C-605, and Analytical Laboratory SOP AnL-01-0053. This includes communicating needs with Transportation and directing the loading of the material.
- 3.3 The Dispatcher shall be responsible for coordinating the activities of personnel involved in accepting, transporting, and releasing the hazardous waste transferred via trailer, forktruck, or other vehicles.
- 3.4 The Transportation Supervisor shall be responsible for the following:
- 3.4.1 Providing oversight and guidance to the MVO assigned to transport hazardous waste.
- 3.4.2 Ensuring that MVO are trained to operate equipment used to transport hazardous waste.
- 3.5 Waste Management shall be responsible for storage of hazardous waste at the FMPC storage facilities per SOP 1-C-605.
- 3.6 Materials Control and Accountability (MC&A) shall be responsible for preparing the "Item Production/Certification/Identification" (W65) card packet, Form FMPC-CONT-1945-XX, and the "Nuclear Materials Transfer Record", 68/69/XX card packet, Forms FMPC-AC-1990, FMPC-AC-2220, FMPC-AC-2221.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 2 of 13 Revision No. 3	2343
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE		PO-S-06-001
			SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None	Issue Date: 07-21-89

4.0 DEFINITIONS

- 4.1 Motor Vehicle Operator (MVO) - Classification of personnel that are trained and licensed for vehicle operation.
- 4.2 Resource Conservation and Recovery Act (RCRA) - The congressional act requiring "cradle to grave" control and proper management of all hazardous wastes.
- 4.3 Transport - Moving materials by forktruck, trailer, or other vehicle from one location to another for purposes such as storage, sampling, shipping, redrumming, or weighing.
- 4.4 Satellite Accumulation Area (SAA) - A waste accumulation area, controlled by the Supervisor of the process that generated the waste. The SAA is located near the generation point.
- 4.5 Satellite Accumulation Container (SAC) - Portable polyethylene container, orange in color, designed to hold 55 gallon drums and approved containers. All accumulation area drums shall stand in a SAC, except PCB contaminated wastes.
- 4.6 MC&A - Materials Control & Accountability.
- 4.7 AEDO - Assistant Emergency Duty Officer.
- 4.8 DCAR - Deviation and Corrective Action Report.
- 4.9 Generator - A trained and knowledgeable person to whom the authority to dispose of hazardous waste in a satellite accumulation area has been given by supervisory personnel.
- 4.10 Hazardous Waste - A waste material exhibiting characteristics of ignitibiity, corrosivity, reactivity, or toxicity, is listed in 40CFR261 (RCRA), or is identified as hazardous in applicable state regulations.

5.0 REFERENCES

- 5.1 SOP 1-C-605, "Storage of Hazardous Waste"
- 5.2 SOP 20-C-605, "Hazardous Waste Satellite Accumulation Areas"
- 5.3 SOP 20-C-606, "Hazardous Material Spill Cleanup"
- 5.4 SOP AnL-01-0053, "Managing Hazardous Waste Satellite Accumulation Areas in the Analytical Laboratories"

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 3 of 13 Revision No. 3	2343
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE		PO-S-06-001
			SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None	Issue Date: 07-21-89

5.0 REFERENCES (cont.)

5.5 FMPC-503, "FMPC Spill Incident Reporting and Cleanup"

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS

6.1 The following health and safety requirements shall be observed by MVOs while moving hazardous waste material.

- 6.1.1 An Industrial Truck that has not been inspected per SOP 20-C-902 shall not be used.
- 6.1.2 Leather-palm gloves shall be worn while operating equipment and when handling sharp-edged or abrasive material.
- 6.1.3 Safety glasses shall be worn outside of enclosed cab vehicles and when operating an open cab vehicle unless the area is exempted by Safety.
- 6.1.4 The MVO shall remain with the vehicle while a load is being transported.
- 6.1.5 Any circumstance which could have resulted in an intake of radioactive material by inhalation, ingestion, or absorption shall be reported to a supervisor. The supervisor shall immediately report the possible radioactive material intake to the Radiological Safety Section for evaluation. The involved employee shall report to Medical Services Section to submit biological samples. Typically, samples are required at the end of the shift and at the start of the subsequent shift.

7.0 PROCEDURE

NOTE: Two methods are provided for the proper transport of hazardous waste to storage and one method of miscellaneous movement of hazardous waste.

NOTE: The MVO shall inform the Transportation Supervisor or Dispatcher immediately of any spills or problems during transport. The supervisor or Dispatcher shall notify the AEDO who will provide guidance on corrective actions per site procedure FMPC-503 and SOP 20-C-606.

7.1 Transporting Non Satellite Accumulation Area Waste to Storage

7.1.1 The Generator or Waste Management shall proceed as follows:

- 7.1.1.1 Notify the supervisor of the Hazardous Waste Storage Area that a specific number of drums or containers are ready for transport to storage.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 4 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001 SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation	Supersedes: None	Issue Date: 07-21-89

7.0 PROCEDURE (cont.)

7.1.1.2 Obtain the location for storage.

7.1.1.3 Communicate the material type, packaging, and amount to the Transportation Dispatcher.

NOTE: Per RCRA regulations, the Generator or Waste Management has one day to notify Transportation of hazardous waste to be moved.

7.1.2 The Dispatcher notifies the supervisor of the Hazardous Waste Storage Area of the volume of material that is being transported.

NOTE: RCRA regulations allows one day for Transportation to pick up the waste container and transport the container to Waste Management and one day for Waste Management to move the waste into storage.

7.1.3 The Dispatcher/supervisor directs an MVO to the waste location.

NOTE: The Dispatcher and/or supervisor shall ensure that the MVO has the required equipment.

7.1.4 At the location of the waste, the MVO ensures documentation is complete.

NOTE: Documentation attached shall be compatibility color dot; hazard label; "Item Production/Certification/Identification" (W65) card packet, Form FMPC-CONT-1945-XX; "Nuclear Materials Transfer Record" 68/69/XX card packet, Forms FMPC-AC-1990, FMPC-AC-2220, and FMPC-AC-2221; Radiological Survey for surface contamination per Topical Manual, FMPC-2089.

7.1.5 The MVO checks the consignment for the following (Refer to 20-C-605):

7.1.5.1 Condition of the container.

NOTE: DOT approved drums and FM approved five gallon stainless steel safety cans with self-closing spigots are acceptable containers (See Figures 1 and 2).

NOTE: Self closing spigots shall not bind.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 5 of 13 Revision No. 3	2343
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE		PO-S-06-001
			SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None	Issue Date: 07-21-89

7.0 PROCEDURE (cont.)

7.1.5.2 Security of the lid or closure.

NOTE: Lids on drums of liquid waste shall have lids taped on to avoid possible spills.

7.1.5.3 Leakage or presence of material on external surface of the container.

R 7.1.5.4 DELETED

R 7.1.5.5 DELETED

7.1.5.6 Security of load on transport vehicle.

R **NOTE:** DELETED

7.1.5.7 Compatibility of material.

NOTE: Only containers identified by one dot type color code shall be moved per each trailer or vehicle except for containers identified by an orange dot code which may be moved with other colors.

7.1.5.8 Identification and label placement (See Figures 1 and 2).

7.1.5.9 If any condition is not acceptable, proceed per Item 7.5.

7.1.6 After inspection, the MVO shall sign the "Nuclear Materials Transfer Record" 68/69/XX Cards, Forms FMPC-AC-1990, FMPC-AC-2220, and FMPC-AC-2221 and transport the consignment to the specified storage area.

7.1.7 The MVO shall wait at the delivery point for MC&A and Waste Management Supervision to accept and sign the "Nuclear Materials Transfer Record", 68/69/XX Cards FMPC-AC-1990, FMPC-AC-2220, and FMPC-AC-2221.

7.1.8 If the material is rejected at the delivery point, proceed per Item 7.5.

7.2 Transporting Waste from an SAA to Storage using a Forktruck or TrailerR **NOTE:** When transporting drums by forklift, one drum at a time shall be moved.

7.2.1 The Generator or Waste Management shall proceed as follows:

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 6 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None Issue Date: 07-21-89

7.0 PROCEDURE (cont.)

- 7.2.1.1 Notify the supervisor of the Hazardous Waste Storage Area that a specific number of drums are ready to transport to storage.
- 7.2.1.2 Obtain the location for storage.
- 7.2.1.3 Communicate the material type, packaging, and amount to the Transportation Dispatcher.

NOTE: Per RCRA regulations, the Generator or Waste Management has one day to notify Transportation of hazardous waste to be moved.

- 7.2.2 The Dispatcher/Supervisor notifies the supervisor of the Hazardous Waste Storage Area that a specific volume of material is being transported.

NOTE: RCRA regulations allows one day for Transportation to pick up the waste container and transport the container to Waste Management, and one day for Waste Management to move waste into storage.

- 7.2.3 The Dispatcher/Supervisor sends an MVO to the location of the waste.

NOTE: The Dispatcher and/or supervisor shall ensure that the MVO has the required equipment.

- 7.2.4 The MVO ensures that the following documentation is complete.

7.2.4.1 Documentation attached: Compatibility color dot; hazard label; "Item Production/Certification/Identification" (W65) card packet, Form FMPC-CONT-1945-XX; "Nuclear Materials Transfer Record" 68/69/XX card packet, Forms FMPC-AC-1990, FMPC-AC-2220, and FMPC-AC-2221; Radiological Survey for surface contamination per Topical Manual, FMPC-2089.

- 7.2.5 The MVO checks the consignment for the following (Refer SOP 20-C-605):

- 7.2.5.1 Condition of the container.

NOTE: DOT approved drums and FM approved five gallon stainless steel safety cans with self closing spigots are acceptable containers (See Figures 1 and 2).

NOTE: Self-closing spigots shall not bind.

- 7.2.5.2 Security of the lid or closure.

NOTE: Lids shall be taped to drums of liquid waste to avoid spills.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 7 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None Issue Date: 07-21-89

7.0 PROCEDURE (cont.)

7.2.5.3 Leakage or presence of material on external surface of the container.

R 7.2.5.4 DELETED

7.2.5.5 Security of load on transport vehicle.

NOTE: Containers and/or SACs shall be strapped down.

7.2.5.6 Compatibility of material.

NOTE: Only containers identified by one dot type color code shall be moved in each load except for containers identified by an orange dot code which may be moved with other colors.

7.2.5.7 If the inspection indicates a condition that is not acceptable, proceed per Item 7.5.

7.2.6 If all inspections are acceptable, the MVO shall sign the "Nuclear Materials Transfer Record" 68/69/XX Cards, Forms FMPC-AC-1990, FMPC-AC-2220, and FMPC-AC-2221 and transport the consignment to the specified storage area.

CAUTION: THE SAC IS MADE OF PLASTIC AND MAY BE DAMAGED IN HANDLING OR MAY SLIDE ON SMOOTH SURFACES.

7.2.7 The MVO shall wait at the delivery point for MC&A and Waste Management Supervision to accept and sign the "Nuclear Materials Transfer Record", cards Forms FMPC-AC-1990, FMPC-AC-2220, and FMPC-AC-2221.

7.2.8 If the material is rejected at the delivery point, the MVO shall proceed per Item 7.5.

7.3 Other Vehicle Transport Process

7.3.1 The Generator or Waste Management shall proceed as follows:

7.3.1.1 Notify the Supervisor of the Hazardous Waste Storage Area that a specific number of drums are prepared for transport to storage.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 8 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None Issue Date: 07-21-89

7.0 PROCEDURE (cont.)

7.3.1.2 Obtain the storage location from the supervisor.

7.3.1.3 Notify the Transportation Dispatcher of hazardous waste for shipment, material type, packaging, and amount of material to be moved.

NOTE: Per RCRA regulation, the Generator or Waste Management has one day to notify Transportation of hazardous waste to be moved.

7.3.1.4 Notify the Dispatcher of special vehicle requirements such as pickup truck or flatbed.

7.3.2 The Dispatcher notifies the supervisor of the Hazardous Waste Storage Area that a specific volume of material is being transported.

7.3.3 The Dispatcher/Supervisor sends an MVO and the required vehicle type to the waste location within one day.

NOTE: RCRA regulations allow one day for Transportation to pick up the waste container and transport the container to Waste Management and one day for Waste Management to move the waste to storage.

7.3.4 The MVO performs Steps 7.2.4 thru 7.2.5.7.

7.4 Miscellaneous Movements

NOTE: The Generator or Waste Management may have a requirement to move containers of hazardous waste other than to a storage building. The waste may be moved within an SAA; within a building to stage material for shipment; for physical inventory; between or within buildings to obtain scale weight; remove material from non-accumulation areas such as fields; or for any other purpose requiring an MVO and vehicle to move hazardous waste.

NOTE: Movements outside or between buildings or from a field location shall be documented by a "Interplant Nuclear Material Transfer Record", Form FMPC-PRO-614.

7.4.1 The Generator or Waste Management shall notify the Transportation Dispatcher of location of waste containers, material type, packaging, and amount to be moved.

NOTE: MVOs assigned to the Generator or Waste Management may move material as directed by the Generator or Waste Management without notifying the Dispatcher.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 9 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None Issue Date: 07-21-89

7.0 PROCEDURE (cont.)

7.4.2 The Dispatcher/Supervisor directs an MVO to the location of the waste to be moved if support is required.

7.4.3 The MVO checks the containers of waste as follows:

7.4.3.1 Condition of the container.

NOTE: DOT approved drums and FM approved five gallon stainless steel cans are acceptable containers (See Figures 1 and 2).

NOTE: Self-closing spigots shall not bind and the bungs shall be sealed with pipe tape.

7.4.3.2 Security of lid or closure.

NOTE: Lids shall be taped to drums to avoid spills.

7.4.3.3 Leakage or presence of material on external surface of the container.

R 7.4.3.4 DELETED

7.4.3.5 Security of load on trailer or vehicle.

R NOTE: All containers shall be strapped down.

7.4.3.6 Compatibility of material.

NOTE: Only containers identified by one dot type color code shall be allowed per vehicle except for containers identified by an orange dot code which may be transported with other color codes.

7.4.3.7 If inspection reveals an unacceptable condition, the MVO shall proceed per Item 7.5.

VAS

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 10 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation	Supersedes: None	Issue Date: 07-21-89

7.0 PROCEDURE (cont.)

7.4.4 The MVO moves the material to the location designated by Generator or Waste Management.

7.5 Rejection of Consignment Process

7.5.1 The MVO notifies the Dispatcher or a Transportation Supervisor of any questionable condition of the consignment.

NOTE: This includes but is not limited to those conditions identified in Steps 7.1.5, 7.2.5, or 7.4.3 as appropriate.

7.5.2 The MVO or Dispatcher requests the assistance of the Transportation Supervisor to evaluate the consignment.

7.5.3 The Transportation Supervisor evaluates the consignment and communicates any concerns to the Generator and/or Waste Management and directs the MVO to perform additional tasks as required.

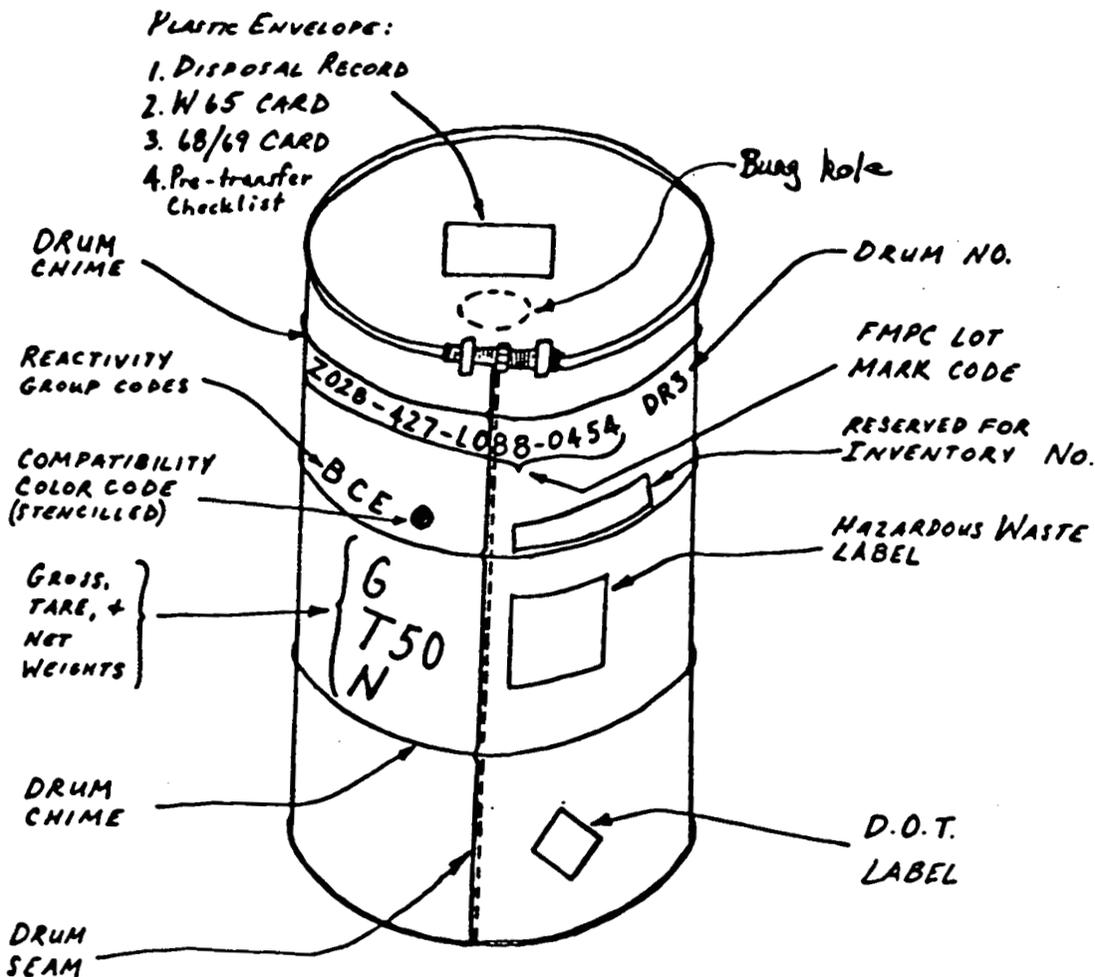
7.5.4 Concerns which are confirmed to be noncompliances along with corrective actions will be documented by the generator in the Hazardous Waste Disposal Record, Form FMPC-PRO-3064 per SOP 20-C-605 or SOP AnL-01-0053 as applicable.

NOTE: When all of the confirmed deficiencies have been corrected, the transport action will be initiated by the Generator/Waste Management.

8.0 APPLICABLE FORMS

None

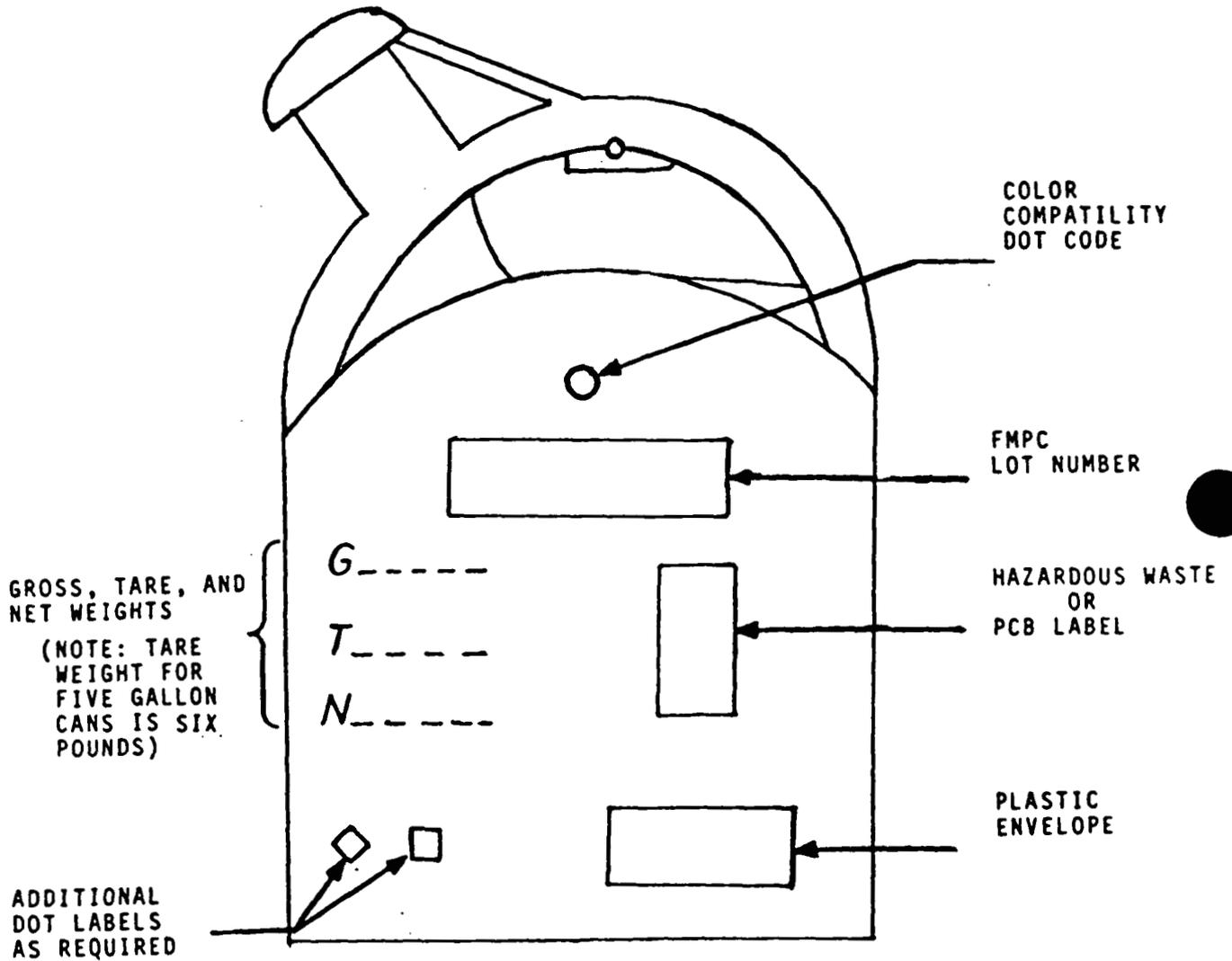
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation	Supersedes: None	Issue Date: 07-21-89



NOTE: Bung type drums shall be labelled as shown except that the bung hole will be used to center the labels. Chime locations may also vary.

RCRA WASTE DRUM LABELING
Figure 1

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 12 of 13 Revision No. 3	2343
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE		PO-S-06-001
			SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None	Issue Date: 07-21-89



NOTE: Container shall be marked with the appropriate color code (enriched, normal, depleted) per the FMPC Lot Marking and Color Coding System and SOP AnL-01-0053.

FM APPROVED STAINLESS STEEL SAFETY CAN
 RCRA WASTE LABELING
 Figure 2

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO SITE SERVICES DOCUMENT PROGRAM		Page 13 of 13 Revision No. 3
SITE SERVICES PROCEDURE	MOVEMENT OF HAZARDOUS WASTE	PO-S-06-001
		SECTION PROCEDURE
Authorization: Signature on File W. R. Den Herder, Transportation		Supersedes: None Issue Date: 07-21-89

RECORD OF ISSUE/REVISIONS

<u>DATE</u>	<u>REV. NO.</u>	<u>DESCRIPTION AND AUTHORIZATION</u>
07-21-89	0	Request for procedure for movement of Hazardous Waste per Request No. P89-338, initiated by W. R. Den Herder.
10-18-89	1	Revision to Definitions/Update per Request No. P89-375, initiated by W. R. Den Herder.
01-31-90	2	Revised to include non-satellite accumulation generated waste movement per Request No. P89-423, initiated by W. R. Den Herder.
01-09-91	3	Revised to incorporate CIO Nos. C90-042 (P90-271), C90-043 (P90-272), and C90-044 (P90-273).

TITLE:

SOP - MOVING AND STORING NUCLEAR MATERIALS¹ ONSITE AT THE FMPC

NON-CONTROLLED COPY.

20-C-101

DIVISION & PLANT:	SUPERSEDES:	PREPARED BY:	DATE ISSUED:
Prod. Proc. All	NLCO-821, Revision 4 October 27, 1970	C. W. Baer	9/19/75

Pages 9 and 10 revised: 10/15/82

TABLE OF CONTENTS

	<u>PAGE(S)</u>
Description of Operations	2
Environmental Considerations	3
Industrial Safety Requirements	3 - 5
Procedure	5 - 8
1. Initiating Onsite Transfers of Nuclear Material	5 - 6
2. Moving Nuclear Material Onsite	7
3. Receiving Nuclear Material from Onsite	7 - 8
Appendix I - Color Coding and Identification	9 - 11
Depleted Uranium Materials	9
Normal Uranium Materials	10
Enriched Uranium Materials	10 - 11
Thorium Materials	11
Container Identification Obliteration (Empty Red Drums and Cans)	11
Identification of Method of Nuclear Safety Control in Storage Areas	11
Appendix II - Uranium Materials Lists and Nuclear Safety Limits	
List 1 - Uranium Metal and High U Density Materials	12 - 14
Table 1 - Safe Mass and Slab Limits for List 1 Materials	15
List 2 - Uranium Compounds & Mixtures of Materials Containing Uranium	16 - 17
Table 2 - Nuclear Safety Limits for List 2	18
List 3 - Contaminated (Low U Density) Materials	19 - 20
Table 3 - Nuclear Safety Limits for List 3	20
Nuclear Safety Limits for Vehicle Loads	21
Spacing Requirements	21

¹Nuclear material here includes depleted, normal, and enriched (<2.1% ²³⁵U) materials and thorium metal and materials. Uranium metals and materials of greater enrichments will be subject to nuclear safety limits specified and authorized by a Nuclear Safety Operational Authorization NLO-H&S-1354 or by limits in an authorized Manufacturing Specification.

DESCRIPTION OF OPERATION

Trailers, mobile hoppers, and fork trucks, which are supplied by Transportation, are loaded with nuclear materials for transfer from one plant or storage area to another. Records are prepared to direct each transfer and maintain an accurate account of the nuclear materials in an area. Transfers of nuclear materials usually are controlled and recorded by the use of a packet of three EDP cards: Transfer Record NLO-AC-1990, Receipt Record NLO-AC-2220, and -XX, Material Identification Record NLO-AC-2221.

There are exceptions to the use of the EDP card packet. In some instances the form Interplant Transfer NLQ-PRO-614 is used:

- Examples:
1. Red tag metal samples at the end of the month (monthly accumulation).
 2. Monthly accumulation of "D" residues going directly to the pit.
 3. Memo transfers for internal control (within material balance areas).

The transfers of ingots from Plant 9 to Plant 6 for heat treating are handled in this way.

4. Materials shipped from Technical Laboratory to other location.

Ingots are transferred from Plant 5 to Plant 9 by means of Ingot-Rod Activity Record's sub portion Notice of Ingot Production and Transfer NLO-AC-1125.

The moving, including storing, of all nuclear materials is done with careful adherence to industrial safety, fire safety, health, nuclear materials control, and transportation requirements. Personnel maintain and check color coding and identification when shipping and receiving materials and during long term storage of them.

Enriched uranium materials, <2.1% ²³⁵U are transferred and stored under the additional regulations necessary to assure nuclear safety. Color coding and identification of enriched materials are maintained at a high standard as an integral part of maintaining nuclear safety.

When machinery, metals, tools, or other items are to be shipped to Decontamination, they must be marked to indicate the isotopic level of the contamination - natural (normal), enriched, or depleted. The maximum % ²³⁵U must be designated.

ENVIRONMENTAL CONSIDERATIONS

It is the intention of NLO, Inc. to achieve and maintain those levels of air and water quality which will protect health and promote welfare and safety. The responsibility for limiting the release of pollutants to tolerable quantities rests with all personnel, both management and operators.

INDUSTRIAL SAFETY

1. All employees will wear such protective equipment as is suitable for the particular operation, such as gloves, respirators, protective suits, and eye protection in addition to the prescribed work clothing. Posted requirements for eye protection areas are to be followed.
2. All spills will be cleaned up promptly to prevent the spread of contamination.
3. Materials of a corrosive nature will be placed in containers constructed of or lined with a corrosion resistant material.
4. Floor loading limits specified for an area will not be exceeded.
5. Drums will be limited to 1000 lb of material if a 4000 lb capacity fork truck is available, or 1500 lb if a 6000 lb capacity fork truck is at hand. Palletized drums will not be stacked higher than three units.

NOTE Drums of material in long term storage will be inspected quarterly for leakage and deterioration. Leaking or significantly deteriorated drums will be replaced or moved to a controlled pad if processing is imminent.

6. Ingots may be stacked up to three skids high if they are uniformly distributed in plane and if nuclear safety limits are not exceeded.

7. Fire Safety

7.1 Drums of pyrophoric materials will be stored so that both nuclear safety and fire safety requirements are met. When safe mass storage is used, two foot of spacing between masses is required. An access aisle for fire protection is required between each array of five parallel rows of material. Skids of materials will be arranged in herringbone fashion in the

In the case of materials stored according to safe mass/unit area, see Note 6 under List 1.

7.1.1 Briquettable chips will be packaged in cans or drums not larger than 30-gallon size and filled to no more than 2/3 capacity or a safe mass, whichever is smaller. No water or coolant will be added. Drums may be left open except that in winter they may be covered in outside storage to prevent accumulation of ice and snow.

7.1.2 Machining sludge will be packaged in cans or drums not larger than 30-gallon size and filled to no more than 2/3 capacity or a safe mass, whichever is the smaller quantity. Water or coolant will be added to provide a cover of at least two inches. Drums will be provided with two 3/8" vent holes, 180° apart, and about 1/2" below the upper chime. Drums need to be lidded only when they are moved interplant.

7.1.3 Sawdust and grinder sludge will be packaged 75 lb or a safe mass, whichever is the smaller quantity, in a drum. Water or coolant will be added to provide at least two inches of cover. Drums need to be lidded only when they are moved interplant. See 7.1.2 for venting requirements.

7.1.4 Briquettes will be packaged dry in covered, vented 10-gallon cans. If storage is at Plant 5 or 6, briquettes should be stored under provided canopy to decrease the possibilities of overheating.

7.2 Containers of pyrophoric materials shall be inspected at frequent intervals to detect overheating. Overheated containers should be cooled and ventilated. If an overhead spray system is provided, overheated drums of material should be placed under it.

7.3 Fire lanes are to be marked (stencilled) and kept clear of obstructions. There will be no parking of equipment in fire lanes.

8. Vehicle Load Limits

NOTE: Those limits, vehicle load or nuclear safety, which are most restrictive have priority.

8.1 Load limit for a trailer is 12,000 pounds (gross).

8.2 Load limit for a fork truck is not to exceed rated capacity as indicated on truck plate.

8.3 Load limits of other vehicles will be specified by the Transportation Department.

9. Any hoist to be used will be checked in the following respects on each day of its use before any lifting with it and a record of the check will be made by the operator.

- 9.1 Limit switches will be checked by actually operating them to see that they are in working order.
 - 9.2 Cables will be checked visually for condition. The presence of six or more broken wires per lay indicates an unacceptable condition.
 - 9.3 The hook and lifting device used with the hoist will be visually examined to confirm that they are not cracked or damaged.
 - 9.4 Safety latches will be checked to make sure they are in working order.
 - 9.5 A record of the check will be made by the operator, who will record the date, critical comments or statement of satisfactory condition of hoist, and his name.
10. Any incident which could have resulted in a significant intake of radioactive materials by inhalation, ingestion, or absorption will be immediately reported to a supervisor. The involved employees, wage or salary, will report to the Medical Department at the end of the shift to submit a urine sample. The supervisor will inform the Fire and Safety Inspector of the incident before the end of the shift during which the incident occurred.

PROCEDURE

1. Initiating On-Site Transfer of Nuclear Material under Control of the EDP Packet Record

(Transferring Plant's Responsibilities)

- 1.1 (Production Supervisor)³ When preparing to make a transfer, supply the necessary information to Production Records for the preparation of the EDP card packet (68, 69, XX cards) to cover the transfer and request Production Records to complete the packet.

NOTE: The packet is to be completed except for Transportation and Receiver signatures so that the -69 and -XX cards are ready for pickup prior to calling Transportation.

²Responsibilities of transferring plant, mover, and receiving plant, except for varying details of form usage and signature requirements, are the same with respect to transfers directed and documented by NLO PRO-614 or NLO-AC-1125 as those by EDP cards.

³The transferring and receiving plants' responsibilities may be accomplished by production supervisors or their designees, however, the supervisors are ultimately responsible for the satisfactory fulfillment of requirements.

- 1.2 (Production Supervisor) Check that the material to be transferred is acceptable in the following respects:
 - (1) Has been weighed on an NMC scale as required.
 - (2) Has been sampled and analysis forms completed if necessary.
 - (3) Has met all pertinent industrial safety requirements.
 - (4) Has been color coded and identified as appropriate according to requirements in Appendix I.
- 1.3 (Production Supervisor) Determine the nuclearly safe method to be used in transferring the material:
 - 1.3.1 Locate the material type code in one of the three lists in Appendix 2, Pages 12-20.
 - 1.3.2 Refer to the appropriate table (for example, Table 1 for a List 1 Material) for the method of maintaining nuclear safety. For some materials, the method is given in a footnote. In addition to the limitation by mass, slab, volume, or density, whether by lb U/ft³, g U/l, or lb U/gal, note the nuclear safety spacing and vehicle loading requirements.
- 1.4 (Production Supervisor) Instruct personnel who will be loading or storing materials in the color coding, nuclear safety, and vehicle gross load limitations (Industrial Safety Item 8).
- 1.5 (Production Supervisor) When the material has been loaded and the forms filled in, verify that the container count is correct and confirm that the EDP card packet's description of the material includes a lot number and is accurate.
- 1.6 (Production Supervisor) Check that the correct destination has been entered on the packet.
- 1.7 (Production Supervisor) Sign the EDP card packet as the shipper and return the packet to the Production Records office for distribution.
- 1.8 (Production Supervisor) Notify Transportation that the material is ready for transfer.
- 1.9 (Production Supervisor) Maintain the material's integrity and identification, and if it is enriched material, its nuclear safety configuration until Transportation moves it.

NOTE: Responsibility for the material remains with the initiator of transfer until the material is accepted for movement by Transportation.

2. Moving Nuclear Material On-Site under Control of EDP Packet

(Mover's Responsibilities)

- 2.1 (Mover) Pick up the EDP card packet from the initiating plant's Production Records office (or other specified, convenient location).
- 2.2 (Mover) Determine to the fullest extent practical that the shipment matches with the information on the EDP packet cards by verifying the container count and the lead trailer or mobile hopper number. If the move is to be by fork truck, check material's identification against record.
- 2.3 (Mover) After verifying that the shipment and the cards match, sign the packet in the space designated "Transportation."

NOTE: If the EDP packet cards do not accurately describe the shipment return the packet to the Production Records office for resolution of differences and correction of shipment or card and move on to the next scheduled transfer without waiting for correction of the error.

- 2.4 (Mover) Return the SS Transfer Record, top card of the packet, to the Production Control office for forwarding to Data Processing.

NOTE: Production Control will enter the transferring plant's number before 68 on the SS Transfer Record.

- 2.5 (Mover) Move verified shipment to the receiving location, being careful to maintain the load configuration of enriched materials for nuclear safety.
- 2.6 (Mover) Deliver the -69 and -XX cards directly to the receiver at a specific location.

3. Receiving Nuclear Material from On-Site under Control of EDP Packet Record

(Receiving Plant's Responsibilities)

- 3.1 (Production Supervisor) Using the -69 card and -XX card, check the shipment promptly in detail to make sure that it is acceptable and in accordance with the information on -69 Receipt Record card.

NOTES: If the material is not acceptable or is not as described by the Receipt Record, make a notation on the Receipt Record to indicate why the shipment is unacceptable, request Transportation to return the shipment, and send the -69 card bearing the notation and the -XX card along with it.

Report cases of shipments which are unacceptable or not as described in the Receipt Record immediately to the Production Control Central Office and to the office of the Plant Superintendent. If the incident occurs on the second or third shifts, notify the Shift Superintendent, who will relay the facts to the Production Control Superintendent.

- 3.2 (Production Supervisor) After verifying the shipment, sign the -69 card with -XX card at the indicated position and deliver the two cards to the Production Control office for disposition.

NOTE: Production Control will forward the Receipt Record card to Data Processing and will destroy the Material Identification Card after checking it against Data Processing's printout.

- 3.3 (Production Supervisor) Have material unloaded, and if enriched, handled and stored in conformance with nuclear safety requirements of this SOP or an appropriate Manufacturing Specification for the area.
- 3.4 (Production Supervisor) Have all materials $>2.1\%$ ^{235}U consigned to Plant 1 storage reweighed upon receipt at Plant 1, and discrepancies corrected on the EDP cards.

Also have the material sampled for % U and % ^{235}U upon receipt at Plant 1. Whenever Laboratory analyses indicate a discrepancy with the recorded ^{235}U contents, have Production Control initiate a "Correction and Recode" form NLO-AC-2376.

APPENDIX I

COLOR CODING AND IDENTIFICATION INFORMATION

<u>MATERIAL AND CONTAINER</u>	<u>COLOR CODE</u>	<u>IDENTIFICATION</u>
<u>Depleted Uranium Materials*</u>		
Depleted uranium residues, compounds, small metal pieces in drums or cans	Black with green stripe around can, white markings ⁴	Full lot mark; drum number; gross, tare, net weights
Depleted UF ₄ in cans	Black can with green stripe	Completed label
Depleted metal pieces in boxes	Green-white cards on both ends of box	Completed EDP -XX card
Depleted uranium compounds in hoppers	Painted green target or green-white card	Hopper number
Depleted uranium derby	Green-white card on metal or skid	Derby number on color code card or on the derby.
Depleted uranium ingot	Green-white card on metal or skid	Number and weight stamped on end, completed EDP -XX card
Depleted metal sample	None	Ingot number stamped on sample, bag tag marked "Depleted," EDP -17 card
Depleted samples other than metal	None	Completed label, marked "Depleted," analysis request form

⁴Containers of briquettes produced in Plant 6 may bear a printed label rather than stenciled markings.

*The symbol "Ti" will be stenciled in black letter 4 inches high on each container of depleted uranium-Ti alloy metal and/or turnings potentially recycleable through casting. These letters should be in a prominent location, preferably as near as practicable to the other identification.

APPENDIX I (Continued)

COLOR CODING AND IDENTIFICATION INFORMATION

<u>MATERIAL AND CONTAINER</u>	<u>COLOR CODE</u>	<u>IDENTIFICATION</u>
<u>Normal Uranium Materials</u>		
Normal uranium residues, compounds, small metal	Black with yellow stripe around can, white markings ^{4,5}	Full lot mark; drum number; gross, tare, net weights
Normal UF ₄ in cans	Black can with yellow stripe	Completed label
Normal uranium metal in boxes	None	Completed EDP -XX card
Normal uranium derby	None	Completed EDP -XX card
Normal uranium ingot	None	Ingot number, weight stamped on end, completed EDP -XX card.
Normal metal sample	None	Ingot number stamped on sample EDP -17 card.
Normal samples other than metal	None	Completed label, analysis request form
<u>Enriched Uranium Materials</u>		
Unlimited materials: compounds <0.98% ²³⁵ U and uranyl nitrate solution <2.00% ²³⁵ U and low density (contaminated).	Black drum or can with red stripe around body of container.	Full lot mark; drum number; gross, tare, net weights; enrichment. Drums for slag need not bear weights.
Mass, geometry, or concentration restricted mat'ls: metal >0.72% ²³⁵ U and compounds >0.98% ²³⁵ U (uranyl nitrate solution >2.00% ²³⁵ U).	Red drum or can.	Full lot mark; drum number; gross, tare, net weights, enrichment, nuclear material weight if material is mass restricted and assays less than 100%.
Enriched UF ₄ in cans, <0.98% ²³⁵ U	Black can with red stripe.	Completed label (red printing)
>0.98% ²³⁵ U	Red can.	As above.

⁴Container of briquettes produced in Plant 6 may bear a printed label rather than stenciled markings.

⁵The yellow stripe is not required on concentrates and on UO₃ produced at the FMPC.

APPENDIX I (Continued)

COLOR CODING AND IDENTIFICATION INFORMATION

<u>MATERIAL AND CONTAINER</u>	<u>COLOR CODE</u>	<u>IDENTIFICATION</u>
<u>Enriched Uranium Materials (Cont'd.)</u>		
Enriched uranium metal pieces in boxes	Red-white card	Completed EDP -XX card, enrichment on color code card
Enriched uranium derby on skid	Red-white card	Completed EDP -XX card, enrichment and derby number on color card.
Enriched uranium ingot on skid	Red-white card	Completed EDP -XX card, ingot number, weight, enrichment stamped on end, ingot number and enrichment on color card
Enriched metal sample	Red-white card	Ingot number stamped on sample, ingot number and enrichment on color card, EDP -17 card.
Enriched samples other than metal	None	Completed label, analysis request form.
<u>Thorium Materials</u>		
Thorium compounds and residues in drums or cans	Black with blue stripe, white markings	Full lot mark; drum number; gross, tare, net weights.
Thorium derby sections in cans	Black with blue stripe around can, white markings	P. O. number; lot number; weight; packaging date

CONTAINER IDENTIFICATION OBLITERATION

Identification markings on red containers, including drums and 6" diameter by 15" high cans, must be obliterated or removed immediately after the container is emptied unless the container is in a circuit of routine use. Examples of circuits in routine use are the feed material and product drum circuits which operate between drum digestion in the Refinery and extraction in the Pilot Plant.

IDENTIFICATION OF METHOD OF NUCLEAR SAFETY CONTROL IN STORAGE AREAS

Signs explaining the method of nuclear safety control employed will be displayed in process storage areas and general (warehouse and outdoor) storage areas.

Where there are a number of groups under different nuclear safety controls in indoor or protected storage, the method of control may be marked on the standard red-white color code cards stapled to the skid or box as an alternative to the use of signs.

APPENDIX II

URANIUM MATERIAL LISTS AND NUCLEAR SAFETY LIMITS

LIST 1 - URANIUM METAL AND HIGH U DENSITY MATERIALS
 (Containing >200 lb U/ft³ or >10% free U)

NOTE: Nuclear safety limits for List 1 materials are in Table 1 with exceptions in indicated footnotes.

<u>CODE AND DESCRIPTION</u>	<u>CODE AND DESCRIPTION</u>
041 Sludges, oily, for oxidation, high free metal	113 Zr clad metal from off-site to be declad in Zirnlo system
046 Sludges, nonoily, for oxidation, including high and low free metal	114 Zirnlo feed, classified and sawed
(6) 070 Rockwell spills	118 Hollow cores with broken drill all types - bits to be removed and cores pickled prior to remelt
075 Clad metal for HNO ₃ dissolver	119 Solid metal, other than cores with embedded steel
076 Metal for HCl dissolver	(9) 120 Chemical reject primary ingot for dissolver feed
080 Partially oxidized metal, for sorting, containing Metl-X	121 U ₃ O ₈ +8 mesh, high fluoride
081 Partially oxidized metal, for sorting not containing Metl-X	122 U ₃ O ₈ +8 mesh, low fluoride
084 Bad reduction (no derby)	124 Zirnlo: Partially declad fuel elements
102 Scrap UO ₂ (pellets)	128 Clad uranium metal: Declad to machining or chemical treatment
103 Second generation top crops for dissolver	(10) 129 MgF ₂ , +20 mesh, high free U, high assay, including dirty prill, and Code 5 derbies
(7) 104* Metal spills and extrusion ends, metal high in impurities for HNO ₃ metal dissolver	130 Partially oxidized metal, for dissolver feed
106 Chips embedded in concrete - high calcium	131 Partially oxidized metal, oxidation feed
(8) 107* Chips and turnings contaminated with non-SS materials for oxidation	136 Metal to be oxidized
109* Sawdust for oxidation	138 Oxides clad or mixed with any metallic element other than Al, Zr, or stainless steel
110* Non-briquettable chips and turnings for oxidation	139 Uranium alloyed or canned with elements other than Al, Mo, c Zr
(8) 111* Briquettable chips and turnings, from standard metal	
(8) 112* Briquettable chips and turnings, high impurities, for briquetting and double melting	

*See applicable fire safety requirement under Industrial Safety Item 7.

⁶If a Rockwell spill at the 2.1% ²³⁵U level cannot be handled under the limit given in the table, store it in an area which is safe from water moderation.

APPENDIX II (Cont'd)

LIST 1 - URANIUM METAL AND HIGH U DENSITY MATERIALS (Cont'd)
 (Containing >200 lb U/ft³ or >10% free U)

NOTE: Nuclear safety limits for List 1 materials are in Table 1 with exceptions in indicated footnotes.

<u>Code and Description</u>	<u>Code and Description</u>
141 Clad metal for acid dissolution not for Zirnlo	(9) 241 Double melt ingots to be sawed but not pickled prior to remelt
166 UO ₂ , refinery feed (pellets)	(9) 242 Chemical reject ingots (and other chemical reject material to be sawed and pickled or to be rolled, sheared, and pickled prior to remelt
218 Clean prill for double melting	243 Chemical reject solid metal to be sawed, but not pickled prior to remelt
(10)220 Code 2 derbies for double melting or shot blasting	(9) 244 Chemical reject double melt ingots from double melting to be sawed and pickled
221 Solid metal for pickling prior to remelt, does not require blending	245 Chemical reject double melt solid metal to be sawed, but not pickled, prior to remelt
222 Solid metal-includes physical but not chemical reject ingots; to be sawed or crushed and pickled prior to remelt	251 Chemical reject solid metal for pickling prior to remelt
223 Solid metal to be sawed, sheared or crushed, but not pickled prior to remelt	(8) 252* Briquettes high in impurities for double melting
227 Metal samples for double melting	253 Reject rods
228 Solid metal to be pickled	(10)254 Code 4 or bottom burnout derbies for double melting
229 Pickled first generation top crop for double melting	300 Derbies (codes 1 & 3)
230 Double melt ingot crops to be pickled	(8)302 Briquettes
231 Standard remelt metal to be caustic leached and pickled	304 Solid remelt metal - low impurities - does not require blending or pickling - not from double melts
232 Pickled metal for double melting other than first generation top crop	306 Experimental shapes - including classified shapes not to be crushed
234 Physical reject billets to be sawed prior to remelt	
235 Tubular elements to be crushed	
236 Extrusion butts to be pickled	
239 Chemical reject sawed remelt metal to be caustic leached and pickled	
(9)240 Double melt ingots to be sawed and pickled prior to remelt	

*See applicable fire safety requirement under Industrial Safety Item 8

24" from other fissionable material. Plant Superintendent and Nuclear Safety will decide on disposition within 24 hours.

(7) If neither the 805 lb nor the 8" limit can be applied to a metal spill at the 1.25% ²³⁵U level, a maximum charge of 2150 lbs

APPENDIX II (Cont'd)

LIST 1 - URANIUM METAL AND HIGH U DENSITY MATERIALS (Cont'd)
 (Containing >200 lb U/ft³ or >10% free U)

NOTE: Nuclear safety limits for List 1 materials are in Table 1 with exceptions in indicated footnotes.

<u>Code and Description</u>	<u>Code and Description</u>
307 Zirnlo product	402 Special hollow ingots
(11)308 Ingot crops and duds	403 Special castings, including static and centrifugal
310 Pickled crops from SR metal	(9) 404 NPR ingots - raw
311 SR standard solid metal - for remelt	405 NPR ingots - direct castings for finished billet machining
313 Pickled crops from HW metal	(9) 410 NPR ingots - finished
314 Pickled crops from double melt ingots	411 Uranium shot
322 Chemical reject solid remelt metal - does not require pickling	450 Billets, rolling mill
325 Reject cores	452 HW rolled rods for I&E
326 Reject billets, including sawed billet sections	(12)453 NPR extruded tubes
330 Sections from sawed double melt ingots	454 Raw billets - sawed extrusions
333 Pickled chemical reject crops	457 Special rods
334 Pickled chemical reject crops from sawed double melt ingots	458 HW extruded tube - rod in tube
335 Crushed tubular elements	459 NPR raw billets - upset forged
336 Pickled extrusion butts	502 Hanford ingot cores
340 Chemical reject sections from sawed double melt ingots	503 NPR finished billets from extrusion
(9) 400 Standard ingots - HW	504 Cores other than 502
401 Special solid ingots	506 Special machined shapes

may be stored as a unit until it can be cut up for disposal. Two feet spacing is required. Spills of 2.1% ²³⁵U enriched metal will be handled 1/group with 24" separation from other fissionable material. Spills which are porous or have projections will be protected from entrance of water. Plant Superintendent and Nuclear Safety will decide on disposition within 24 hours.

- (8) Chips-turnings and briquettes of the enrichments listed below may be stored under mass/unit area control rather than under limits given in Table 1 as follows:

<u>Percent ²³⁵U</u>	<u>Chips - Turnings</u>	<u>Briquettes</u>
0.95%	550 U lb/30-gal drum	342 U lb/10-gal can
1.25%	270 U lb/30-gal drum	166 U lb/10-gal can
2.1%	100 U lb/30-gal drum	

Drums (or cans) may be side by side. Skids of containers may be stored in a maximum of five parallel rows. No stacking is permitted. Each 5-row array will be separated from another by an aisle to allow access for fire protection.

APPENDIX II (Cont'd)

TABLE I

SAFE MASS LIMITS FOR URANIUM METAL AND HIGH U DENSITY MATERIALS											
Smallest Dimension (in.) of Solid Piece or Wall Thickness of Hollow Cylinder*											
% ²³⁵ U	Any Size	≥1.5	≥2	≥3.5	≥4	≥5	≥7	≥8	≥9	≥11	≥12
0.86	5100	5200	12800	∞	-	-	-	-	-	-	-
0.95	2700	5200	12800	∞	-	-	-	-	-	-	-
1.25	805	1470	2250	5870	7450	10400	14300	18200	∞	-	-
2.1	152	480	695	1450	1720	2240	3260	3780	4300	5300	5780

SAFE SLAB LIMITS FOR URANIUM METAL AND HIGH U DENSITY MATERIALS											
Smallest Dimension (in.) of Solid Piece or Wall Thickness of Hollow Cylinder*											
% ²³⁵ U	Any Size	≥1.5	≥2	≥3.5	≥4	≥5	≥7	≥8	≥9	≥11	≥12
0.86	20.0	15.5	22.0	∞	-	-	-	-	-	-	-
0.95	12.5	15.5	22.0	∞	-	-	-	-	-	-	-
1.25	8.0	10.5	13.0	27.0	32.0	41.5	77.0	300.0	∞	-	-
2.1	4.75	6.0	7.0	10.0	11.0	13.0	17.0	19.0	21.0	25.0	27.0

*Values in this table may be applied to hollow metal cylinder ≤ 0.95% ²³⁵U by using the combined wall thickness (OD-ID) as the "smallest dimension".

- (9) Piped or porous ingots at 0.86 and 0.95% ²³⁵U levels must be handled under most restrictive (any size) limits. At 1.25% and 2.1% ²³⁵U levels they must be handled 1/group.
- (10) Derbies graded as code 4 or 5 derbies must be handled under most restrictive (any size) limits.
- (11) Duds at 0.86% and 0.95% ²³⁵U levels with voids or projections must be handled under most restrictive (any size) limits. At 1.25% and 2.1% ²³⁵U levels they must be handled 1/group.
- (12) At 0.95% ²³⁵U level banded boxes of extrusions from off-site may be transported up to 12,000 lb/vehicle load and may be stacked three boxes high in storage.

APPENDIX II (Cont'd)

LIST 2 - URANIUM COMPOUNDS & MIXTURES OF MATERIALS CONTAINING URANIUM
 (Compounds, slurries, solutions, mixtures containing ≤ 200 lb U/ft³ and $\leq 10\%$ free U metal)

NOTE: Nuclear safety limits are in Table 2 with exception in indicated footnotes.

<u>Code and Description</u>	<u>Code and Description</u>
029 Dust collector bags	(16) 072 U or Th nitrate solutions, high
032 Incinerator ashes - material	impurity such as Zirnlo decopperin
passing through grate or screen	solutions - for Refinery processing
040 Sludges for blending, and screening	079 Unfired reduction charges plus
042 Sludges, cleanout, nonoily, for	MgF ₂ from liner cave-ins.
roasting	082 Off-spec UF or ThF ₄
044 Sludges, salt, soft, chloride	083 U chloride salts, reject
(for Plant 8 recovery)	085 U ₃ O ₈ - Rotexed - other than
045 Sludges, salt, soft, nonchloride	Plant 8's own product - not meeting
047 Samples, non-metallic,	Refinery specifications for con-
miscellaneous	tinuous digestion
048 Oil burner ash	086 U ₃ O ₈ - Rotexed - Plant 8's own
049 Graphite burner ash	product - not meeting Refinery
059 Ash from burning dust	specifications for continuous
collector bags	digestion
061 Furnace salt solidified,	087 Roasted sump cake - high fluoride -
nonchloride	for milling
062 Dust collector residues -	100 Scrap U ₃ O ₈ , low fluoride
high fluoride, less than	101 Scrap U ₃ O ₈ , high fluoride
20 percent assay	102 Scrap UO ₂ powder
063 KOH reversion cake	117 Wet ammonium diuranate cake
064 Dust collector residues,	132 Dust collector residues, low
pyrophoric, high fluoride	fluoride
065 Scrap salts, high fluoride,	134 U ₃ O ₈ for reoxidation
including floor sweepings	135 Dust collector residues, high
066 Scrap salts, low fluoride,	fluoride, greater than 20% assay
including floor sweepings	143 Roasted calcium precipitated sump
(13) 067 Wet sump or filter cake,	and filter cake
halide contaminated	144 Offsite sump and filter cakes after
(14) 068 Wet sump or filter cake,	roasting at FMPC
oil contaminated	
(15) 069 Wet sump or filter cake,	
nonoily, and nonhalide	
071 Rockwell cleanings	

- (13) Unlimited at $\leq 1.25\%$ ²³⁵U. At higher enrichments, standard limits apply.
- (14) Unlimited at $\leq 2.0\%$ ²³⁵U. (NLO material only. Based on precipitation by MgO or CaO.)
- (15) Unlimited at $\leq 2.0\%$ ²³⁵U. (NLO material only. Based on precipitation by NH₄OH)

APPENDIX II (Continued)

LIST 2 - URANIUM COMPOUNDS AND MIXTURES OF MATERIALS CONTAINING URANIUM

(Compounds, slurries, solutions, mixtures containing ≤ 200 lb U/ft³ and $\leq 10\%$ free U metal) - (Continued)

NOTE: Nuclear safety limits are in Table 2 with exception in indicated footnotes.

CODE AND DESCRIPTION	CODE AND DESCRIPTION
145 Roasted Ammonium - precipitated sump and filter cake	163 Roasted, milled and/or screened ammonium - precipitated sump and filter cakes
146 Roasted magnesium - precipitated sump and filter cakes	164 Roasted, milled, and/or screened magnesium - filter cakes
147 Roasted, milled and/or screened ADU cake for slag leach digestion	165 U ₃ O ₈ , reoxidized crucible burn
148 Roasted, milled, and/or screened ADU cake for continuous digestion	167 UO ₂ powder - refinery feed
(16-a) 150 Uranyl nitrate solutions	168 Crushed furnace salts and slud non-chloride
153 -8 mesh product from oxidizing +8 material	169 Roasted furnace salts and slud non-chloride
154 U ₃ O ₈ rotexted Plant 8 furnace product	(16) 200 UO ₃ product
155 U ₃ O ₈ -8 mesh from rotexing of other than Plant 8's own products - low fluoride	201 UO ₃ reactor recycle tails
157 Reject UO ₃	202 UO ₂
158 Phosphate ash	(16-a) 204 Purified uranyl nitrate solution
159 Roasted, milled, and/or screened calcium - precipitated sump and filter cakes	206 Blended UF ₄ charge
(17) 160 Impure uranyl nitrate - solid	(17) 207 Purified uranyl nitrate solid
162 Offsite sump and filter cakes after roasting, milling and/or screening at FMPC	208 ADU powder
	(18) 210 UF ₄
	212 UF ₄ from Hanford UO ₃
	213 UF ₄ from Savannah River UO ₃
	214 U ₃ O ₈ from recycle UO ₃ (ROR process)
	(19) 216 Charged UF ₄ pots, WIP

(16-a) Unlimited if analyses $< 2.00\%$ ²³⁵U. At 2.1% U, the original solution must be limited 238 g U/l.

(16) UO₃ product $\leq 1.25\%$ ²³⁵U may be stored 2000 lb U maximum in drums or 3600 lb U maximum per mobile hopper.

UO₃ product 2.00% ²³⁵U may be stored two 30-gal drums/skid (total net weight on skid 2000 lb), 20" between drums on skid, and 24" from drums on other skids. Plant 7 elevator is to carry a maximum of 2 drums at one time. Floor loading in Plant 7 is to exceed 125 lb/ft².

(17) Unlimited if analyses $< 2.00\%$ ²³⁵U. At 2.1% U, limit is 215 lb U.

(18) At 1.25% ²³⁵U 10-gallon cans of UF₄ (225 lb/can maximum of 170 lb U) in a single place may be stored edge-to-edge in unlimited array (mass/unit area control.)

UF₄ product 2.00% ²³⁵U may be handled in same manner as UO₃ product (second paragraph of note 16).

(19) At 2.0% or 2.1% ²³⁵U, one pot/group.

APPENDIX II (Cont'd)

TABLE 2

NUCLEAR SAFETY LIMITS FOR URANIUM COMPOUNDS & MIXTURES OF MATERIALS CONTAINING URANIUM		
% ²³⁵ U	These materials may be handled by mass (lb U) or vol (max. capacity in gal) limits	
	Mass (U lb)	Volume* (max. capacity in gal.)
≤ 0.98	Unlimited	Unlimited
≤ 1.25	2000	179
≤ 2.0	252	30
≤ 2.1	215	26

*Container's capacity may not exceed that listed for a given enrichment.

APPENDIX II (Continued)

LIST 3 - CONTAMINATED (LOW U DENSITY) MATERIALS

NOTE: Nuclear safety limits are in Table 3 with exceptions indicated in footnotes.

<u>CODE AND DESCRIPTION</u>	<u>CODE AND DESCRIPTION</u>
001 Discard process residues, trailer cakes, waste slurries, raffinates, etc.	022 Contaminated TBP and/or kerosene mixtures and sludges
003 Non-burnable trash - to be discarded after washing and/or cleaning	023 Oily MgF ₂
004 Contaminated steel and equipment (off-site receipts only) after washing and/or cleaning	024 Contaminated graphite, crushed for processing (1% U)
006 Contaminated leather gloves for laundry (off-site receipts only)	025 Contaminated metallic filter elements
007 Trailer cakes, waste slurries, raffinates, not meeting discard specification	026 Contaminated carbon filter elements
008 Contaminated graphite for machining	027 Contaminated burnable cloths, paper, cartridges, contaminated burnable trash
009 Contaminated oil-soluble; coolant	028 Contaminated nonburnable filter cartridges, asbestos, polyethylene bags, etc.
010 Contaminated water containing chlorides	030 Magnesium oxide and magnesium zirconate from crucible cleanout
011 Contaminated soil, rocks, sand, bricks, and ceramics to be processed for SS recovery	²⁰ 031 Roasted MgF ₂ (blended with other materials) for slag leach digestion
012 Contaminated water or sump liquor, non-chloride	033 Incinerator cinders - material not passing through grate or screen
013 Contaminated solvent, trichlor, perchlor, etc., to be processed for SS recovery (Stencil type of solvent on container)	034 MgF ₂ for milling
015 Contaminated oil, insoluble - to burner	035 MgF ₂ or CaF ₂ , good liner material
017 Contaminated graphite, uncrushed, broken in large pieces, to burner (1% U)	036 MgF ₂ , -20 mesh, high free metal, for Plant 8 roasting
018 Contaminated Al turnings	037 MgF ₂ , ground, 90 percent -325 mesh for slag leach digestion
019 Contaminated magnesium	038 MgF ₂ or CaF ₂ , slag to be crushed - materials from breakout
020 Contaminated Merco-Dri and Hilco cake	039 Sludges, oily, from decant separation including Plant 6 oil separator
021 Drum decontamination residues; wet MgF ₂	

²⁰Density of material is to have been confirmed by laboratory analysis to \leq the same density listed for a given enrichment.

APPENDIX II (Continued)

LIST 3 - CONTAMINATED (LOW U DENSITY) MATERIALS

NOTE: Nuclear safety limits are in Table 3 with exceptions indicated in footnotes.

<u>CODE AND DESCRIPTION</u>		<u>CODE AND DESCRIPTION</u>	
043	Sludges, solvent-trichlor, perchlor, etc. (Stencil type of solvent on container)	073	U chloride or fluoride solutions, high impurity such as Plant 8 metal dissolver product not for refinery feed
053	Non-burnable metal with SS content	074	U sulphate solutions
060	Furnace salt, solidified, chloride (for Plant 8 recovery)	²¹ 088	Unroasted but milled MgF ₂ (blended with other materials) for slag leach digestion

TABLE 3

NUCLEAR SAFETY LIMITS FOR CONTAMINATED (LOW U DENSITY) MATERIALS

% ²³⁵ U	Above Materials are Unlimited if U Densities equal or are less than those below:		
	lb U/ft ³	g U/l	lb U/gal
≤0.98	200	3200	26.7
≤1.25	25	400	3.3
≤2.1	14.8	238	2.0

²¹ Density of material is to have been confirmed by laboratory analysis to be ≤ the safe density listed for a given enrichment.

APPENDIX II (Cont'd)

NUCLEAR SAFETY LIMITS FOR VEHICLE LOADS

The vehicle load limit for mass, slab, or mass/unit area restricted materials is a total of two safe masses in both inter-and intra-plant moves. In the case of mass restricted material, a two-foot spacing is required between safe masses. If the material is being handled by the safe slab or by the safe mass/unit area limit, the two masses may be together. Mass/unit area restricted material will be loaded in a single plane. Volume limited materials will be loaded one safe volume container per vehicle. "Unlimited" materials may be loaded to the capacity of the vehicle.

SPACING REQUIREMENTS

An isolation distance of two feet is required between nuclearly safe groups (safe masses, slabs, volumes, cylinders, or safe mass/unit area arrays) and between any such group and material in unlimited category. An isolation distance of one foot is required between all such groups and barriers or walls.

* * * * *

The above SOP has been approved by the Director of Procurement, Plant Superintendent, Production Control Superintendent, General Superintendent, Nuclear Safety, Health & Safety Division, and the Production Technology, Nuclear Materials Control, and Quality Control Departments.

Authorized By:

Assistant Manager 9/9/77
Date

REVISIONS

<u>PAGE(S)</u>	<u>DATE</u>	<u>DESCRIPTION AND AUTHORITY</u>
All	10/01/75	Formation of SOP requested by R. M. Spenceley and W. W. Wright in Request No. 66.
3	09/23/76	Drum loading maximum revised per Change Request No. 161 initiated by R. C. Heatherton and D. L. Dunaway.
10, 19, 20	04/12/78	Color coding clarified per Change Request No. 216 initiated by R. C. Heatherton and D. L. Dunaway.
8	05/22/78	Reweighing of material >2.1% ²³⁵ U on receipt made mandatory by Change Request No. 261, initiated by H. McDaniel.
12	11/15/78	Material type code 106 for concreted chips added per Change Request No. 286 initiated by R. C. Heatherton and D. L. Dunaway.
1, 5, 7, 10	02/18/82	References to SS materials changed to nuclear per Change in SOP #680 initiated by L. C. Dolan.
9, 10	10/15/82	Color coding for cans of UF ₄ revised per Change Request No. 753 initiated by E. M. Nutter.

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 1 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: GENERAL NUCLEAR SAFETY REQUIREMENTS	SOP 20-C-904	
		Section: Metals Plants Plant: All	
Authorization: F. J. Gurney <i>E. Schonegg</i>		Supersedes: None	Issue Date: 11-17-88

1.0 PURPOSE

The purpose of this document is to define the criteria for nuclear safety material handling and storage.

2.0 APPLICABILITY

- 2.1 This document is applicable to production areas that process, handle, and store depleted, normal, and/or enriched material.

3.0 RESPONSIBILITIES

- 3.1 The Area Supervisor shall be responsible for ensuring that sub-contractors, Maintenance, Transportation and Utilities personnel comply with Nuclear Safety procedures within their area of responsibility.
- 3.2 The Production Supervisor shall be responsible for ensuring that operators are trained, and comply with this SOP.
- 3.3 The operator shall be responsible for complying with this SOP.

4.0 DEFINITIONS

None

5.0 REFERENCES

- 5.1 SOP 20-C-101, "Moving and Storing Nuclear Materials On-Site at the FMPC"
- 5.2 SOP 20-C-102, "Nuclear Safety for Receiving, Storing, Repackaging, and Moving Enriched Uranium Materials 20% ²³⁵U from Off-Site"

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS

- 6.1 A defined safety system is not involved.
- 6.2 Spacing restrictions shall be adhered to.
- 6.3 Containers shall be identified so that the correct nuclear safety restrictions can be applied.
- 6.4 Containers shall be color-coded to prevent mixing of enrichment levels.

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 2 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: GENERAL NUCLEAR SAFETY REQUIREMENTS	SOP. 20-C-904	Section: Metals Plants Plant: All
		Authorization: F. J. Gurney	Supersedes: None
		Issue Date: 11-17-88	

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS (cont.)

6.5 Storage areas shall be posted as required.

6.6 Any circumstance which could have resulted in an intake of radioactive materials by inhalation, ingestion or absorption shall immediately be reported to a supervisor. The supervisor shall immediately report the circumstance of possible radioactive materials intake to Radiological Safety for evaluation. The involved employees shall report to Medical Services at the end of their shift or as directed to submit a urine sample and again report at the start of their next shift to submit another urine sample.

7.0 PROCEDURE

7.1 Spacing Requirements

NOTE: Nuclear Safety spacing restrictions maintain safe operating conditions by reducing the possibility of interaction between uranium bearing materials. Violation of spacing requirements reduces the margin of safety.

7.1.1 Spacing between a container, mass, or material stored as a safe grouping and other material shall be per Table 1.

TABLE 1
SAFE GROUP SPACING

DESCRIPTION	MINIMUM ISOLATION DISTANCE
Another safe grouping	2 feet
Material stored in the unlimited category	2 feet
Process equipment	2 feet
Walls or barriers	1 foot
Non-uranium bearing material	1 foot

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 3 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: GENERAL NUCLEAR SAFETY REQUIREMENTS	SOP 20-C-904	Section: Metals Plants Plant: All
		Authorization: F. J. Gurney	Supersedes: None Issue Date: 11-17-88

7.0 PROCEDURE (cont.)

7.1.2 Spacing between uranium bearing material stored as unlimited and other material shall be per Table 2.

TABLE 2
UNLIMITED GROUP SPACING

DESCRIPTION	MINIMUM ISOLATION DISTANCE
Material stored as a safe group	2 feet
Uranium-bearing material of different enrichment stored in the unlimited category	2 feet
Non-uranium bearing material	1 foot

7.1.3 Spacing requirements of items 7.1.1 and 7.1.2 shall be adhered to unless specific spacing is given in the process procedure.

7.1.4 Aisles shall be eight feet in width to allow room for operation of material handling equipment.

7.2 Container and Material Identification

NOTE: Material identification is essential to ensure that the nuclear restrictions for handling and storing are being followed.

7.2.1 Containers filled with uranium-bearing material shall be color-coded (refer to Item 7.3) prior to use and premarked with percent enrichment, material codes, and a tare weight of the container.

7.2.1.1 Filled containers shall be marked with gross and net weights.

7.2.2 Non-uranium bearing materials shall be contained in solid black cans or drums.

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 4 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: GENERAL NUCLEAR SAFETY REQUIREMENTS	SOP. 20-C-904	
		Section: Metals Plants Plant: All	
Authorization: F. J. Gurney	Supersedes: None	Issue Date: 11-17-88	

7.0 PROCEDURE (cont.)

7.2.2.1 The containers shall have a description of the material stenciled on the side.

7.2.2.2 A generic stencil "No fissile Material" may be used.

7.2.3 Empty uranium-bearing containers shall have the material code, enrichment, and weights marked out, unless otherwise specified in another process procedure.

7.3 Color Coding

NOTE: The color-coding system ensures safe transport and storage of uranium-bearing materials by reducing the possibility of intermixing enrichments. The enrichment is the percent of U^{235} in an amount of uranium.

7.3.1 Drum and/or can color coding shall be in accordance with Table 3.

TABLE 3
COLOR-CODE (Drums/Cans⁽¹⁾)

ENRICHMENT	CONTAINER	STRIPE	MARKINGS
Depleted	Black	Green	White
Natural (Normal)	Black	Yellow	White
Enriched, Unrestricted	Black	Red	White
Enriched, Restricted by Mass, Volume, Concentration, etc.	Red	None	White
Waste Shipments	White	None	Black
Thorium	Black	Blue	White

(1) Six-inch diameter bare aluminum cans marked per item 7.2.1 shall be handled one at a time and stored according to the spacing requirements in item 7.1.

PRODUCTION
OPERATIONS
PROCEDURE

Title: GENERAL NUCLEAR SAFETY REQUIREMENTS

SOP. 20-C-904

Section: Metals Plants
Plant: All

Authorization: F. J. Gurney

Supersedes: None

Issue
Date: 11-17-88

7.0 PROCEDURE (cont.)

7.3.2 The enrichment of uranium metal on skids shall be identified by attaching a color-coded card to the skid. Table 4 identifies the color-coding for cards.

TABLE 4
CARD COLOR CODE

ENRICHMENT	COLOR-CODE ⁽¹⁾
Depleted	Green/White
Natural (Normal)	Yellow/White
Enriched	Red/White - Enrichment marked on card.
⁽¹⁾ U ²³⁵ cylinders and T-Hoppers shall be marked with cards indicating the enrichment.	

7.4 Handling Requirements for Solid Red Containers

NOTE: Solid red drums/cans shall be handled with care.

7.4.1 30 and/or 55 gallon solid red drums shall not be stacked.

7.4.2 5 gallon and 10 gallon red cans may be stacked 2 high when permitted by individual Manufacturing Specification.

7.4.3 Small containers shall not be stacked on top of 30 and/or 55 gallon drums.

7.4.4 Solid red drums/cans shall be used for enriched uranium material requiring special Nuclear Safety Restrictions.

7.4.4.1 Trash or non-uranium bearing material shall not be placed in solid red drums/cans.

7.4.4.2 Empty solid red drums/cans shall be stored in accordance with industrial safety limits. Red containers shall not be used as safety barriers or for any purpose other than the intended use.

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 6 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: GENERAL NUCLEAR SAFETY REQUIREMENTS	SOP 20-C-904	
		Section: Metals Plant Plant: All	
Authorization: F. J. Gurney	Supersedes: None	Issue Date: 11-17-88	

7.0 PROCEDURE (cont.)

7.5 Equipment Identification

7.5.1 Process equipment shall be marked with color-coded cards showing the enrichment of the uranium currently being processed.

7.6 Handling Material of Unknown Enrichment

7.6.1 Uranium of unknown enrichment shall be handled with the proper Nuclear Safety Restrictions for the highest possible enrichment until analyzed. (e.g. safe mass, concentration, geometry, etc.).

7.6.1.1 After analysis, the material shall be remarked and handled according to the limits for the actual enrichment.

7.6.1.2 Any material or equipment which has come into contact with uranium must be assumed to contain uranium.

7.7 Storing and Posting Requirement

7.7.1 Signs showing the nuclear safety limits in effect for the area shall be posted in process storage areas and general (warehouse and outdoor) storage areas.

7.7.1.1 Signs posted in storage areas shall be in plain view. The signs shall identify the material that may be stored in the area and the limits.

7.7.2 Material with an enrichment greater than 2.1% U-235 shall be stored in areas surrounded by supported chains. Standard signs or cards shall be hung on the chains or on the stanchions to mark the area. The signs or cards shall be clearly marked with the maximum enrichment of the stored material. Skid loaded containers shall be placed with markings outward.

7.7.3 Materials with an enrichment equal to, or greater than, 5% shall be stored indoors.

7.7.4 Process equipment and operator stations shall be posted with the nuclear safety limits and restrictions for the process.

7.8 Interplant Shipments

7.8.1 Shipments shall be per SOP 20-C-101 and SOP 20-C-102.

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 7 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: GENERAL NUCLEAR SAFETY REQUIREMENTS	SOP: 20-C-904	
		Section: Metals Plants Plant: All	
Authorization: F. J. Gurney	Supersedes: None	Issue Date: 11-17-88	

7.0 PROCEDURE (cont.)

7.9 Isotopic Changeover, Cleanup, and Inspection

7.9.1 Refer to the SOP pertaining to the appropriate plant.

8.0 APPLICABLE FORMS

None

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 8 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: GENERAL NUCLEAR SAFETY REQUIREMENTS	SOP: 20-C-904	Section: Metals Plants Plant: All
		Authorization: F. J. Gurney	Supersedes: None Issue Date: 11-17-88

RECORD OF ISSUE/REVISION

<u>PAGE</u>	<u>DATE</u>	<u>DESCRIPTION AND AUTHORITY</u>
1 thru 8	11-17-88	Procedure required for defining general nuclear safety requirements for the production area per Request No. P88-137, initiated by C. A. Hill.

LIST OF EFFECTIVE PAGES

<u>PAGE</u>	<u>DATE</u>
1 thru 8	11-17-88

FMPC/FCS WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 1 of 18 Revision No. 0	2343
RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL		SOP 1-C-608
			AREA: Plant 1
Authorization: <i>[Signature]</i> R. L. Gardner, Manufacturing		Supersedes: None	Issue Date: 08-13-90

1.0 PURPOSE

The purpose of this procedure is to provide the requirements for storing radioactive material.

2.0 APPLICABILITY

This procedure shall apply to designated Plant 1 radioactive material storage areas.

3.0 RESPONSIBILITIES

3.1 Supervisors shall be responsible for the following:

- 3.1.1 Coordinating and notifying support organizations of assistance as required per this procedure.
- 3.1.2 Specifying storage location for material in accordance with FMPC-2084, "Radiation Control Manual".
- 3.1.3 Ensuring only trained personnel handle radioactive material.
- 3.1.4 Distributing documentation as required per this SOP.
- 3.1.5 Performing required inspections of storage facilities.
- 3.1.6 Ensuring that AEDO is notified of any release to the environment and that a Minor Event Report (MER) is completed.
- 3.1.7 Ensuring authorized storage configurations, aisle spacing, material segregation and other storage requirements are maintained per this SOP.
- 3.1.8 Contacting Industrial Hygiene or Radiological Safety to determine the appropriate respiratory protection for the process being performed.
- 3.1.9 Providing operators with the required respiratory protection.
- 3.1.10 Contacting Radiological Safety to perform a survey prior to storing the radioactive material.

3.2 Solid Waste Compliance shall be responsible for the following:

- 3.2.1 Performing surveillances of radioactive material storage areas according to regulatory requirements.
- 3.2.2 Assuring proper characterization and classification of FMPC waste streams.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 2 of 18 Revision No. 0	2343
RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608	
Authorization: R. L. Gardner, Manufacturing		Supersedes: None	Issue Date: 08-13-90
		AREA: Plant 1	

3.0 RESPONSIBILITIES (cont.)

- 3.2.3 Ensuring applicable regulation requirements are incorporated into this procedure and are being followed at the FMPC.
- 3.2.4 Performing surveillances of radioactive material storage area records to ensure adequacy and completeness.
- 3.3 Operators shall be responsible for complying with this SOP and notifying supervisor immediately of spills, leaks, releases or any unusual conditions.
- 3.4 Materials Control & Accountability shall be responsible for the following:
 - 3.4.1 Maintaining current radioactive material inventory.
 - 3.4.2 Preparing, maintaining and signing inventory and identification records per this SOP.

4.0 DEFINITIONS

- 4.1 Material Characterization - An evaluation which provides the physical and chemical characteristics and major radiological content and concentration of the material.
- 4.2 FMPC Lot Marking System - A 15 digit alpha numeric coding system used to identify nuclear material to ensure separation of depleted, normal, and enriched uranium or thorium materials.
- 4.3 Non-Characterized Material - Radioactive material that is suspected to have constituents on the Environmental Protection Agency Hazardous Waste List.
- 4.4 Resource Conservation & Recovery Act (RCRA) - The Congressional Act which established safe and environmentally acceptable management practices for specific wastes. RCRA requires strict "cradle to grave" control and proper management of all hazardous waste.
- 4.5 Short Term Material - Radioactive material stored only for a maximum of six months.
- 4.6 Radioactive Material - Material composed of radioactive or radioactively contaminated material in excess of safe limits for unconditional release.

RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608
		AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing	Supersedes: None	Issue Date: 08-13-90

5.0 REFERENCES

- 5.1 SOP 20-C-902, "Liquid Propane Gas (LPG) Powered Handstackers and Tuggers"
- 5.2 SOP 1-C-101, "Sampling Residue and Waste Material"
- 5.3 SOP 1-C-804, "Overpacking Deteriorated Containers"
- 5.4 SOP 20-C-904, "General Nuclear Safety Requirements"
- 5.5 SOP 1-C-604, "Inspection of Containerized and Drummed Residues"
- 5.6 SOP-01-104, "Segregation of Wooden Pallets"
- 5.7 SOP 20-C-601, "Packaging Low Level Radioactive Waste (L-LRW) for Offsite Disposal"

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS

- 6.1 A defined safety system is not involved.
- 6.2 Respiratory protection provided by the supervisor shall be worn when required.
- 6.3 A HEPA type filter vacuum cleaner or a vacuum system approved by IH&S shall be used during spill cleanup with a current DOP test label properly affixed to vacuum.
- 6.4 Leather-palm gloves shall be worn when handling drums, operating equipment and when handling rough, sharp-edged or contaminated materials.
- 6.5 Any release of radioactive material outside of storage container shall be reported to the supervisor immediately.
- 6.6 Any circumstance which could have resulted in an intake of radioactive materials by inhalation, ingestion or absorption shall immediately be reported to a supervisor. The supervisor shall immediately report the circumstance of possible radioactive materials intake to Radiological Safety for evaluation. The involved employees shall report to Medical Services at the end of their shift or as directed to submit a urine sample and again report at the start of their next shift to submit another urine sample.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 4 of 18 Revision No. 0	2343
RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL		SOP 1-C-608
			AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing		Supersedes: None	Issue Date: 08-13-90

7.0 PROCEDURE

7.1 Preparing Containers for Storage

7.1.1 Upon delivery of radioactive material to the storage area, inspect container(s) and accompanying paperwork per the "Radioactive Material Pre-Storage Checklist", Form FMPC-REST-3183 (See Figure 1).

NOTE: An MC&A representative shall be notified for inventory update.

NOTE: An "NM Transfer Record/NM Receipt Record/Material Identification Record" (68/69 card) is not required for radioactive material received from offsite.

7.1.1.1 If an unacceptable item is noted, complete "Corrective Action" and "Date Corrected" section on the "Radioactive Material Pre-Storage Checklist".

NOTE: If container is acceptable, proceed to Step 7.1.2.

7.1.2 Sign the "NM Transfer Record/NM Receipt Record/Material Identification Record", 68/69 card (See Figure 2). Request the Waste Management Supervisor and the Nuclear Materials Reporting Specialist to sign 68/69 card.

7.1.2.1 If the container holds radioactive material received from offsite, complete the "Nuclear Material Receiving Report," Form FMPC-ADMS-613 (Figure 3) and the "Offsite Nuclear Materials Receipt Verification and Disposition Report", Form FMPC-ADMS-PRO-1131-1 (Figure 4) and transmit to supervisor.

NOTE: Supervisor shall forward Form FMPC-ADMS-613 to MC&A.

7.1.3 Paint bare metal, chipped paint areas, or rust areas using the same color of rust inhibiting paint.

CAUTION: RESPIRATORY PROTECTION SHALL BE WORN WHILE PERFORMING THIS STEP.

NOTE: Remove loose paint or rust with a metal brush before painting.

7.1.4 Request Nuclear Materials Reporting Specialist to record data for LLRM Inventory database.

7.1.5 Check to ensure hazardous material warning label (See Figure 5) affixed on container. If label(s) do not have coating, apply polyurethane coating.

689

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 5 of 18 Revision No. 0	2343
RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL		SOP 1-C-608
			AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing		Supersedes: None	Issue Date: 08-13-90

7.0 PROCEDURE (cont.)

- 7.1.6 Sign the completed "Radioactive Material Pre-Storage Checklist", Form FMPC-REST-3183 and obtain the other required signatures. Submit signed form to the supervisor.
- 7.1.7 Notify MC&A when container is moved from one location to another location.

7.2 Storage

- 7.2.1 Using forklift or handstacker, move radioactive material containers to storage per Table 1.

NOTE: Handstacker shall be inspected and operated per SOP 20-C-902.

- 7.2.1.1 If additional action is determined which is not listed on Table 1, notify supervisor.

7.3 Inspection

- 7.3.1 Inspect radioactive material containers on a periodic basis as determined by supervisor. Complete the "Radioactive Material Container/Storage Discrepancy Record", Form FMPC-REST-3182 (See Figure 6) during inspection by recording only the container/storage area discrepancies.

NOTE: Refer to Table 2 for inspection criteria.

- 7.3.1.1 If an unacceptable condition is noted on Form FMPC-REST-3182, refer to Tables 1 and 2 for corrective action.
- 7.3.1.2 If other items of concern are noted during inspection, notify supervisor for corrective action.
- 7.3.2 When inspection is completed, submit Form FMPC-REST-3182 to the supervisor.

NOTE: The inspector and supervisor shall sign the completed form.

NOTE: The supervisor shall maintain records of completed remediation.

RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608
		AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing	Supersedes: None	Issue Date: 08-13-90

8.0 APPLICABLE FORMS

- 8.1 Form FMPC-REST-3182, "Radioactive Material Container/Storage Discrepancy Record"
- 8.2 Form FMPC-REST-3183, "Radioactive Material Container Pre-Storage Checklist"
- 8.3 Form FMPC-ADMS-613, "Nuclear Material Receiving Report"
- 8.4 Form FMPC-AC-1990, "NM Transfer Record"
- 8.5 Form FMPC-AC-2220, "Nuclear Material Receipt Record"
- 8.6 Form FMPC-AC-2221, "Material Identification Record"
- 8.7 Form FMPC-ADMS-PRO-1131-1, "Offsite Nuclear Materials Receipt Verification and Disposition Report"

RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608
		AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing	Supersedes: None	Issue Date: 08-13-90

TABLE 1
 STORAGE REQUIREMENTS FOR RADIOACTIVE MATERIAL

STORAGE REQUIREMENT	APPLICABLE RADIOACTIVE MATERIAL			
	CONTAINERIZED		NON-CHARAC- TERIZED WASTE	NON-CONTAINERIZED FREE-RELEASE MATERIAL
	LONG TERM	SHORT TERM		
1 Stack maximum of three containers high	X	X	X	
2 Group containers per lot number	X	X	X	X
3 Maintain forklift accessibility to rows	X	X	X	X
4 Spacing must be facility dependent	X	X	X	X
5 Store drummed material on pallets	X	X	X	
6 Container markings and labels shall be visible in aisle	X	X	X	
7 Aisles shall be accessible for inspection	X	X	X	
8 May be stored on or off pad				X
9 Nuclear safety requirements apply per SOP 20-C-904	X	X	X	

RESTORATION
PROCEDURE

STORAGE OF RADIOACTIVE MATERIAL

SOP 1-C-608

AREA: Plant 1

Authorization:
R. L. Gardner, Manufacturing

Supersedes: None

Issue
Date: 08-13-90

TABLE 2
RADIOACTIVE MATERIAL STORAGE INSPECTION

ITEM	INSPECTION ITEM	INSPECTION CRITERIA	CORRECTIVE ACTION REQUIRED
Container	Hole	An opening in the container including breach, gouge, puncture or leak.	Overpack per SOP 1-C-804.
Container	Dent	A crease, depression or hollow made by blow or pressure; a concave distortion which jeopardizes the integrity of the container. A dent in the top or bottom rim.	Overpack per SOP 1-C-804.
Container	Bulge	A swollen area, a convex distortion, an outward bend which jeopardizes the integrity of the container.	Overpack per SOP 1-C-804.
Container	Corrosion	A container exhibiting exterior rust which is flaking or discoloration and bulging from interior rust.	Overpack per SOP 1-C-804.
Configu- ration	Spacing	Aisle spacing must be three feet between pallets and between rows of pallets for non-characterized material. All other material must be spaced per supervisor's direction. (1)	Move container(s).
Pallet	Boards	Inspect for broken boards per criteria of SOP 01-104.	Replace or repair pallet.
Container	Labeling	A hazardous material label, FMPC lot marking code, and gross weight must be visible and legible on the container. (2)	Affix label or stencil with enamel paint the required markings in 2 inch letters.

(1) Excluding requirements for nuclear safe masses per SOP 20-C-904.

(2) Enriched material shall include labeling requirements of SOP 20-C-904.

188

RESTORATION
PROCEDURE

STORAGE OF RADIOACTIVE MATERIAL

SOP 1-C-608

AREA: Plant 1

Authorization:
R. L. Gardner, Manufacturing

Supersedes: None

Issue
Date: 08-13-90

RADIOACTIVE MATERIAL CONTAINER PRE-STORAGE CHECKLIST					
STORAGE AREA:		FMPC INVENTORY NO.:		DATE:	
ITEM NO.	INSPECTION ITEM	ACCEPTABLE		CORRECTIVE ACTION	DATE CORRECTED
		YES	NO		
1	Form FMPC-CONT-1945-XX card complete			Complete form per SOP 20-C-601 or 1-C-604(1).	
2	68/69 card complete			Notify supervisor.	
3	Shipping manifest and waste characterization complete(2)			Notify supervisor.	
4	Container free of spilled/leaked material			Notify supervisor and contain spill/leak per SOP 20-C-606	
5	Container free of damage (i.e. bare metal, hole, dent, bulge, corrosion)			Overpack per SOP 1-C-804.	
6	Container bolt ring secure			Secure or replace bolt ring.	
7	Material sampled/factor assay performed for radionuclides and RCRA determination			Sample per SOP 1-C-101.	
8	FMPC Lot Number complete and stencilled on container			Obtain and stencil lot number per SOP 20-C-601 or 1-C-604(1).	
9	Gross, net, and tare weight complete and stencilled on container			Stencil weights per SOP 20-C-601 or 1-C-604(1).	
10	"POOS" marking stencilled on container, if applicable			Stencil "POOS" marking on container per SOP 20-C-601 or 1-C-604(1).	
11	Gross weight marking correct size (2")			Correct marking per SOP 20-C-601 or 1-C-604(1).	

RADIOACTIVE MATERIAL CONTAINER PRE-STORAGE CHECKLIST (SHEET 1 OF 2)
FORM NO. FMPC-REST-3183

Figure 1

603

RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608
		AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing	Supersedes: None	Issue Date: 08-13-90

RADIOACTIVE MATERIAL CONTAINER PRE-STORAGE CHECKLIST (cont.)					
STORAGE AREA:		FMPC INVENTORY NO.:		DATE:	
ITEM NO.	INSPECTION ITEM	ACCEPTABLE		CORRECTIVE ACTION	DATE CORRECTED
		YES	NO		
12	Container markings and labels correctly located per Figure 7 ⁽³⁾			Correct per Figure 7 or Figure 8.	
13	"Hazardous Material Warning Label" affixed to container			Affix label to container.	
14	Other labels affixed to container as applicable (Flammable)			Affix applicable labels per SOP 20-C-601 or 1-C-604 ⁽¹⁾ .	
15	Pallet free of damage			Replace or repair pallet per SOP-01-104.	
16	Container plastic wrapping secure, if applicable			Secure, rewrap, or containerize.	

- (1) SOP 20-C-601 is applicable to radioactive waste. SOP 1-C-604 is applicable to residues and refuse material.
- (2) Applicable to material received from offsite.
- (3) Box markings and labels shall be located as shown in Figure 8.

COMMENTS: _____

MC&A Signature Badge No. Waste Management Signature Date

 Inspector's Signature Date

RESTORATION
PROCEDURE

STORAGE OF RADIOACTIVE MATERIAL

SOP 1-C-608

AREA: Plant 1

Authorization:
R. L. Gardner, Manufacturing

Supersedes: None

Issue
Date: 08-13-90

NUCLEAR MATERIAL TRANSFER RECORD

CARD PL NO. 68	NEGATIVE	DATE TRANSFERRED MO. DAY YEAR	SHIFT	TRANS. BY BADGE NO.	NOTE: Green card is for receiver information ONLY and may be retained in file. DO NOT FORWARD to Data Processing. DO NOT LEAVE with the material.
CARD SEQUENCE NO. 92852	P.O. NO.:	SOURCE:	MBA: (FROM)	PLANT:	NO. OF CONTAINERS OR ITEMS NUMBER DESCRIPTION
	MATERIAL CLASS:	MATERIAL TYPE:	MBA: (TO)	PLANT:	GROSS WEIGHT:
	LOT SEQUENCE NO.:		STORAGE LOCATION:		TARE WEIGHT:
	MATERIAL DESCRIPTION:				
	SHAPE CODE:				
SIGNATURES:					

FMPC-AC-1880 (REV. 10/7/88)

NUCLEAR MATERIAL RECEIPT RECORD

CARD PL NO. 69	NEGATIVE	DATE RECEIVED MO. DAY YEAR	SHIFT	RECEIVED BY BADGE NO.	NOTE: Green card is for receiver information ONLY and may be retained in file. DO NOT FORWARD to Data Processing. DO NOT LEAVE with the material.
CARD SEQUENCE NO. 92852	P.O. NO.:	SOURCE:	MBA: (FROM)	PLANT:	NO. OF CONTAINERS OR ITEMS NUMBER DESCRIPTION
	MATERIAL CLASS:	MATERIAL TYPE:	MBA: (TO)	PLANT:	GROSS WEIGHT:
	LOT SEQUENCE NO.:		STORAGE LOCATION:		TARE WEIGHT:
	MATERIAL DESCRIPTION:				
	SHAPE CODE:				
SIGNATURES:					

FMPC-AC-220 (REV. 10/7/88)

MATERIAL IDENTIFICATION RECORD

CARD PL NO. XX	NEGATIVE	DATE RECEIVED MO. DAY YEAR	SHIFT	RECEIVED BY BADGE NO.	NOTE: Green card is for receiver information ONLY and may be retained in file. DO NOT FORWARD to Data Processing. DO NOT LEAVE with the material.
CARD SEQUENCE NO. 92852	P.O. NO.:	SOURCE:	MBA: (FROM)	PLANT:	NO. OF CONTAINERS OR ITEMS NUMBER DESCRIPTION
	MATERIAL CLASS:	MATERIAL TYPE:	MBA: (TO)	PLANT:	GROSS WEIGHT:
	LOT SEQUENCE NO.:		STORAGE LOCATION:		TARE WEIGHT:
	MATERIAL DESCRIPTION:				
	SHAPE CODE:				
SIGNATURES:					

FMPC-AC-221 (REV. 10/7/88)

NM TRANSFER RECORD/NM RECEIPT RECORD/MATERIAL IDENTIFICATION RECORD
FORMS FMPC-AC-1990, 220, 221

Figure 2

RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608
		AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing	Supersedes: None	Issue Date: 08-13-90

FMPC Page ____ of ____ Pages
 PRODUCTION OPERATIONS DEPARTMENT - RECEIVING GROUP (PLANT 1)
OFF-SITE NUCLEAR MATERIALS RECEIPT VERIFICATION AND DISPOSITION REPORT

Shipped From _____ Nuclear Mail Rec Report No. _____ Date Disposed _____
 _____ Date Received _____ DOE 741 No. _____

Carrier _____ Shipper's Tally List Received with Shipment Yes No

No. of containers on Nuclear Mail Receiving Report _____ WMT No. _____ No

LINE ITEM	PRODUCTION RECEIVING DATA						
	SHIPPER'S I.D. NO.	NO. OF CONTAINERS	MATERIAL DESCRIPTION	FMPC GROSS (LBS)	FMPC TARE (LBS)	FMPC NET (LBS)	SHIPPER'S NET WT. (LBS)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

DISPOSITION		
LINE ITEMS INCLUDED	FMPC LOT NO. ASSIGNED	DELIVERED TO (CONSIGNEE):

Condition Received (Remarks & Recommendations): _____

Disposition by _____
 Persons Consulted in Reference to Disposition _____

NO	DISTRIBUTION OF COPIES
1	MCSA RECORD COPY
2	Receiving Group - Plant 1
3	Operations Scheduling & Planning
4	Production Records - Plant 1
5	Receiving Plant

FMPC-ADMS-PRO-1131-1 REV 6/88

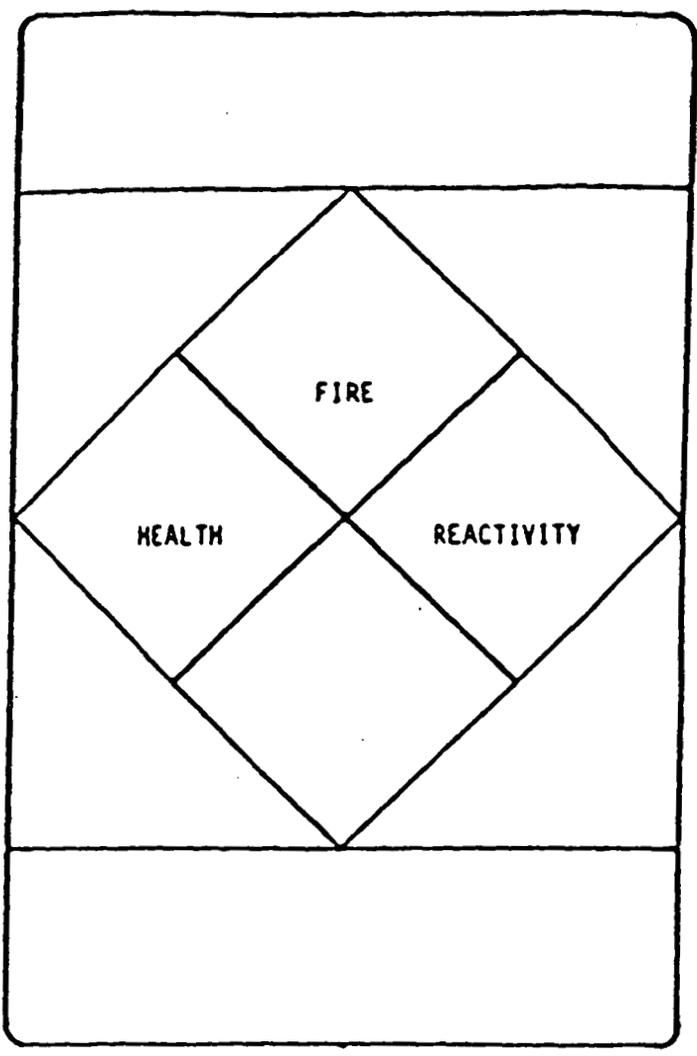
OFFSITE NUCLEAR MATERIALS RECEIPT VERIFICATION AND DISPOSITION REPORT
 FORM FMPC-ADMS-PRO-1131-1

Figure 4

ABS

R - MATERIAL REVISED, ADDED, OR DELETED.

RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608
		AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing	Supersedes: None	Issue Date: 08-13-90



"HAZARDOUS MATERIAL WARNING LABEL"
Figure 5

888

RESTORATION
PROCEDURE

STORAGE OF RADIOACTIVE MATERIAL

SOP 1-C-608

AREA: Plant 1

Authorization:
R. L. Gardner, Manufacturing

Supersedes: None

Issue
Date: 08-13-90

RADIOACTIVE MATERIAL CONTAINER/STORAGE DISCREPANCY RECORD

INSPECTOR'S NAME: _____ INSPECTOR'S BADGE NO.: _____

LOCATION: _____ DATE: _____ TIME: _____

FMPC LOT NUMBER	MC&A INVENTORY NUMBER	HOLE		SPACING		BROKEN PALLET BOARD		CORRECT LABELING		LOCATION NO.
		YES	NO	YES	NO	YES	NO	YES	NO	

COMMENTS: _____

INSPECTOR'S SIGNATURE: _____ DATE: _____

SUPERVISOR'S SIGNATURE: _____ DATE: _____

RADIOACTIVE MATERIAL STORAGE INSPECTION
FORM FMPC-REST-3182
Figure 6

868

295

RESTORATION
PROCEDURE

STORAGE OF RADIOACTIVE MATERIAL

SOP 1-C-608

AREA: Plant 1

Authorization:
R. L. Gardner, Manufacturing

Supersedes: None

Issue
Date: 08-13-90

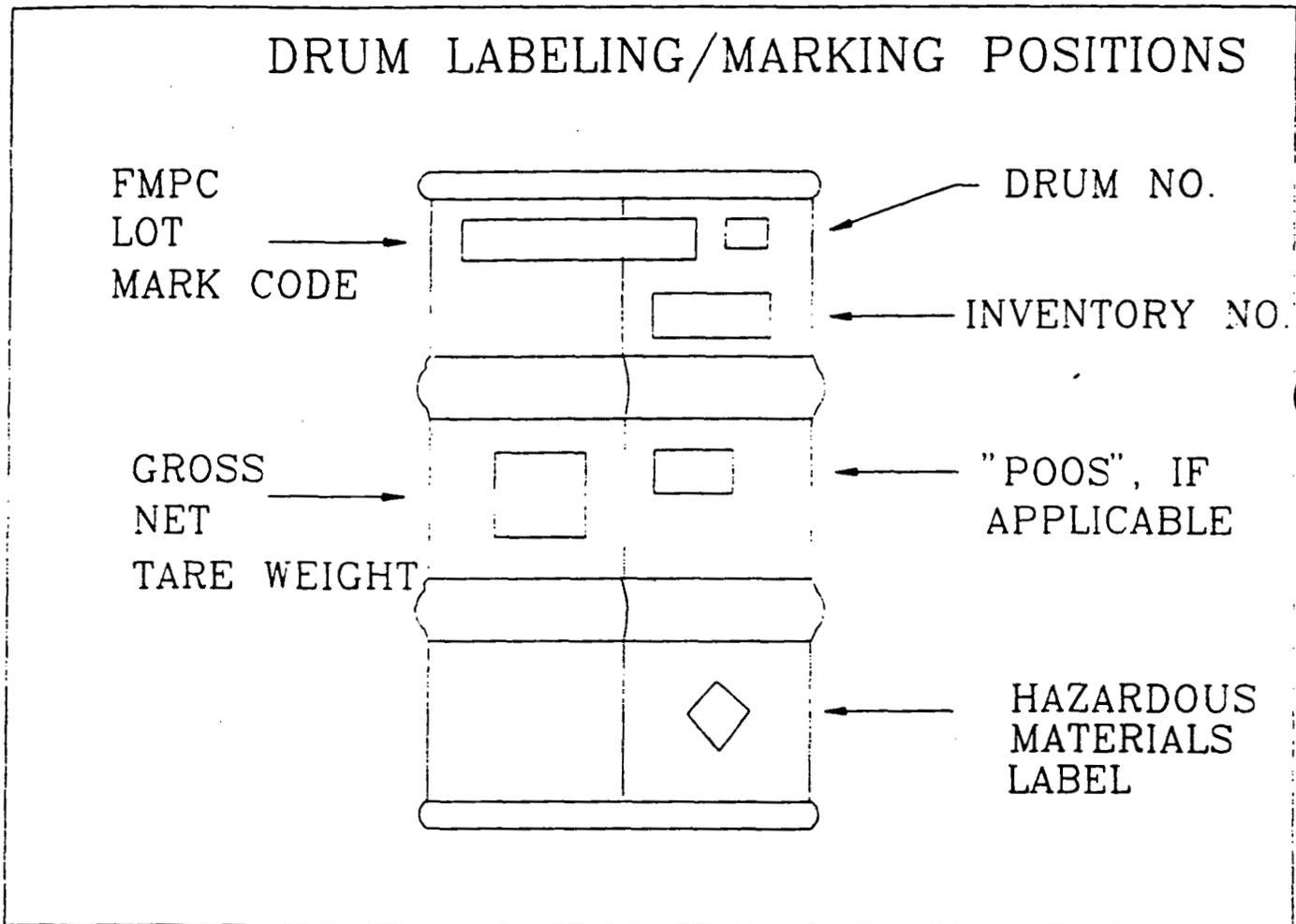


DIAGRAM OF RADIOACTIVE MATERIAL CONTAINER LABELING
Figure 7

288

296

RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL	SOP 1-C-608
		AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing	Supersedes: None	Issue Date: 08-13-90

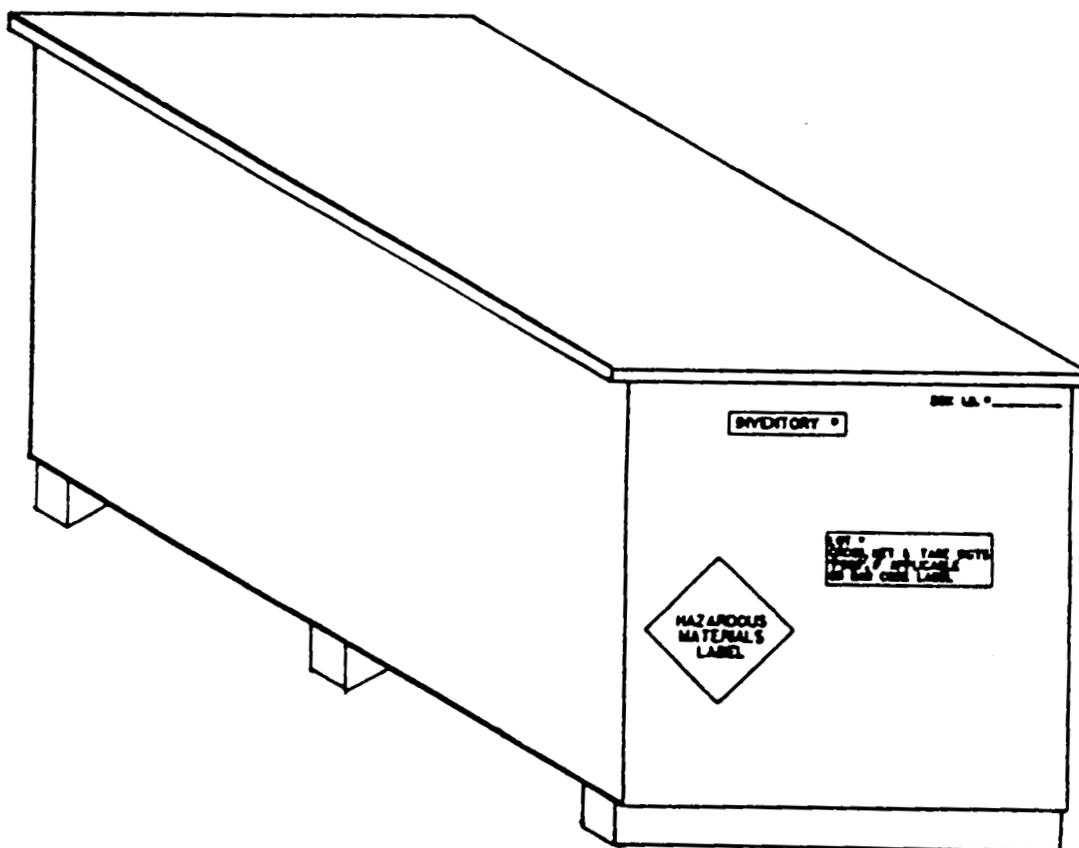


DIAGRAM OF LLRM BOX LABELING
Figure 8

SES

FMPC: 1-608 WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 18 of 18 Revision No. 0	2343
RESTORATION PROCEDURE	STORAGE OF RADIOACTIVE MATERIAL		SOP 1-C-608 AREA: Plant 1
Authorization: R. L. Gardner, Manufacturing		Supersedes: None	Issue Date: 08-13-90

RECORD OF ISSUE/REVISIONS

<u>DATE</u>	<u>REV. NO.</u>	<u>DESCRIPTION AND AUTHORITY</u>
08-13-90	0	Procedure required for storing radioactive material per Request No. P89-448, initiated by K. Dunbar.

YES

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 1 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: CONTROL AND UTILIZATION OF CONTAMINATED TRASH DUMPSTERS	SOP 20-C-604	
Authorization: J. T. Grumski <i>J. T. Grumski</i>		Supersedes: None	Section: Waste Operations Plant: All
			Issue Date: 05-24-88

1.0 PURPOSE/DESCRIPTION

Contaminated trash is collected in specially marked dumpsters around the site. The trash is packaged and shipped offsite for disposal. All waste packages and their contents must conform to regulations set forth by governing Federal and State agencies.

This procedure provides instructions to Waste Generators for filling these dumpsters only with contaminated trash that is in compliance with governing regulations.

2.0 APPLICABILITY

This procedure applies to contaminated trash dumpsters controlled by Waste Operations located within the Production area.

3.0 RESPONSIBILITIES

3.1 Waste Operations shall be responsible for providing training or training material to production personnel to fill and control contaminated trash dumpsters per this procedure.

3.2 Production Operations Area Supervisors or designee's shall maintain control over the contaminated trash dumpsters ensuring that the dumpsters remain locked when not in use. They shall ensure that only personnel trained, with Waste Operations guidance, are authorized to fill these dumpsters.

3.3 Production Operations Area Supervisors shall maintain training records of personnel who are using the dumpsters and provide these training records to Waste Operations.

3.4 Waste Generators shall be responsible for ensuring prohibited items (See Figure 1) are not placed into the contaminated trash dumpsters.

3.5 Waste Generators shall be responsible for ensuring contaminated trash is placed in plastic bags as defined in this procedure.

4.0 DEFINITIONS

4.1 Contaminated Waste Dumpster - Secured container for the collection of contaminated trash.

4.2 ERMT - Environmental Radiological Monitoring Technician

4.3 IH&S - Industrial Hygiene & Safety

4.4 Contaminated Waste Generator - Person filling contaminated trash dumpster

299

PRODUCTION
OPERATIONS
PROCEDURE

Title: CONTROL AND UTILIZATION OF
CONTAMINATED TRASH DUMPSTERS

SOP 20-C-604

Section: Waste Operations
Plant: All

Authorization: J. T. Grumski

Supersedes: None

Issue
Date: 05-24-88

5.0 REFERENCES

None

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS

- 6.1 A defined safety system is not involved.
- 6.2 Safety glasses with side shields shall be worn unless other eye protection is specified.
- 6.3 Proper respiratory protection shall be worn if dusty conditions exist, as specified by the ERMT for radioactive contaminants or by IH&S personnel for chemical air contaminants.
- 6.4 Leather-palm gloves shall be worn to protect hands from rough material and contamination.
- 6.5 Contaminated trash shall not be allowed to accumulate around the dumpsters.
- 6.6 Smoking is permitted only in designated areas.
- 6.7 Any circumstance which could have resulted in an intake of radioactive materials by inhalation, ingestion, or absorption shall be immediately reported to a supervisor. The supervisor shall immediately report the circumstance of possible radioactive materials intake to Environmental and Radiation Monitoring for evaluation. The involved employees shall report to Medical Services at the end of their shift to submit a urine sample and again report at the start of their next shift to submit another urine sample.

7.0 PROCEDURE

- 7.1 Examine the trash. Determine if any of the prohibited items or categories of waste listed in Figure 1 are contained in the trash.

WARNING: IF UNABLE TO MAKE THIS DETERMINATION FOR ANY ITEM, REMOVE ITEM AND CONSULT WITH SUPERVISION FOR FURTHER DIRECTION.

- 7.2 Remove prohibited items from the trash.

NOTE: Contact supervision for the required disposal procedure for any prohibited items.

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 3 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: CONTROL AND UTILIZATION OF CONTAMINATED TRASH DUMPSTERS		SOP 20-C-604
			Section: Waste Operations Plant: All
Authorization: J. T. Grumski		Supersedes: None	Issue Date: 05-24-88

7.0 PROCEDURE (cont.)

7.3 Place small or loose items such as paper and small pieces of wood chips into clear plastic bags (Stores Item No. 00244).

NOTE: Bulky items, such as oversize pieces of cardboard, can be placed directly into the dumpster.

7.4 Gather the open end of the filled bag and securely tape the bag shut.

7.5 Unlock dumpster upon obtaining approval from the person designated by the area supervisor.

7.6 Inspect the trash in the secured clear plastic bag again to ensure there are no prohibited items.

7.7 Place identified contaminated trash excluding items in Figure 1 into the dumpster.

CAUTION: DO NOT PLACE ANY PIPING INTO THE DUMPSTER. ALSO, DO NOT PLACE PIECES OF WOOD OVER TWO FEET IN LENGTH INTO DUMPSTER.

NOTE: Do not place unsecured bags or bags that are grossly damaged into the dumpster.

7.8 Lock dumpster.

8.0 APPLICABLE FORMS

None

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 4 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: CONTROL AND UTILIZATION OF CONTAMINATED TRASH DUMPSTERS	SOP 20-C-604	
		Section: Waste Operations Plant: All	
Authorization: J. T. Grumski	Supersedes: None	Issue Date: 05-24-88	

LIST OF WASTE TYPES PROHIBITED FROM THE CONTAMINATED TRASH DUMPSTERS

- * Any kind of liquid.
- * Non-radioactive materials
- * Pressurized containers/spray cans
- * Explosive materials
- * Gaseous radioactive materials
- * High-level radioactive waste
- * Pyrophoric materials
- * Hazardous materials
- * Flammable substances
- Alkaline metals
- * Reactive or oxidizing materials
- * Ashes, dry powders, or dusts
- * Immobilized or ionized waste with pH less than 4.
- * Mixed waste

WARNING: IF THERE IS ANY QUESTION ABOUT WHETHER OR NOT THE TRASH FALLS INTO ANY OF THE CATEGORIES ABOVE, CONTACT THE AREA SUPERVISOR OR WASTE OPERATIONS.

WESTINGHOUSE MATERIALS COMPANY OF OHIO - FMPC		Page 5 Page Revision Date: None	2343
PRODUCTION OPERATIONS PROCEDURE	Title: CONTROL AND UTILIZATION OF CONTAMINATED TRASH DUMPSTERS	SOP 20-C-604	
		Section: Waste Operations Plant: All	
Authorization: J. T. Grumski		Supersedes: None	Issue Date: 05-24-88

LIST OF ISSUE/REVISION

<u>PAGE</u>	<u>DATE</u>	<u>DESCRIPTION AND AUTHORITY</u>
1 thru 5	05-24-88	New procedure issued from CIO C88-014 per Request No. P88-056, initiated by J. E. Harmon.

LIST OF EFFECTIVE PAGES

<u>PAGE</u>	<u>DATE</u>
1 thru 5	05-24-88

OPERATIONS PROCEDURE	TRASH BALER OPERATION	SOP 2-C-923 2343
		SECTION: Manufacturing AREA: 2/3
Authorization: D. L. Dunaway/ Signature on File R. L. Gardner	Supersedes: None	Issue Date: 10-21-87

1.0 PURPOSE

To define procedures to bale contaminated trash for the Nevada test site.

2.0 APPLICABILITY

This procedure shall apply to the Selcon Trash Baler in the Incinerator Bldg.

3.0 RESPONSIBILITIES

3.1 The supervisor shall be responsible for ensuring that trained personnel operate the baler and providing materials required.

3.2 Operators shall be responsible for complying with this SOP.

4.0 DEFINITIONS

4.1 Platen - Pressure plate of the baler.

5.0 REFERENCES

R 5.1 DELETED

R 5.2 FMPC-719, "PROPER Lock and Tag Procedure"

6.0 INDUSTRIAL HEALTH AND SAFETY REQUIREMENTS

6.1 A defined safety system is not involved.

6.2 Safety glasses shall be worn at all times unless other protection is required.

6.3 Leather-palm gloves shall be worn when loading or conveying trash.

R 6.4 When making adjustments or cleaning the baler, wear respiratory protection and
R comply with the "PROPER Lock and Tag Procedure", FMPC 719.

6.5 When working in a dusty environment, a respirator equipped with purple cartridges shall be worn unless other protection is specified by an RST.

6.6 Any circumstance which could have resulted in an intake of radioactive materials by inhalation, ingestion or absorption shall immediately be reported to a supervisor. The supervisor shall immediately report the circumstance of possible radioactive materials intake to Radiological Safety for evaluation. The involved employees shall report to Medical Services at the end of their shift or as directed to submit a urine sample and again report at the start of their next shift to submit another urine sample.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 2 of 14 Revision No. 1
OPERATIONS PROCEDURE	TRASH BALER OPERATION	SOP 2-C-923 2343
		SECTION: Manufacturing AREA: 2/3
Authorization: D. L. Dunaway/ Signature on File R. L. Gardner	Supersedes: None	Issue Date: 10-21-87

7.0 PROCEDURE

7.1 Trash Receiving

- R 7.1.1 When the Transportation Driver arrives with a load of trash, open the
R dumpster and visually check for prohibited materials.
- R 7.1.1.1 If prohibited materials are found, request the Transportation Driver to
R return dumpster to generator. Notify supervisor that dumpster has been
R returned and what prohibited materials were inside the dumpster.
- R 7.1.1.2 If no prohibited materials are found, request the Transportation Driver
R to deposit the dumpster contents into the incinerator bin and conveyor.
- R 7.1.2 Complete a "Trash Baler Operation Log", Form FMPC-PRO-2887, (See Figure 1).
R
R NOTE: Stand clear of incinerator bin and conveyor while the
Transportation Driver is emptying material from the dumpster.
- R 7.1.3 Check dumpster while bottom is open to ensure that all trash has been
R deposited in the bin.
- R 7.1.3.1 If trash remains inside the dumpster, use a rake and pull the
R material from the dumpster.
- 7.1.4 Visually inspect the trash to determine if prohibited items or categories
of waste (See Figure 5) are contained in the trash.
- 7.1.5 Remove prohibitive items from the trash and place in a designated
container.
- 7.1.6 Notify supervisor of prohibitive items found.
NOTE: Supervisor shall notify Waste Operations of prohibitive items found.
- 7.1.7 Complete the Item Production/Certification/Identification card, Form
FMPC-CONT-1945-XX (See Figure 6).
NOTE: The supervisor of the trash baler and the operator of the trash
baler as waste generator shall sign the card.
- 7.1.8 At the rear of the baler, ensure that the bale removal chain is unhooked
from the platen (See Figure 2).

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 3 of 14 Revision No. 1
OPERATIONS PROCEDURE	TRASH BALER OPERATION	SOP 2-C-923 2343
		SECTION: Manufacturing AREA: 2/3
Authorization: D. L. Dunaway/ Signature on File R. L. Gardner	Supersedes: None	Issue Date: 10-21-87

7.0 PROCEDURE (cont.)

7.1.9 Ensure that the bale removal door is closed and latched properly.

NOTE: Automatic operation is not possible unless door is positioned against limit switches and latched.

7.1.10 Position the scaffold platform against bale removal door. Lock scaffold wheels in place.

R 7.1.11 Latch scaffolding chain locks onto baler frame.

R 7.1.12 Place moveable walkway between scaffolding and platform.

R 7.1.13 Position south swinging gate between angle iron and scaffolding.

R 7.1.14 Chain and lock north swinging gate to scaffolding.

7.2 Baler Operation

7.2.1 Raise the safety gate.

7.2.2 Cover the bale chamber floor with a large sheet of trash cardboard.

7.2.3 Place trash bags in the bale chamber.

7.2.4 Pull down safety gate until latched.

NOTE: Automatic operation of baler is not possible unless safety gate is properly closed.

7.2.5 At the control panel, press the "DOWN" button. The baler will automatically compact the contents, then return to the "UP" position.

7.2.6 Repeat steps 7.2.1, 7.2.3, 7.2.4, and 7.2.5 until bale is nearly complete.

7.2.6.1 Before compaction is complete, add a large cardboard sheet to top of bale.

7.2.7 When bale is completed, the indicator at the control panel will light and the baler automatically shut off in the "DOWN" position. Record bale number on Form FMPC PRO-2887 (See Figure 1), "Trash Baler Operation Log."

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 4 of 14 Revision No. 1
OPERATIONS PROCEDURE	TRASH BALER OPERATION	SOP 2-C-923 2343
		SECTION: Manufacturing AREA: 2/3
Authorization: D. L. Dunaway/ Signature on File R. L. Gardner	Supersedes: None	Issue Date: 10-21-87

7.0 PROCEDURE (cont.)

7.3 Bale Removal

- 7.3.1 Unlock wheels of scaffold platform and move platform away from bale removal door.
- 7.3.2 Open the bale removal door using the gradual tension release latch.
- 7.3.3 Insert four or more wires through the slots in the floor of the baling chamber. Wrap the wires around bale and then back through the slots in the ram of the baler.
- 7.3.4 Insert end of each wire through end loop. Wrap each end at least four times above end loop.

7.3.5 At the rear of the baler, hook bale removal chains onto the platen.

7.3.6 Using a "hand stacker", position a wood skid at bale removal door.

NOTE: Prior to use of stacker, operate without load to verify safe conditions. Complete "Operator Checklist," Form FMPC-ADMS-2414 or "Electric Truck Operator's Daily Checklist," Form FMPC-ADMS-2415 (See Figures 3 and 4) as applicable.

7.3.7 Position a bale cover on the skid. Make sure the bale cover bottom seams are aligned with sides of skid and the sides of the bale cover overlap the skid.

7.3.8 On the baler, ensure that safety gate is in closed position.

7.3.9 On the control panel, press and hold "UP" button until bale rolls out onto skid. Release "UP" button.

NOTE: Only one bale shall be placed on a skid.

7.3.10 Using a "hand stacker", move skid away from baler.

7.3.11 Pull the bale cover around the bale and position the bale cover top over the bale.

OPERATIONS PROCEDURE	TRASH BALER OPERATION	SOP 2-C-923	2343
		SECTION: Manufacturing AREA: 2/3	
Authorization: D. L. Dunaway/ Signature on File R. L. Gardner		Supersedes: None	Issue Date: 10-21-87

7.0 PROCEDURE (cont.)

7.3.12 Using five inch tape, seal the bale cover top and sides in place.

7.3.13 Stencil the date and bale number on the bale cover and record on log sheet (Figure 1).

NOTE: Use bale number "W050-240-P-027-XXXX." The last four numbers will be in sequence, starting with 0001.

7.3.14 On baler, close and latch bale removal door. At control panel, press "DOWN" button for at least three seconds.

7.3.14.1 While holding "DOWN" button, observe bale removal chains. When platen of baler reaches the lowest position, ensure that bale removal chains automatically unhook from rear of platen. Release the down button and ensure that baler returns to the "UP" position.

CAUTION: IF CHAINS FAIL TO UNHOOK, PRESS "EMERGENCY STOP" BUTTON AT CONTROL PANEL. MANUALLY UNHOOK CHAINS. TURN "EMERGENCY STOP" BUTTON HEAD. VERIFY BALER CYCLE COMPLETES, LEAVING BALER RAM IN "UP" POSITION.

7.3.15 Move completed bale to the designated storage area.

OPERATIONS
PROCEDURE

TRASH BALER OPERATION

SOP 2-C-923

SECTION: Manufacturing
AREA: 2/3

Authorization: D. L. Dunaway/
Signature on File R. L. Gardner

Supersedes: None

Issue
Date: 10-21-87

7.0 PROCEDURE (cont.)

7.4 Trouble Shooting (Refer to Table 1)

TABLE 1 Baler Trouble Shooting		
Problem	Cause	Corrective Action
1. Baler will not start.	A. Bale removal door/latch open. B. Safety Gate Open C. "Emergency Stop Switch" activated.	A. Close removal door and latch. B. Close safety gate. C. Turn "Emergency Stop" Switch push button head to release the locking device.
2. Baler Shuts Down	A. Safety gate raised faster than ram. B. Releasing the "UP" push button during the ejection cycle.	A. Allow ram to move up before activating safety gate. B. Continue pushing the "UP" button.

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 7 of 14 Revision No. 1	2343
OPERATIONS PROCEDURE	TRASH BALER OPERATION		SOP 2-C-923
			SECTION: Manufacturing AREA: 2/3
Authorization: D. L. Dunaway/ Signature on File R. L. Gardner		Supersedes: None	Issue Date: 10-21-87

8.0 APPLICABLE FORMS

- 8.1 FMPC-PRO-2887, "TRASH BALER OPERATION LOG"
- 8.2 FMPC-ADMS-2414, "GAS, LPG OR DIESEL FUELED EQUIPMENT OPERATOR'S CHECKLIST"
- 8.3 FMPC-ADMS-2415, "ELECTRIC TRUCK OPERATOR'S DAILY CHECKLIST"

OPERATIONS
 PROCEDURE

TRASH BALER OPERATION

SOP 2-C-923

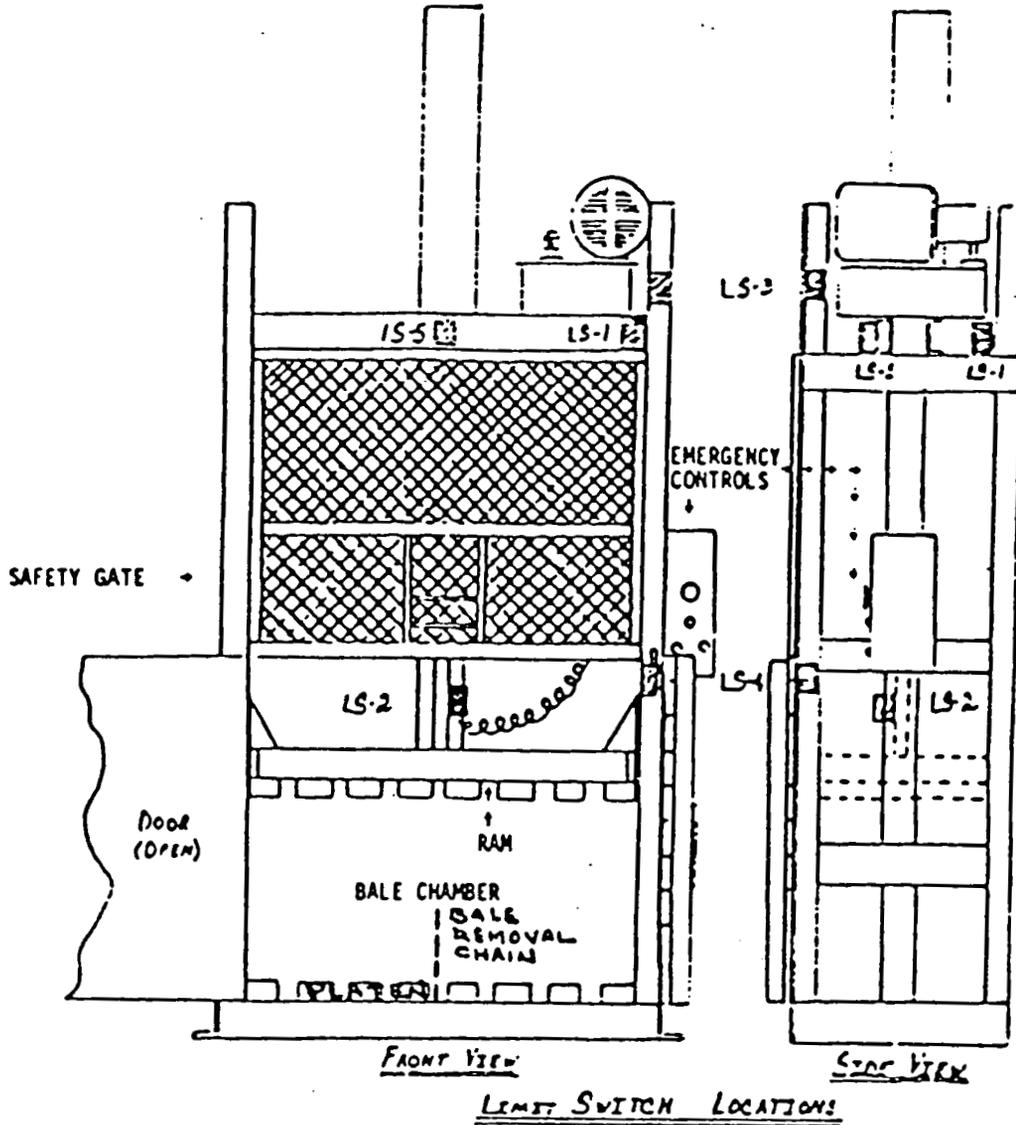
2343

SECTION: Manufacturing
 AREA: 2/3

Authorization: D. L. Dunaway/
 Signature on File R. L. Gardner

Supersedes: None

Issue
 Date: 10-21-87



- LS-1 - UP STOP
- LS-2 - GATE-PLATEN INTERLOCK
- LS-3 - GATE CLOSE
- LS-4 - BALE CHAMBER DOOR
- LS-5 - BALE SIZE

TRASH BALER CONFIGURATION
 Figure 2

OPERATIONS
 PROCEDURE

TRASH BALER OPERATION

SOP 2-C-923 **2343**

SECTION: Manufacturing
 AREA: 2/3

Authorization: D. L. Dunaway/
 Signature on File R. L. Gardner

Supersedes: None

Issue
 Date: 10-21-87

FMPC
 ADMINISTRATIVE SERVICES - TRANSPORTATION
 GAS, LPG OR DIESEL FUELED EQUIPMENT OPERATOR'S CHECKLIST

SEE REVERSE SIDE FOR INSTRUCTIONS Shift _____ Date _____

EQUIPMENT NUMBER	OPERATOR'S NAME	PLANT LOCATION	SUPERVISOR'S SIGNATURE
------------------	-----------------	----------------	------------------------

HOOR METER/SPEEDOMETER READING -- _____ HOURS/MILES

Check (✓) boxes accordingly OK Needs attention or repair

VISUAL CHECKS:		OPERATIONAL CHECKS:	
<input checked="" type="checkbox"/>	Engine oil level	<input checked="" type="checkbox"/>	Horn
<input checked="" type="checkbox"/>	Radiator water level when cold	<input checked="" type="checkbox"/>	Steering
<input checked="" type="checkbox"/>	Fuel level	<input checked="" type="checkbox"/>	Service Brakes
<input checked="" type="checkbox"/>	Obvious damage and leaks	<input checked="" type="checkbox"/>	Parking brake
<input checked="" type="checkbox"/>	Tire condition	<input checked="" type="checkbox"/>	Hydraulic controls
<input checked="" type="checkbox"/>	Head and tail lights	<input checked="" type="checkbox"/>	Directional signals
<input checked="" type="checkbox"/>	Warning lights	<input checked="" type="checkbox"/>	Backup alarm
<input checked="" type="checkbox"/>	Hour meter/speedometer		
<input checked="" type="checkbox"/>	Other gauges and instruments		

Due for PMP based on Hrs./Miles Date

Comments: (Explain all items needing attention or repair.) _____

FMPC-ADMS 2414 (REV 3-4-86)

OPERATOR CHECKLIST
 Form No. FMPC-ADMS-2414
 Figure 3

OPERATIONS
PROCEDURE

TRASH BALER OPERATION

SOP 2-C-923

2343

SECTION: Manufacturing
AREA: 2/3

Authorization: D. L. Dunaway/
Signature on File R. L. Gardner

Supersedes: None

Issue
Date: 10-21-87

FMPC
ADMINISTRATIVE SERVICES - TRANSPORTATION
ELECTRIC TRUCK OPERATOR'S DAILY CHECKLIST
(Check before start of each shift.)

SEE REVERSE SIDE FOR INSTRUCTIONS

Shift _____ Date _____

TRUCK NUMBER	OPERATOR'S NAME	PLANT LOCATION	SUPERVISOR'S SIGNATURE
HOUR METER READING START OF DAY: _____ END OF DAY: _____ HOURS FOR DAY: _____			

Check (J) boxes accordingly OK Needs attention or repair

VISUAL CHECKS:	OPERATIONAL CHECKS:
<input checked="" type="checkbox"/> Obvious damage and leaks	<input checked="" type="checkbox"/> Horn
<input checked="" type="checkbox"/> Tire condition	<input checked="" type="checkbox"/> Steering
<input checked="" type="checkbox"/> Battery plug connection Note: Be sure the battery plug connection is tight.	<input checked="" type="checkbox"/> Service Brakes
<input checked="" type="checkbox"/> Head and tail lights	<input checked="" type="checkbox"/> Battery load test Note: Watch battery indicator while holding till lever on full back till. If needle falls to red area, battery doesn't have sufficient charge to operate truck properly.
<input checked="" type="checkbox"/> Warning lights	<input checked="" type="checkbox"/> Parking brake
<input checked="" type="checkbox"/> Hour meter	<input checked="" type="checkbox"/> Seat brake
<input checked="" type="checkbox"/> Other gauges and instruments	<input checked="" type="checkbox"/> Hydraulic controls
<input checked="" type="checkbox"/> Battery discharge indicator Note: Key on, needle should indicate in green area.	

Comments (Explain all items needing attention or repair.) _____

FMPC ADMS-2415 (REV 3-4-86)

ELECTRIC TRUCK OPERATOR'S DAILY CHECKLIST
Form No. FMPC-ADMS-2415
Figure 4

FMPC WESTINGHOUSE MATERIALS COMPANY OF OHIO OPERATIONS DOCUMENT PROGRAM		Page 12 of 14 Revision No. 1
OPERATIONS PROCEDURE	TRASH BALER OPERATION	SOP 2-C-923 2343
		SECTION: Manufacturing AREA: 2/3
Authorization: D. L. Dunaway/ Signature on File R. L. Gardner	Supersedes: None	Issue Date: 10-21-87

R LIST OF WASTE TYPES PROHIBITED FROM THE CONTAMINATED TRASH DUMPSTERS

- R * Any kind of liquid.
- R * Non-radioactive materials
- R * Pressurized containers/spray cans
- R * Explosive materials
- R * Gaseous radioactive materials
- R * High-level radioactive waste
- R * Pyrophoric materials
- R * Hazardous materials
- R * Flammable substances
- R * Alkaline metals
- R * Reactive or oxidizing materials
- R * Ashes, dry powders, or dusts
- R * Immobilized or ionized waste with pH less than 4.
- R * Mixed waste

R WARNING: IF THERE IS ANY QUESTION ABOUT WHETHER OR NOT THE TRASH
R FALLS INTO ANY OF THE CATERGORIES ABOVE, CONTACT THE AREA
R SUPERVISOR OR WASTE OPERATIONS.

R PROHIBITED WASTE
R Figure 5

FMPC
OPERATIONS

CIO NO. C90-062 2343

Effective Date: 02-06-91

Expiration Date: 08-06-91

CHANGE IN OPERATION

1. AFFECTED DOCUMENT NUMBER
2-C-923

2. AFFECTED DOCUMENT PAGE NUMBER
13

3. TITLE OR SUBJECT:

Trash Baler Operation

4. OPERATION AND AREA AFFECTED:

Trash Baler/Contaminated Trash Dumpster Inspection

5. SAFETY SYSTEM INVOLVED:

YES

NO

X

6. AUTHORIZATION:

R. L. Gardner
R. L. Gardner, Facility Operations

SECTION: Operations

7. CHANGE:

1) A new Figure 7 is added as follows:

REQUIRED DOCUMENT ACTION

Prepare and issue new document per this CIO.

PRIORITY ASSIGNMENT

Revise affected procedure/specification per this document.

PRIORITY ASSIGNMENT

No procedure/specification action required.

FILING INSTRUCTION: File facing page 13, SOP 2-C-923
(Issue Date: 10-21-87, Revision No. 1)

2343

**FMPC
CONTAMINATED DUMPSTER MONTHLY CHECKSHEET**

Date: _____ Supervisor: _____

DUMPSTER NUMBER AND LOCATION	DUMPSTER CONDITION OK		LOCKS ON BOTH DOORS		PROHIBITED MATERIAL LIST POSTED		DISCHARGE DOOR SEAL INTACT		CHECKED BY		COMMENTS
	YES	NO	YES	NO	YES	NO	YES	NO	NAME	BADGE NO	
	1 Plant 4										
2 IRS&T											
3 Tank Farm											
4 Plant 5/ Building 55											
5 Garage											
6 Plant 6 East											
7 Plant 6 Inspection											
8 Laboratory											
9 Plant 5/ Building 55											
10 Instrument Shop											
11 Millwright Shop											
12 Tank Farm											
13 Decontamination											
14 Plant 9											
15 Receiving											
17 Pilot Plant/ Maintenance											
18 Heavy Equipment											
19 Pilot Plant East											
20 Rust/ Building 3045											
21 Service Building											
22 Plant 8 West											
23 Plant 6 South											
24 Building 71											
25 Plant 2/3 South											
26 Boiler Plant											
27 Chemical Warehouse											
30 Plant 1											

FMPC-OPR-3258 (8-79-90)

**CONTAMINATED TRASH DUMPSTER MONTHLY CHECKSHEET
FMPC-OPR-3258
Figure 7**

318

2343

OPERATIONS
PROCEDURE

TRASH BALER OPERATION

SOP 2-C-923

SECTION: Manufacturing
AREA: 2/3

Authorization: D. L. Dunaway/
Signature on File R. L. Gardner

Supersedes: None

Issue
Date: 10-21-87

CARD XX ITEM PRODUCTION/CERTIFICATION/IDENTIFICATION

P. O. NO.	SOURCE	CLASS	MATERIAL TYPE	LOT SEQUENCE NO.	DATE			SHIFT	BADGE NO.	PACKAGE NO.
					MO	DAY	YEAR			
SEAL NUMBER		SEAL DATE			PACKAGE PHYSICAL CERTIFICATION			PLANT	PROD. MBA	GROSS WEIGHT
		MONTH	DAY	YEAR	YES NO					
		EMPTY CONTAINER AT START						PLANT TO	MBA TO	
		RUST HOLES OR DENTS								
		MATERIAL IS AS CODED						TARE WEIGHT		
WASTE DESCRIPTION AND COMMENTS		PROHIBITED MATERIALS						NET WEIGHT		
		LIQUIDS IN CONTAINER								
PACKAGE TYPE		MINIMUM OF VOID SPACE								
PACKAGE SIZE		PACKAGE SECURED								
		DRAIN PLUG SECURED								

GENERATOR SIGNATURE
FMPC-CONT-1945-XX (REV 12/18/88)

SUPERVISOR SIGNATURE DATE

ITEM PRODUCTION/CERTIFICATION/IDENTIFICATION CARD
Form No. FMPC-ES&H-1945-XX
Figure 6

OPERATIONS
 PROCEDURE

TRASH BALER OPERATION

SOP 2-C-923 2343

SECTION: Manufacturing
 AREA: 2/3

Authorization: D. L. Dunaway/
 Signature on File R. L. Gardner

Supersedes: None

Issue
 Date: 10-21-87

RECORD OF ISSUE/REVISIONS

<u>REV.</u>	<u>PAGE</u>	<u>DATE</u>	<u>DESCRIPTION AND AUTHORITY</u>
N/A	1 thru 11	10-21-87	Preparation of procedure for Baling Trash per Request No. P86-168, initiated by B. Perkins.
N/A	1 and 2	06-19-89	Revised to incorporate C89-002 per Request No. P89-098.
1	1 thru 14	09-01-89	Revised to incorporate CIO Nos. C89-065 (P89-352), C89-066 (P89-372), and C89-005 (P89-100). Revision program changed from "Page Revision Date" to "Revision No.".

STEP 4



Westinghouse
Materials Company
of Ohio — FMPC

NUMBER: FMPC-715	REVISION: 0	ISSUE DATE: 3/2/89
TITLE: FMPC WORK REQUEST SYSTEM 2343		
APPROVED BY: <i>M. B. Boswell</i> M. B. BOSWELL, PRESIDENT		

SITE POLICY AND PROCEDURE

1.0 POLICY

The Westinghouse Materials Company of Ohio (WMO) shall establish a system for initiating, performing and controlling maintenance and service work at the Feed Materials Production Center (FMPC).

2.0 SCOPE

This procedure describes the requirements and responsibilities for all requested work to be accomplished or controlled by WMO personnel and performed by WMO Maintenance at the FMPC. All requests for services, equipment replacement, maintenance, or alterations to personal or real property must be initiated and processed in accordance with this procedure.

3.0 DEFINITIONS

3.1 Alteration - Changes which impact the form, fit, or function of equipment, systems, processes, or facilities.

3.2 Configuration Management - System for defining and maintaining system baselines while controlling and statusing changes to critical systems. Systems to be controlled by Configuration Management are:

1. Safety Systems;
2. Design Features for Safety; or
3. Systems, Subsystems, Components or Processes designated by Production Operations to be critical to production.

3.3 Custodial Maintenance - Routine tasks performed in order to maintain or enhance the FMPC facilities, e.g., ground keeping, minor repairs, furniture relocation or assembly, door or window repairs, and light bulb replacement. This effort does not require written approval provided the procedures and materials utilized have received prior OS&H approval. (See Attachment B)

3.4 Design Features for Safety - Items identified in safety analysis documents (Safety Assessments, Safety Analysis Reports, Operational Safety Requirements, et. al.) that are necessary for safety but play a passive role in providing that function.

3.5 Engineering Change Proposal (ECP)

A document in a specific format used to propose a change to the current configuration baseline. (Form FMPC-T-2721)

3.0 DEFINITIONS - (Continued)

- 3.6 FMPC Work Request/Order - The form initiated to request work and used in developing a plan of action to accomplish the work. (See Attachment A FMPC-PRO-2532)
- 3.7 Major Construction - Material and Labor effort with projected cost in excess of \$2000 designated as construction by the Davis-Bacon Committee determination.
- 3.8 MMICS - Maintenance Management and Inventory Control Systems, the computer software by which the maintenance work requests and work orders are tracked and Stores Inventory records are kept.
- 3.9 Personnel Safety Item - A condition that directly impacts the safety of site personnel. Items in this category must be coded as such on the Work Order.
- 3.10 Plant Projects Committee - Staff group designated to review proposed projects and Project Authorizations for scope, cost, and bugetary prioritization. (Formerly the PA Committee).
- 3.11 Preventive Maintenance - Scheduled services performed to prevent premature failure of machine or process parts and components. Also scheduled actions taken to identify and replace components or parts which are nearing the end of their normal expected serviceable lifetime before an unplanned stoppage of operation occurs.
- 3.12 Priority - The urgency by which a Work Request is processed is defined in three levels:
- Priority Level 1 - Emergency, A condition which poses an immediate hazard to personnel, facilities or the environment, or a condition which makes it possible to predict that a serious condition is imminent if corrective action is not taken within a short period of time. A Work Request is to be written within the shift to cover the effort required.
- Priority Level 2 - Urgent, A condition which if not corrected is likely to lead to a more costly repair or a costly loss of production. Safety related items not posing an immediate danger to personnel. Safety related items which require that the equipment, process be shutdown until the repairs are completed are also considered to be in this category. (The computer generated DUE DATE is 24 hours after work is requested, if parts are available.)

NO.: FMPC-715	REV.: 0	DATE: 3/2/89
------------------	------------	-----------------

3.0 DEFINITIONS - (Continued)

Priority Level 3 - Routine, A condition which can be corrected as manpower and material are available. (The computer generated DUE DATE is fourteen days after the day the work is requested.)

Work shall not begin on Priority Level 2 or 3 Requests until the Facility Owner's approval has been obtained.

NOTE: Priority Level 1 work may be accomplished without prior approval and/or a Maintenance Work Request due to the nature of the condition.

- 3.13 Quality Level - A designator which is assigned to an item or service to indicate the appropriate management system controls to be imposed in order to assure conformance to applicable quality requirements. (FMPC-711 - Quality Levels)
- 3.14 Request for Engineering Services - FMPC-722 Form (FMPC-T-622) used to request engineering services including design, drawing and specification preparation; cost estimates; and feasibility studies for proposed modifications to plant facilities.
- 3.15 Routine Maintenance - Services or repairs to equipment or facilities to maintain its condition to assure performance of the function(s) for which it is presently intended. The equipment or facility is restored to an "as was" configuration.
- If the system is under Configuration Control, the repair shall be made to restore the equipment or facility to the condition described on the most current approved drawing or drawing revision (Baseline).
- 3.16 Safety System - Equipment and/or hardware identified in safety analysis documents that actively provide a safety function by preventing or mitigating accidents.
- 3.17 Trouble Calls - Diagnostic services or adjustments made to mitigate operating problems. Trouble calls and operating adjustments do not require a written Work Request if no permits, tag outs, or replacement parts are required and provided that any OSR requirements are not violated. The labor effort required is approximately one hour or less.
- 3.18 Work Package - The package consisting of the Work Order and all associated plans, drawings, vendor information, permits, etc., required to perform the requested work.

4.0 RESPONSIBILITIES

- 4.1 Originator - Initiates requests for maintenance, engineering, or other services and sends requests to the Facility owner for approval.

NO: FMPC-715	REV: 0	DATE: 3/2/89
-----------------	-----------	-----------------

4.0 RESPONSIBILITIES - (Continued)

- 4.2 Facility Owner - Approves/initiates Work Requests. If the Work Request is classified as an Alteration, completes Alteration Questionnaire (Form FMPC-PRO-2533, Attachment G) and attaches it to the Work Request. Obtains approval of the Work Request/Order by the appropriate staff support groups and initiates and transmits the ECP to the Configuration Management Function for processing for systems under configuration control. Notifies Plant Project Committee of all Capital Projects or replacement items for classifications and funding. Initiates and/or approves Class 3 ECP for proposed configuration changes on systems under configuration control and transmits a copy of the approved ECP package to the Configuration Management Function. Ensures or acquires assurance from OS&H that the work site is in a safe condition as per the PROPER Lock and Tag Procedure (FMPC-719), prior to the start of all work.
- 4.3 Operations Safety and Health Department - Reviews and approves plans by engineering and maintenance, alteration work which could impact safety systems and design features for safety or other engineered controls for health, safety, fire protection or environment.
- 4.4 Maintenance - Evaluates work requests and determines actions to be taken. Coordinates with the facility owner, the establishment of a work starting date and the final work inspection to comply with the job plan. Assures availability of approved ECP for alterations of systems under configuration control.
- 4.5 Quality Assurance Department - Reviews plans, Work Requests and ECPs for alterations to systems and facilities with a Quality Level 3 or above. Verifies that systems are maintained in accordance with The Operational Safety Requirements, and DOE/ORO orders and regulations pertaining to safety and the environment. Provides inspection of maintenance, alterations to equipment, or facilities as required.
- 4.6 Technical Department - Manages and controls all major construction projects at the FMPC. Provides engineering and technical services to FMPC organizations and assures that the design conforms to applicable orders and codes and with good engineering practice. Reviews and provides recommended disposition of Alterations if requested and all ECPs.
- 4.7 Responsible Maintenance Supervisor - Ensures that the requested maintenance work is within the capabilities of his/her work force and that the request does not violate area rules and regulations. Ensures that all required Work Permits are obtained in accordance with FMPC-515 "Issuance and Implementation of Radiation Work Permits" and FMPC 516 "Control of Permits for Accomplishing Hazardous Work". Oversees completion of the task.

NO.: FMPC-715	REV.: 0	DATE: 3/2/89
------------------	------------	-----------------

4.0 RESPONSIBILITIES - (Continued)

- 4.8 Controller - Reviews Work Request packages, except Preventive Maintenance or Custodial Maintenance, with an estimated cost of \$2000 or more to insure proper funding. If deemed capital, assigns a charge number and opens charge number within the MMICS data base. The Controller's approval is required in the Release Section of Work Request (Attachment A) after completion of the review.

NOTE: Costs are collected against a Work Order number which is tied to the Equipment Number which is identified with a specific charge number. In order to assure that the proper charge number is charged, the correct Equipment number must be used. When all costs are collected and the work is finished on the job, Maintenance notifies Accounting to close out the Work Order costs.

- 4.9 Production Operations - Responsible for administering all production, maintenance and utilities activities.
- 4.10 Configuration Management - Defines and maintains baseline documentation for critical systems sitewide. Provides status, control, and impact assessment for proposed changes to the established baselines.

NOTE: Configuration Management at the FMPC is being implemented on a phased basis consistent with available resources. Configuration Management activities required in this procedure will be implemented when designated by the Configuration Management Function.

5.0 GENERAL

- 5.1 All requests for work on the FMPC site to be accomplished by WMCO Maintenance personnel (excluding custodial maintenance) shall be initiated by submitting an FMPC Work Request/Order form referencing the appropriate equipment number (Attachment A). Custodial maintenance, and all Work Requests, Alterations, Routine, etc., are subject to the guidelines of FMPC-515, FMPC-516 and all applicable permits shall be obtained.
- 5.2 Engineering/Drafting service will be obtained by submitting a Request for Engineering Services to the Plant Engineering section.
- 5.3 Work tasks performed by Transportation garage personnel are exempt from the requirements of this procedure because the nature of the work is not considered WMCO engineering or maintenance.
- 5.4 On off shifts, the first line Production Operations supervisors may be designated to function as Facility Owners. In areas such as the Administration Building or Service Building, where no Facility Owner or delegate is available, the Utility Engineer shall act as the Facility Owner for emergency or urgent work.

NO.: FMPC-715	REV.: 0	DATE: 3/2/89
------------------	------------	-----------------

5.0 GENERAL - (Continued)

- 5.5 Work Requests with combined labor and material estimate in excess of \$2000 require Davis-Bacon determination. For work accomplished by or for the Maintenance Section this determination will be obtained from DOE by the Manager of Maintenance. For major construction work, this determination will be obtained from the DOE by the Technical Director.
- 5.6 Quality Assurance and Specified Groups in OS&H shall approve Alteration Work Orders as indicated on Form No. FMPC-PRO-2533 (Attachment G) and ECPs with a Quality Level of 3 or above.
- 5.7 Work tasks impacted by regulations, funding levels, budgetary constraints, participation by supporting organizations, etc., which may or may not be initiated by an FMPC Work Request/Order are not covered in the text of this procedure. A brief description of those categories to assist the Facility Owner in defining when these conditions are applicable are listed on Attachment H.

6.0 PROCEDURE

6.1 WORK REQUEST - CUSTODIAL MAINTENANCE (See Guidelines, Attachment C)

RESPONSIBILITY

ACTION

ORIGINATOR

A. Calls appropriate Maintenance Supervisor to arrange for work required. (See Attachment B, Examples of Custodial Maintenance.)

MAINTENANCE

B. Accepts and acknowledges work requested.

C. Prioritizes, plans and performs work requested.

ORIGINATOR

D. Verifies and verbally accepts completed work.

6.2 WORK REQUEST - ROUTINE MAINTENANCE (See Guidelines, Attachment D)

ORIGINATOR

A. Initiates a request for maintenance by completing the originator sections of the FMPC Work Request/Order Form. Equipment number is to be clearly marked on the Work Request (Attachment A).

NO.: FMPC-715	REV.: 0	DATE: 3/2/89
------------------	------------	-----------------

6.0 PROCEDURE - (Continued)RESPONSIBILITYACTION

NOTE: Trouble shooting services or adjustments will be requested by calling appropriate maintenance supervisor. Trouble calls and operating adjustments do not require a written Work Request if no permits, tag outs, or replacement parts are required and the labor effort required is approximately one hour or less.

B. Forwards requests to Facility Owner.

NOTE: Originator may be the designated Facility Owner.

FACILITY OWNER

C. Reviews the Request form, making any necessary corrections; confirms the need for work requested and determines that the type of work requested is routine maintenance and not an alteration; verifies funding and enters the Charge Number and object class, if needed; indicates the Quality level, priority level, checks Personnel Safety Work if applicable, and determines if the work affects a designated safety system or design feature for safety.

D. Requests additional reviews by supporting staff as needed. Approves the request and forwards the request to Maintenance.

MAINTENANCE

E. Accepts and acknowledges work requested. Enters the request into the MMICS.

F. Plans work and estimates costs per department procedures.

6.0 PROCEDURE - (Continued)

RESPONSIBILITY

ACTION

OPERATIONS SAFETY & HEALTH

G. As determined necessary, requests engineering assistance or transfers the work to engineering using RES Form FMPC-T-622. Obtains the necessary review signatures as indicated on the Work Request.

H. Evaluates the extent of the OS&H concerns on work request/orders as identified by the facility owner. Provides inspection, monitoring and permitting as required to perform the work.

CONTROLLER

I. Reviews all Work Requests with an estimated cost of \$2000 or more to verify proper funding.

QUALITY ASSURANCE

J. Reviews Work Request/Order per request of Facility Owner to ensure adherence to all applicable quality requirements. Provides inspection of maintenance or alterations to equipment or facilities as required.

FACILITY OWNER

K. Signs the RELEASE SECTION of the Work Order Form when releasing the job site to Maintenance to do the work. Signature indicates that the work area is clean and available to Maintenance.

MAINTENANCE

L. Obtains necessary Work Permits (Flame, Asbestos, Radiation, etc.). Verifies that all energy sources are isolated and tagged and that the equipment or system is safe to work on. (See FMPC-719 PROPER Lock and Tag Procedure.)

Accomplishes requested work, performs any necessary tests, returns worksite to Facility Owner and completes maintenance documentation.

FACILITY OWNER

M. Signs off on Work Order as complete.

NO.: FMPC-715	REV.: 0	DATE: 3/2/89
------------------	------------	-----------------

6.0 PROCEDURE - (Continued)

RESPONSIBILITY

ACTION

6.3 WORK ORDER - PREVENTIVE MAINTENANCE (See Guidelines, Attachment E)

ORIGINATOR

A. Request for Preventive Maintenance is made either verbally or by letter to Maintenance, or generated automatically by the MMICS system program.

MAINTENANCE

B. Schedules work, generates the Work Order, and secures approval of the Facility Owner.

FACILITY OWNER

C. Signs the release portion of the Work Order Form when releasing the job site to Maintenance to do the work. Signature indicates that the worksite is clean and available to Maintenance.

MAINTENANCE

D. Obtains necessary Work Permits (Flame, Asbestos, Radiation, etc.). Verifies that all energy sources are isolated and tagged and that the equipment or system is safe to work on. (See FMPC-719 PROPER Lock and Tag Procedure.)

Accomplishes requested work, performs any necessary tests, returns worksite to Facility Owner and completes maintenance documentation.

6.4 WORK REQUESTS - ALTERATIONS (See Guidelines, Attachment F)

ORIGINATOR

A. Initiates a request for alteration by completing the originator sections of the FMPC Work Request/Order form (Attachment A).

B. Forwards Work Request to Facility Owner.

FACILITY OWNER

C. Reviews the Request form, making any necessary corrections; confirms the need for work requested and determines if the type of work requested is an alteration. Fills out Alteration Questionnaire Part 1 (Form FMPC-PRO-2533, Attachment G). If all questions are answered "No", signs and dates the form and attaches it to the Work Request.

NO.: FMPC-715	REV.: 0	DATE: 3/2/89
------------------	------------	-----------------

6.0 PROCEDURE - (Continued)RESPONSIBILITYACTION

A copy of this package shall be sent to the OS&H Department. If any question on Part 1 of the Alteration Questionnaire is answered "Yes", complete Part 2 of this form. An appraisal of the concerns to be addressed, as identified by affirmative responses to interrogatories on the questionnaire, shall be obtained by contacting the appropriate staff group either verbally or by submitting the Work Order package for review.

- D. Initiates ECP in accordance with the ECP Procedure (PMP-325) for critical items under Configuration Management. Submits ECP with a copy of the Work Request attached to Configuration Management Function.
- E. Determines whether change is for maintenance or requires Plant Project Committee review. If for Plant Project Committee review, send request and budget documentation to the committee. Projects requiring interaction with the Plant Project Committee are those costing in excess of \$25,000 which will enhance productivity, durability, efficiency, etc. Also included are replacement items with a cost over \$5000 and a useful life of 2 years or more.
- F. Verifies funding and enters the Charge number and object codes, if needed; determines priority; indicates the Quality level; whether the work affects a designated safety system or design feature for safety, checks Personnel Safety Work if applicable, and routes ECP to the Configuration Management Function when designated as a critical system under Configuration Management. Completes a request for a Safety Assessment in accordance with FMPC-508 on alterations as required and sends to Nuclear and System Safety section.

6.0 PROCEDURE - (Continued)

RESPONSIBILITY

ACTION

OPERATIONS, SAFETY & HEALTH

G. Evaluates the extent of the OS&H concerns on Work Request/Orders and/or Alterations Questionnaire as identified by the facility owner.

FACILITY OWNER

H. Completes Alteration Questionnaire (Form FMPC-PRO-2533) documenting resolution of the concerns and forwards to the Level 3 Manager.

LEVEL 3 MANAGER

I. Reviews disposition of concerns identified on the Alteration Questionnaire and indicates concurrence by signature. Attaches completed form to the Work Order package and sends a copy to the OS&H Department.

CONFIGURATION MANAGEMENT FUNCTION

J. Process ECP in accordance with requirements of PMP-325 when designated as a critical item under Configuration Management. Returns disposition copy to the Facility Owner.

TECHNICAL DEPARTMENT

K. Provides technical design or review as requested by the Facility Owner. Updates drawings as required to reflect significant changes to process equipment or facilities. (See FMPC-722 - Engineering Services)

CONTROLLER

L. Reviews all Work Requests with an estimated cost of \$2000 or more to verify proper funding.

QUALITY ASSURANCE

M. Reviews Work Request/Order per request of Facility Owner to ensure adherence to all applicable quality requirements.

MAINTENANCE

N. Accepts and acknowledges work requested. Enters the request into the MMICS.

O. Plans work and estimates costs per department procedures.

NO.: FMPC-715	REV.: 0	DATE: 3/2/89
------------------	------------	-----------------

6.0 PROCEDURE - (Continued)

RESPONSIBILITY

ACTION

FACILITY OWNER

MAINTENANCE

OPERATIONS SAFETY & HEALTH

MAINTENANCE

FACILITY OWNER

- P. Verifies the necessary signatures of approval as indicated on the work request have been obtained and ensures the ECP when required, is approved for those critical items under configuration control prior to initiation of work.
- Q. As determined necessary, requests engineering assistance or transfers the work to engineering using RES Form FMPC-T-622.
- R. Signs the release portion of the Work Order Form when releasing the job site to Maintenance to do the work. Signature indicates that the worksite is clean and available to Maintenance.
- S. Obtains necessary Work Permits (Flame, Asbestos, Radiation, etc.). Verifies that all energy sources are isolated and tagged and that the equipment or system is safe to work on. (See FMPC-719, "PROPER Lock and Tag Procedure".)
- T. Provides inspection, monitoring and permitting as required to perform the work.
- U. Accomplishes requested alteration, performs any necessary static tests, returns worksite to Facility Owner and completes alteration documentation.
- V. Verifies that the work is done in accordance with the Work Order and meets the ECP requirements, if applicable. Performs operational testing. Sends a closed out copy of the Work Order to the Configuration Management Function to approve updating baseline documentation for controlled critical items.

6.0 PROCEDURE - (Continued)RESPONSIBILITYACTIONCONFIGURATION MANAGEMENT
FUNCTION

- W. Receives verification that work is done, notifies appropriate individuals to update baseline documentation and enters new baseline data into the Configuration Management Database (CMDB).

7.0 APPLICABLE DOCUMENTS

- FMPC-104, "Signature Authorization"
 FMPC-204, "Joint WMC0-DOE Change Control Board Charter"
 FMPC-206, "Technical Review Board Charter"
 FMPC-508, "Safety Analysis Documentation Program"
 FMPC-512, "Configuration Control of Safety Systems, Design Features for Safety, and OSR-Affected Procedures"
 FMPC-515, "Issuance and Implementation of Radiation Work Permits"
 FMPC-516, "Control of Permits for Accomplishing Hazardous Work"
 FMPC-711, "Quality Levels"
 FMPC-719, "PROPER Lock & Tag Procedure"
 FMPC-722, "Engineering Services"

WMC0:EVP:88-072, Letter W. H. Britton to G. F. Beecher, et. al.
 "Authorization to Implement a Configuration Management System at the FMPC",
 June 22, 1988.

PMP-325, Engineering Change Proposal

8.0 FORMS USED

- FMPC-T-622 - Request for Engineering Services
 FMPC-T-2721 - Engineering Change Proposal
 FMPC-PRO-2532 - FMPC Work Request/Order
 FMPC-PRO-2533 - Alteration Questionnaire

9.0 ATTACHMENTS

- Attachment A - FMPC-PRO-2532, FMPC Work Request/Order
 Attachment B - Custodial Maintenance (Examples)
 Attachment C - Guidelines for Custodial Maintenance
 Attachment D - Guidelines for Routine Maintenance
 Attachment E - Guidelines for Preventive Maintenance
 Attachment F - Guidelines for Alterations
 Attachment G - FMPC-PRO-2533, Alteration Questionnaire Part 1 and Part 2
 Attachment H - Special Work Task Categories and Definitions, pages 1 and 2

W.O. NO.		FMPC WORK REQUEST/ORDER					2343		
		ORIGINATOR'S SECTION							
A M C	REQUESTED COMP. DATE:								
TYPE OF JOB			MONTH	DAY	YEAR	EQUIPMENT NUMBER			WORK REQUEST NUMBER
EQUIPMENT NAME:								QA LEV:	IA
BUILDING			FLOOR	RM-AREA	PRIORITY	PERSONNEL SAFETY ITEM?		ECP REQUIRED?	SAFETY SYSTEM OR DESIGN FEATURE FOR SAFETY:
					1 2 3	YES NO		YES NO	NO
JOB TITLE:									
JOB DESCRIPTION:									
NAME:		INITIALS:	DATE:	PHONE:	SIGNATURE:			INITIALS:	DATE:
ORIGINATOR (REQ)					FACILITY OWNER (APV)			COST CENTER	OBJ. C

PLANNING SECTION								MAN HOURS			
JOB ELEMENTS							CRAFT CODE	NO.	EST	ACTUAL	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
OVERHEAD:	LABOR:	MATERIAL:	TAX:	TOTAL:							
ESTIMATED COSTS							PLANNER'S INITIALS	SHOP	TYPE EST	TOTALS	
RETESTS:											

RELEASE SECTION			
FIRE AND SAFETY:		QA:	
SIGNATURE	DATE	SIGNATURE	DATE
NUCLEAR SAFETY:		ENGINEERING:	
SIGNATURE	DATE	SIGNATURE	DATE
HEALTH PHYSICS:		RESPONSIBLE FIRST LINE SUPERVISOR:	
SIGNATURE	DATE	SIGNATURE	DATE
INDUSTRIAL HYGIENE:		FACILITY OWNER:	
SIGNATURE	DATE	SIGNATURE	DATE
ENVIRONMENTAL COMPLIANCE:		DAVIS-BACON DETERMINATION:	
SIGNATURE	DATE	YES NO	NUMBER
B & R NUMBER:	SUBCONTRACT NUMBER:	PROJECT AUTHORIZATION:	
(CAPITAL ONLY)	(CAPITAL ONLY)	NUMBER	

COMPLETION SECTION			
RESPONSIBLE FIRST LINE SUPERVISOR:		FACILITY OWNER:	
SIGNATURE	DATE	SIGNATURE	DATE
		DATE C	
		MONTH	DAY

NO:	REV:	DATE:
FMPC-715	0	3/2/89

ATTACHMENT B

CUSTODIAL MAINTENANCE
(EXAMPLES)

GROUNDS

Roads, sidewalks, parking lots, fences
 Cleanup - summer & winter
 Signs
 Patchings
 Lights

Trees, shrubs
 Planting
 Trimming
 Mulching
 Watering

Grass
 Cutting
 Seeding
 Weed control
 Watering

BUILDINGS

(Minor repairs or adjustments)
 Doors/windows/shades
 Stairs/handrails
 Signs
 HVAC
 Plumbing
 Lighting

SERVICES

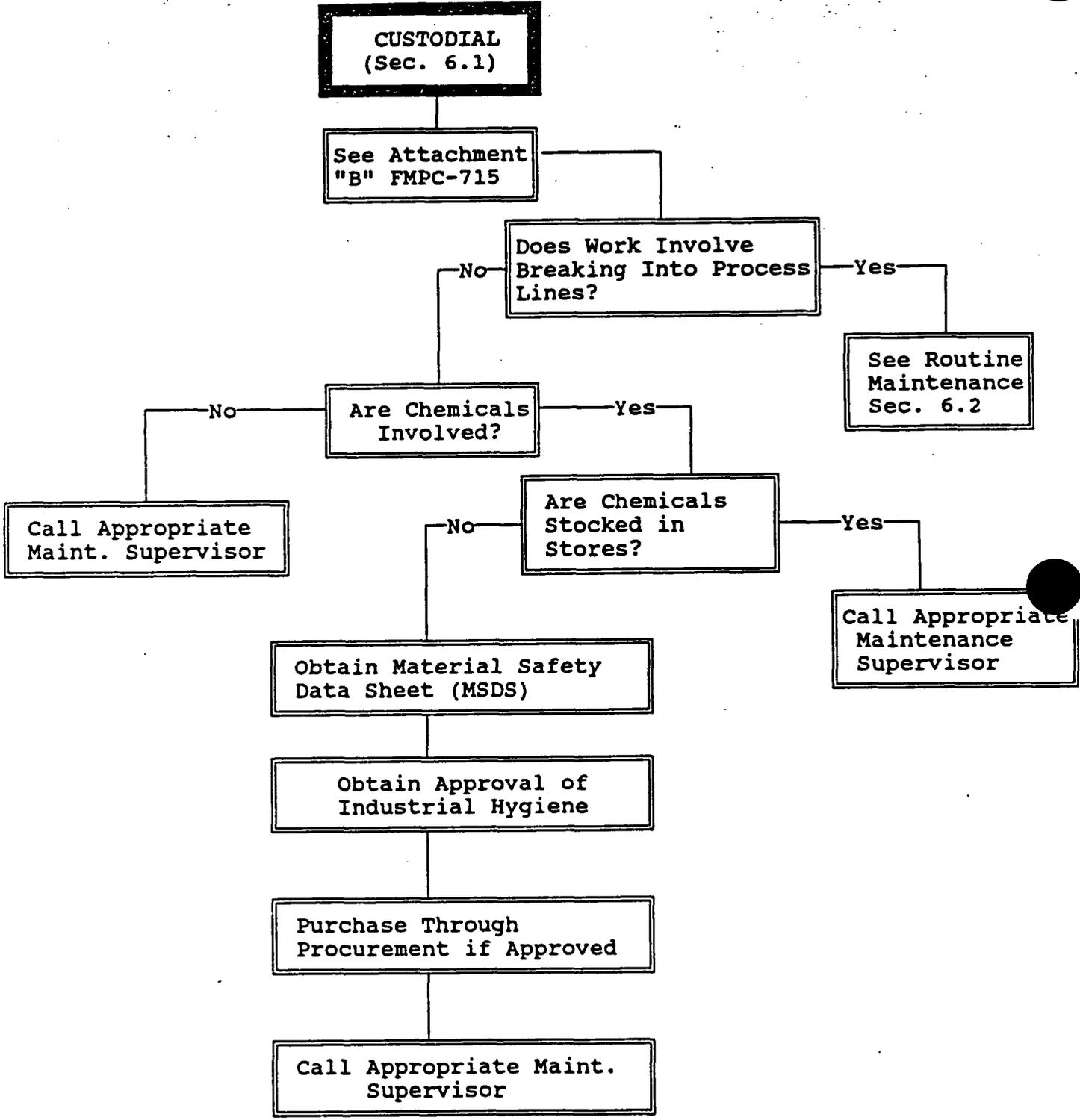
Moving, assembly, or repair of furniture
 Desks/chairs
 Tables/files
 Shelves/cabinets

Moving
 Equipment
 Supplies
 Records
 Personal items

Mounting
 Boards, bulletin, chalk, etc.
 Pictures/charts
 Safety equipment

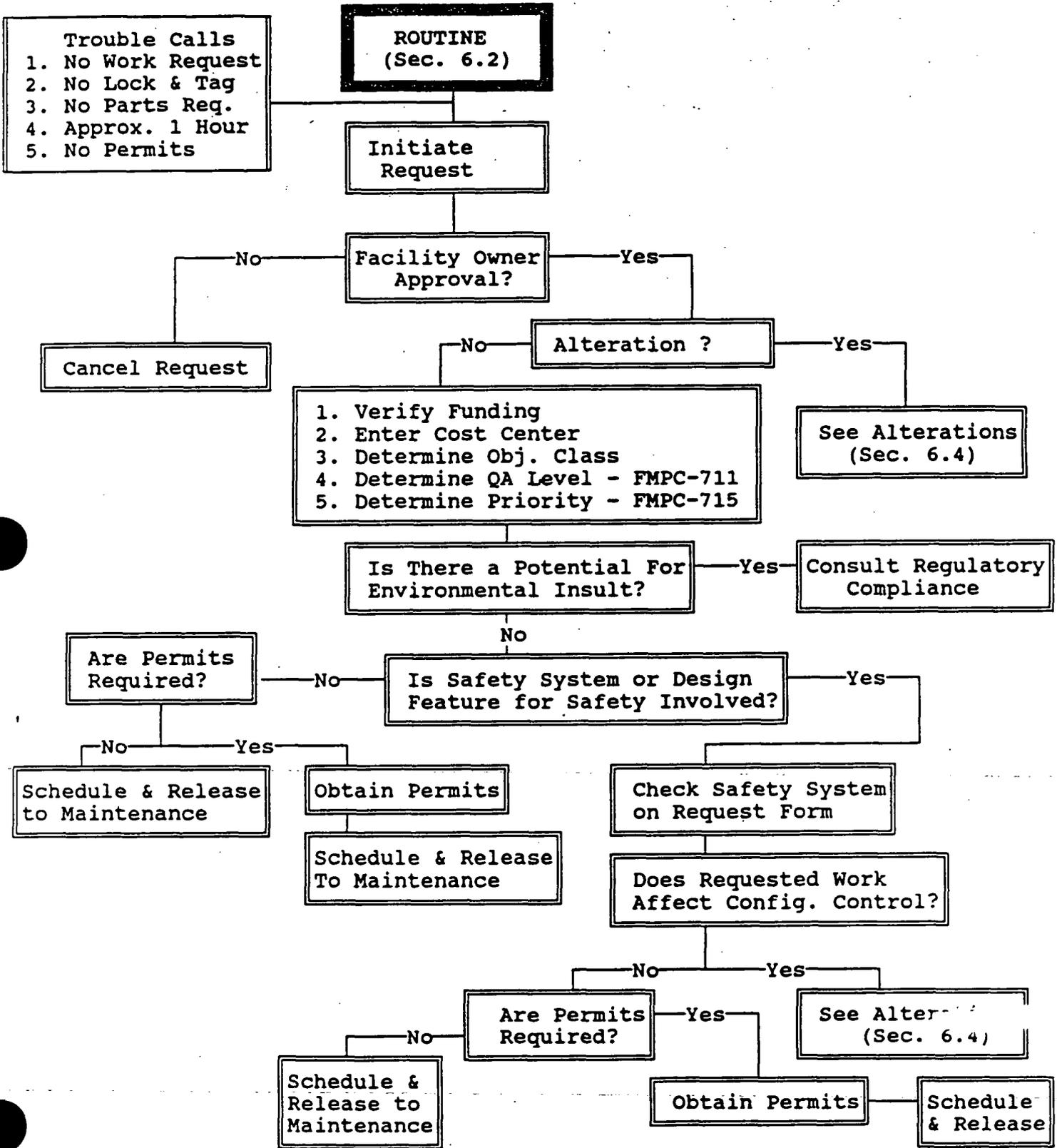
GUIDELINES FOR CUSTODIAL MAINTENANCE

FMPC-715 Rev. 0
Attachment C
Issue Date: 3/01



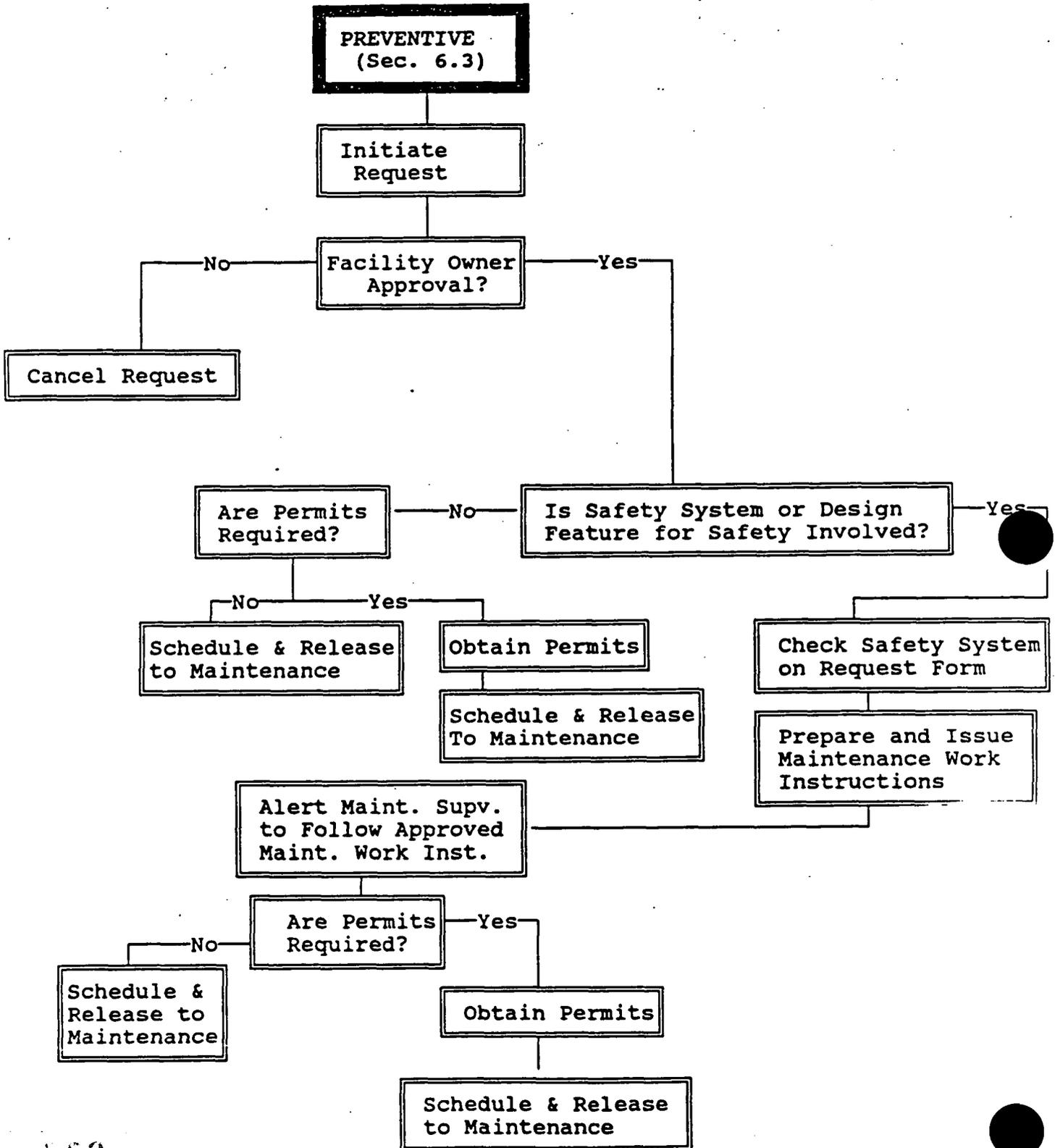
8188

GUIDELINES FOR ROUTINE MAINTENANCE

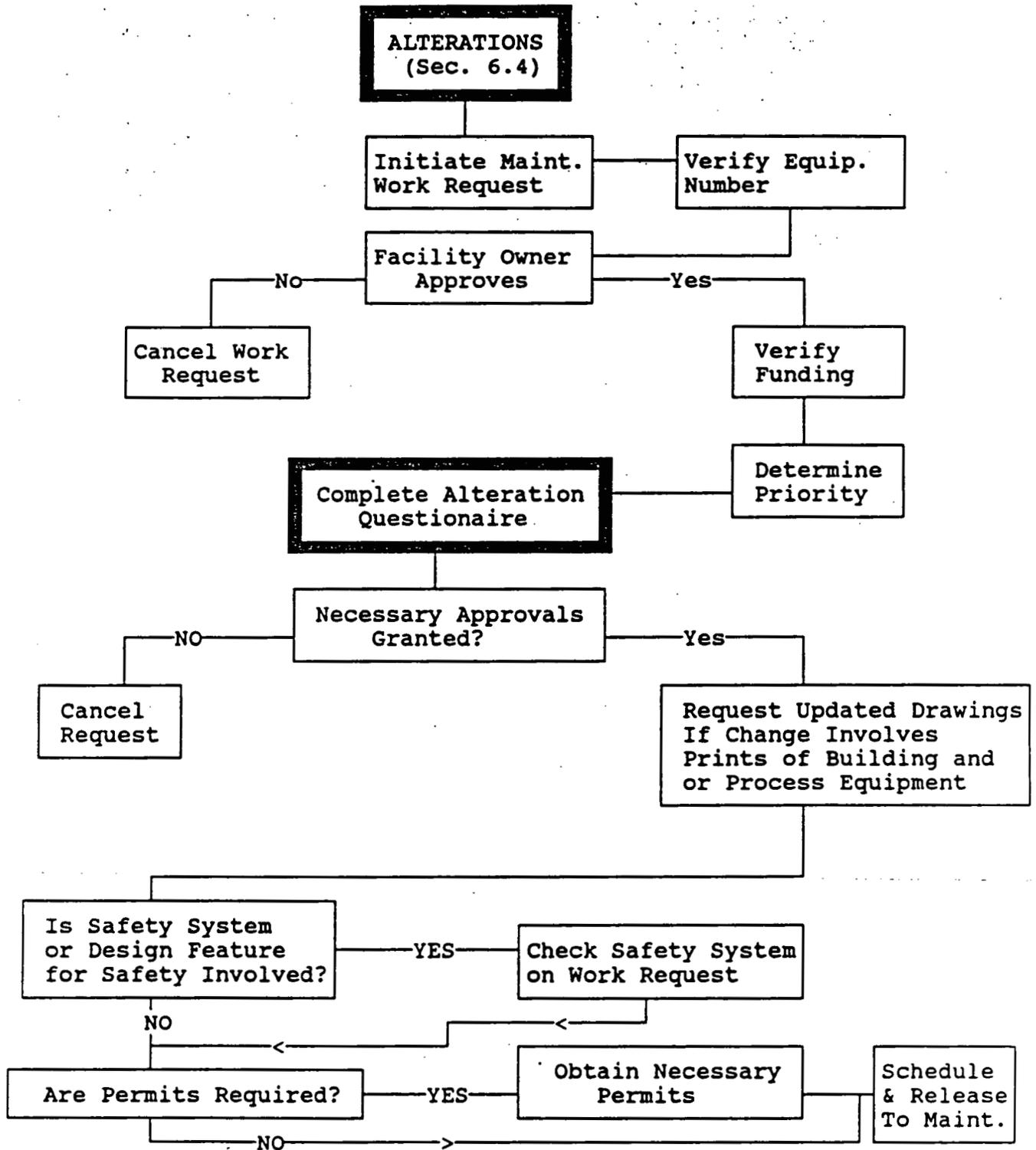


888

337



GUIDELINES FOR ALTERATIONS



8185

FMPC
 PRODUCTION OPERATIONS - MAINTENANCE
ALTERATION QUESTIONNAIRE
 ATTACH TO FORM FMPC-PRO-2532

FMPC-715 Rev. U
 Issue Date: 3/2/89
2343
 WORK REQUEST NUMBER

PART 1

GROUP	CONCERN(S)	YES	NO
FIRE & SAFETY	1. Will additional personal protective equipment be required after the change?		
	2. Will walking or working surfaces be adversely affected?		
	3. Does the change affect fire protection systems and/or equipment?		
	4. Does the work involve explosive and/or flammable materials?		
	5. Will storage requirements for explosive and/or flammable materials change as a result of the change?		
	6. Will changes be made to the structural components of a building?		
	7. Will there be a significant change to the electrical loading due to this change?		
INDUSTRIAL HYGIENE	8. Will this change involve toxic, carcinogenic or biological agents?		
	9. Will the noise level of the work area be increased as a result of this alteration?		
	10. Will the work involve non-ionizing radiation?		
	11. Will the change affect ventilation systems or ventilated enclosures or breathing air stations?		
NUCLEAR SAFETY	12. Does the change affect Radiation Detection Alarm Systems?		
	13. Will storage requirements for enriched uranium bearing materials change?		
	14. Does the change involve any equipment used to process enriched uranium?		
REGULATORY COMPLIANCE	15. Could the environment be insulted as a result of this change and/or the work that will bring about this change?		
	16. Will the change require permitting by an outside agency and/or DOE?		
	17. Does this alteration change any existing terms and/or conditions of Permits to Operate presently in place?		
WASTE MANAGEMENT	18. Will materials under RCRA controls be either generated or stored as a result of this change?		
PRODUCTION TECHNOLOGY	19. Will this change require a change to a current Standard Operating Procedure (SOP)?		
MAINTENANCE	20. Will this change require a change to a Maintenance Work Instruction (MWI)?		
CONFIGURATION CONTROL	21. Does the change affect a safety system or a design feature for safety?		
	22. Will changes to drawings be required?		
OPERATIONAL SAFETY & HEALTH (ALL GROUPS)	23. Will the purpose of the area change?		
	24. Will the function of operations change?		
	25. Does the change affect industry/site color coding requirements?		
	26. Could the change require a Safety Analysis to be performed?		
	27. Does the change involve a system addressed in an approved OSR, FSAR, or Safety Study?		

INSTRUCTIONS: Facility Owner or designee responsible for the area requesting the alteration shall complete the above questionnaire by answering a of the above questions. If all questions are answered "No," sign and date in the appropriate blanks below, attach to Work Reques. and forward to OS&H for review after the work has been completed. If any question is answered "Yes," sign and date in the appropriate blanks below and complete part 2 on the back of this form.

SIGNATURE

DATE

8188

SPECIAL WORK TASK CATEGORIES AND DEFINITIONS

2343

1. Budget Planning - Requirement for budget forms 5A, 5B, or idea letters to insure that funding is planned for proposed projects.
2. Capital Equipment (CE) Projects - (Refers to Program 35 funds). Acquisition or fabrication of capital equipment not related to major construction projects for additions or replacements. The costs incurred include the removal costs of demolishing, dismantling, tearing down, or otherwise removing equipment associated with an equipment project. Projects costing \$150,000 or less require WMCO management approval; projects costing \$150,001 to \$1,000,000, and those exceeding \$1,000,000 which are Major Items of Equipment and require Plant Project Committee and DOE approval.
3. Capital Maintenance - Work involving the procurement and initial installation of equipment, or removal and retirement of equipment, having an expected serviceable lifetime of two or more years and costing \$5,000 or more. Maintenance to capital equipment is never capitalized except for replacement equipment cost when the total cost exceeds \$5,000 or betterment to existing capital unit of significant cost. Work Requests in this category are to be sent to the Controller for review.
4. Construction - Field activities performed by a subcontractor which involves items such as demolition, procurement, fabrication and installation of a new facility or modification of an existing facility.

NOTE: Installation of new items of equipment may not be considered to be construction if the services to the new equipment are not a significant portion of the total requested work. Large scale replacement of equipment may be classified as construction depending on the scope of the overall project. The Department of Energy must make the construction/non-construction (Davis-Bacon) ruling if the cost of the requested work exceeds \$2,000. Plant Projects Committee performs reviews for funding and availability of funding.

5. Expense (EX) Projects - Projects funded under the operating budget which are not capital but require engineering, procurement, and construction activities.
6. General Plant Projects (GPP) - (Refers to Plant Acquisition and Construction with Program 39 funds). Construction projects which are congressionally funded are required during the fiscal year and cannot be specifically identified beforehand. Individual projects shall not exceed \$1.2 million in total estimated cost. Costs incurred on projects or sub-projects include the design, construction, installation or other acquisition of land, property rights, buildings, structures, utility lines, roads, other facilities, or any grouping thereof. Projects costing \$150,000 or less are approved by WMCO management; projects costing \$150,001 to \$1,200,000 are approved by WMCO Management and DOE (OR-5190).

NO:	REV:	DATE:
FMPC-715	0	3/2/89

ATTACHMENT H
Page 2 of 2

7. Line Item (LI) Projects - Capital construction projects that are listed as a part of the Presidents' Budget to Congress and estimated to cost in excess of \$1,200,000. These projects require Congressional approval. They are normally supported by a Conceptual Design Report, Design Criteria, and a Project Management Plan. A Form OR637 Directive must be issued to cover approved costs.
8. Miscellaneous Capital Acquisition (MCA) - A single unit procurement which requires no engineering or installation and is funded by using Form AC-924 "Miscellaneous Capital Acquisition."
9. Major Item of Equipment - An item of capital equipment which has an estimated cost of \$1,000,000 or more, including design, installation, transportation, etc., or a computer system or a component of a computer system having an estimated total cost of \$1,000,000 or more including manufacturer's list price for new equipment or market price for used equipment, plus any other related cost.
10. Project Authorization - An engineering document that is developed to define the scope and justify funding for projects. It includes the cost, schedule, and issue assessments.



Westinghouse
Materials Company
of Ohio — FMPC

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02-15-91
TITLE: ENERGY CONTROL (Lockout and Tagout)		
APPROVED BY: W. H. Britton, President <i>W. H. Britton</i>		

SITE POLICY AND PROCEDURE

1.0 POLICY

It is the policy of Westinghouse Materials Company of Ohio (WMCO) to ensure that all processes, machines, and/or equipment are isolated from all potentially hazardous energy before personnel are allowed to perform any servicing, inspecting, maintenance, or construction activities where the unexpected energization, start-up, or release of stored energy could cause injury to personnel or harm to the environment or equipment. In addition, it is the policy of WMCO to ensure that the notice of precautions or other information necessary to the prior operation of a functional process, machine, or equipment is readily apparent to an individual. These steps shall be done in an auditable manner that ensures the safety of FMPC employees.

2.0 SCOPE

This procedure establishes the minimum requirements for isolating energy sources from processes, machinery, and/or equipment before servicing, inspection, construction, or maintenance activities can be performed along with the minimum requirements to ensure that the notice of precautions or other information necessary to the prior operation of a functional process, machine, or equipment is readily apparent to an individual. This procedure applies to all work performed at the FMPC, including that performed by WMCO, Rust, and their subcontractors.

3.0 DEFINITIONS

- 3.1 AEDO - "Assistant Emergency Duty Officer", (see Utility Engineer).
- 3.2 Affected Employee - A person whose duties include activities such as erecting, installing, constructing, repairing, adjusting, inspecting, operating, maintaining, or cleaning the equipment, process, or system which is under energy isolation, or a person whose duties require that he/she work in an area of equipment, process, or system which has been energy isolated. All Affected Employees will receive training on this procedure.

618

344

3.0 DEFINITIONS (cont.)

3.3 Authorized Employee - A person who initially implements the lockout/tagout procedure on processes, machinery, and/or equipment for the performance of servicing, inspecting, construction, or maintenance on that process, machinery, and/or equipment after being authorized by the Facility Owner or designee. An Authorized Employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the work site, and the acceptable means of isolating these energy sources.

An Authorized Employee and an Affected Employee may be the same person when the Affected Employee's duties also include the performance of the service or maintenance activity for which the process, machinery, and/or equipment is being energy isolated.

3.4 CAUTION Tag - The tag used to assure that notice of some precaution or some information which is necessary prior to the operation of a process, machinery, and/or equipment is readily apparent. The operation of a process, machinery, and/or equipment must be functional, and safe to operate. The tag is to be placed such that it is readily apparent to an individual, but does not interfere with or obscure indicators, switches, or other control devices. The tags cannot be in advertently or accidentally detached during use.

The tag shall be a 2 part pre-numbered yellow 4" x 7-1/2" tag with a metal eyelet and with "CAUTION" in yellow letters on a black rectangle. Part 1 is yellow bond printed on one side in Black ink for use as a detachable record of the information on the CAUTION tag; part 2 is yellow Tyvek with pressure sensitive overlamine printed both sides in black ink, (See Attachment C).

3.5 DANGER Tag - The tag used to warn against hazardous conditions if machinery or equipment is energized. The tag shall contain the legend "DANGER - Do Not Operate". The tag is used to identify the location of each energy isolation. The tag must be securely attached to the energy isolating device such that:

- (1) It is obvious which component is affected by the tag.
- (2) Anyone intending to operate the component would notice the tag prior to operation.
- (3) It does not interfere with or obscure indicators, switches, or other control devices.
- (4) It cannot be inadvertently or accidentally detached during use.

Where physical conditions permit the use of a lock, a lock must be used in conjunction with a DANGER tag. (Where a lock cannot be used to assure the isolation of energy, a specific equipment procedure, approved by IRS&T, shall outline the means of assuring energy isolation.) Tags which have been hung shall be audited as per 6.5. DANGER tags shall not be reused.

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

3.0 DEFINITIONS - (cont.)

The tag is a 2 part pre-numbered white 4 inch x 7-1/2 inch tag with a metal eyelet and with "DANGER" in white letters on a red oval in a black rectangle. Part 1 is white bond printed on one side in Black ink for use as a detachable record of the information on the DANGER tag; part 2 is white Tyvek with a pressure sensitive overlamine printed both sides in black and red ink. (See Attachment A).

- 3.6 DANGER - PERSONNEL WORKING Tag - The tag used to confirm that each Affected Employee is working on the job and agrees that the energy has been isolated at that point. Where physical conditions permit the use of a lock, a personal lock must be used in conjunction with a DANGER - PERSONNEL WORKING tag. DANGER - PERSONNEL WORKING tags and associated personal locks are to be removed by the Affected Employee as he/she leaves the work site. The installing and removal of DANGER - PERSONNEL WORKING tags and associated personal locks are not tracked. DANGER - PERSONNEL WORKING tags shall not be reused. A 2 part pre-numbered white 4" x 7-1/2" tag with a metal eyelet and with "DANGER" in white letters on a red oval in a black rectangle and the words "PERSONNEL WORKING - Do Not Operate" in black. Part 1 is white bond printed on one side in Black ink for use as a detachable record of the information on the DANGER - PERSONNEL WORKING tag; part 2 is white Tyvek with a pressure sensitive overlamine printed both sides in black and red ink. (See Attachment B).
- 3.7 Electrically Qualified Employee - An Electrician, Instrument Mechanic, or other properly trained person who is capable of using the necessary equipment to verify that electrical energy has been isolated and is familiar with the construction and operation of the equipment being isolated and hazards involved. An Electrically Qualified Employee may also be an Affected Employee and/or an Authorized Employee if authorized by the Facility Owner.
- 3.8 Energy Isolating Device - A mechanical device that physically prevents the transmission or release of energy; including, but not limited to: a manually operated electrical circuit breaker, a disconnect switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a slide gate; a slip blind; a line valve; a block; and any similar device used to block or isolate energy. The term does not include a push button, selector switch, and other control circuit type devices.
- 3.9 Energy Source - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other source from which energy can be supplied to the affected system either directly or indirectly. Energy sources shall be vented, drained or discharged to assure that energy does not build, accumulate, or discharge during the period of energy isolation.

348

346

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

3.0 DEFINITIONS - (cont).

- 3.10 Facility Owner - The individual who has the responsibility for a facility or area of the FMPC. All work in a facility must be performed with the consent of the Facility Owner. All DANGER tags, all CAUTION tags, and all locks installed/removed in the Facility Owner's responsibility shall only be hung/removed only with the Facility Owner's authorization.
- 3.11 Hot Tap - A method used in the repair, maintenance, and services activities which involves welding on a piece of equipment (pipelines, vessels, or tanks) under pressure, in order to install connections or appurtenances. Hot Taps include the making of electrical connections to energized high voltage electrical circuits.
- 3.12 Locks
- 3.12.1 Facility Owner
- The locks used to implement this procedure shall be a five-disc tumbler padlock with an aluminum tag attached to an extra long shackle. The lock shall be uniquely identifiable with a number. When not being used to isolate energy sources, they are to be stored under the control of the Facility Owner. This definition only applies to locks installed by or under the authorization of the Facility Owner and not the personal locks installed by the Affected Employees.
- 3.12.2 Personal
- The locks used by the Affected Employees to assure energy isolation while they are performing an activity that involves the isolation of energy. These personal locks are not tracked and are under the exclusive control of each Affected Employee. They are a Stores item and shall be used for nothing except assuring energy isolation by the Affected Employees. The brass tag must contain the employee's badge number to identify the Affected Employee involved.
- 3.13 Lockout & Tagout Log Sheet - A log sheet used by the Facility Owner for recording the placement and removal of Locks, DANGER tags, and CAUTION tags on equipment within his/her facility. As a minimum the log shall contain: the date of installation, the time of installation in military time, the number of the lock installed, the number of the DANGER tag installed, the number of the CAUTION tag installed, the equipment involved, the reason for the lockout/tagout (i.e. the W.O. #), who installed the lock/tag, who removed the lock/tag, the date that the lock/tag was removed, and comments such as the positioning of the energy isolation device. (See Attachment D).

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02/15/91
------------------------	----------------	-------------------------

3.0 DEFINITIONS - (cont.)

3.14 Specific Equipment Plan - A written plan that outlines in detail the steps and special pieces of hardware necessary for isolating all energy sources of a specific process, equipment, or machine. A specific equipment plan must be used for energy isolation when any of the conditions listed in 5.7 exist. A specific equipment plan outlines steps used for the restoration of energy for testing purposes and special unique measures for the isolation of energy. This plan must have the prior written approval of the Facility Owner and a representative of IRS&T; Maintenance and Engineering may also be required to approve this plan.

3.15 Tagout Device - "DANGER" tag.

4.0 RESPONSIBILITIES

4.1 Affected Employee - is defined as a FMPC worker whose activities are directly related to the energy isolation and those who are in the area of the energy isolation. An Affected Employee is responsible for his/her own safety and the safety of other Affected Employees. The locks and tags under his/her control shall be his/her personal locks and the "DANGER - PERSONNEL WORKING" tags.

4.2 Authorized Employee - Is responsible, after receiving the proper training and authorization (verbal or written from the Facility Owner or designee), for locking or implementing the lockout/tagout procedure on machinery or equipment for the performance of servicing or maintenance on that equipment or process. An Authorized Employee is responsible for attending all scheduled training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available at the work site prior to the locking or implementing of the lockout/tagout procedure on machinery or equipment. He/she shall assure that he/she has received the proper authorization prior to the hanging or removing of a lock and associated DANGER tag or of CAUTION tag.

4.3 Electrically Qualified Employee - Is responsible for attending the training in the use of the necessary electrical metering equipment to determine that the electrical energy has been isolated. He/she may hang the locks and "DANGER" tags for the Facility Owner if he/she has been authorized by the Facility Owner or designee.

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

4.0 RESPONSIBILITIES - (cont.)

- 4.4 Facility Owner and/or Designee - Is responsible for a facility or an area of the FMPC. A Facility Owner is responsible for knowing how to isolate all energy sources within his/her facility or for knowing how to find out how to isolate those energy sources. A Facility Owner is responsible for assuring that this procedure is followed within their area and for the keeping of the required lockout and tagout logs involved in the usage of locks (3.12), DANGER tags (3.5), and CAUTION tags (3.4), specific equipment procedures, and quarterly audits. All work in his/her facility must be performed with the Facility Owner consent. All locks and associated DANGER tags, along with all CAUTION tags installed and removed in the Facility Owner's area of responsibility may be installed and removed only with their authorization (verbal and/or written).
- 4.5 Industrial Radiological Safety & Training (IRS&T) - Is responsible for the coordination of the training for each Affected Employee on the purpose and use of this procedure, the recognition of applicable energy sources, the type and magnitude of energy available in the work place, and the methods and means necessary for energy isolation. IRS&T is responsible for assuring that all Affected Employees are retrained annually on the purpose and use of this procedure. IRS&T is responsible for conducting random inspections of the logs, locks and tags to assure the compliance with this procedure, and shall review and approved all specific equipment plans.
- 4.6 Performance Assessment (PA) - Is responsible for conducting an annual audit of this procedure.
- 4.7 Project Manager/Engineer - (or alternate) Is responsible for assuring that subcontract personnel working at the FMPC on his/her project perform the subcontracted activities in compliance with this procedure by verifying that the Affected (subcontract) Employees are aware of the requirements of this procedure and by checking that all required documentation is performed. For the purpose of this procedure, if the work is an area without an assigned Facility Owner, the Project Manager/Engineer shall be the Facility Owner with all the responsibilities as noted in this procedure including the keeping of the required logs.
- 4.8 Responsible Supervisor - Is responsible for assuring that the Affected Employees reporting to him/her are in compliance with this procedure by verifying that the Affected Employees are adequately trained in this procedure and by checking that all required documentation is generated and maintained. The Responsible Supervisor is responsible for assisting the Facility Owner with direct action or by assigning craftsmen or other knowledgeable personnel to identify and/or isolated the various energy sources.
- 4.9 Utility Engineer - For the purpose of this procedure, in the absence of the Assigned Facility Owner or Designee, the Utility Engineer shall act as the Facility Owner, including assuring that the proper documentation is generated and maintained.

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02/15/91
------------------------	----------------	-------------------------

5.0 GENERAL

- 5.1 Routine adjustments, cleaning, and tightening by operations are not covered by this procedure. The servicing and/or maintenance activities which take place during normal production are covered by this procedure only if an Affected Employee is required to remove or bypass a guard or other safety device; or if an employee is required to place any part of his/her body into an area on a process, machinery, and/or piece of equipment where work is actually performed upon the material being processed or where an associated danger zone exists during a machine operating cycle.
- 5.2 This procedure does not apply to work on cord and plug electrical equipment for which exposure to the hazards of unexpected energization or start up of the equipment is controlled by the unplugging of the equipment from the energy source and the plug being under the exclusive control of the Affected Employee performing the servicing or maintenance activity.
- 5.3 Authorized Employees who perform lockout or tagout activities shall be certain as to which switch, valve, or other energy isolating devices apply to the process, equipment, or system being isolated. Any questionable identification of sources shall be cleared by the Authorized Employee with the Facility Owner; additional information may be obtained from other supervisors, engineers, Utility Engineers, or employees.
- 5.4 The substitution of other types of tags for DANGER, DANGER - PERSONNEL WORKING and/or CAUTION tags is be prohibited.
- 5.5 Multiple work assignments may require the tagging of an energy isolation device several times. When a single lock is used for multiple work action energy isolations, each action's DANGER tag shall record the usage of the single lock for the multiple energy isolation. In these cases, the isolating device shall have a DANGER tag for each servicing or maintenance activity, but a single lock may support multiple DANGER tags.

Each Affected Employee shall hang his/her own "DANGER - PERSONNEL WORKING" tag and personal lock at each energy isolation point.

- 5.6 Each personal lockout and/or tagout device (3.6) is to be removed from the energy isolating device by the Affected Employee who applied the device. When the Affected Employee who applies the lockout and/or tagout device is not available to remove it, that device may be removed under the direction of the Facility Owner, provided that:
 - 5.6.1 It can be verified that the Affected Employee who installed the personal lockout and/or tagout device is not on site.
 - 5.6.2 It can be verified that a reasonable effort has been made to contact the Affected Employee to inform him/her that the personal lockout and/or tagout device is to be removed.

269

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

5.0 GENERAL - (cont.)

- 5.6.3 It can be verified that the Affected Employee has knowledge of the removal of the personal lockout and/or tagout device prior to the Affected Employee resuming work at the site.
- 5.6.4 In the event that the Affected Employee cannot be notified, a CAUTION tag will be hung at the point where the personal lock and/or "DANGER - PERSONNEL WORKING" tag was hung.
- 5.7 A specific equipment plan is required for a particular process, equipment, or system when any of the following elements exist:
- 5.7.1 The equipment has the potential for stored or residual energy or re-accumulation of stored energy after shut down which could endanger employees.
- 5.7.2 The equipment has a more than one energy source which can be readily identified and isolated; or the equipment has a single energy source which cannot be readily identified.
- 5.7.3 The isolation and locking out of that energy source will not completely de-energize and deactivate the machine or equipment.
- 5.7.4 The equipment is not isolated from that energy source and locked out during servicing or other activity.
- 5.7.5 A single lockout device will not achieve a lock-out condition.
- 5.7.6 The lockout device is not under the exclusive control of the Affected Employee performing the service or other activity.
- 5.7.7 The servicing, inspecting, construction, or maintenance will create hazards for other employees.
- 5.7.8 There has been a previous occurrence of unexpected activation or re-energization of the equipment during servicing, inspecting, construction, or maintenance.

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

5.0 GENERAL - (cont.)

- 5.8 When the shift ends for an Affected Employee and he/she leaves the work site, he/she will remove the "DANGER - PERSONNEL WORKING" tag(s) and personal lock(s) even if the work is not complete. As the new shift begins and other Affected Employees arrive at the job site, they are to follow 6.1 (M through O).

NOTE: While it is intended that all workers use "DANGER - PERSONNEL WORKING" tags and personal locks to verify that the energy sources are isolated, it is recognized that on work planned to extend weeks or months (i.e. construction) a specific equipment plan may be created and approved as per 6.3 to limit the use of "DANGER - PERSONNEL WORKING" tags and personal locks providing it can be demonstrated to IRS&T that the safety of the Affected Employees will not be impacted.

- 5.9 When employees change jobs, their supervisors will, as a part of the training for working in their new assignment, acquaint them with their work area, including: energy sources and the location(s) of specific equipment energy isolation procedures. A letter verifying this training will be placed in the employee file.
- 5.10 When it is necessary to remove energy isolation devices and restore energy for the purpose of testing equipment following the performance of servicing, inspecting, construction, or maintenance activities, no exception to this procedure (6.2) is permitted unless these actions are approved as part of a previously approved specific equipment energy isolation plan (6.3).
- 5.11 In the case of an emergency, when it is necessary to close valves, open breakers, etc. for the purpose of stopping an emergency (i.e. leaks, fire, etc), this procedure shall be suspended for the purpose of eliminating the emergency condition. No work, however, can be performed to repair the condition until these isolated energy sources have been locked out and tagged out per this procedure.
- 5.12 Whenever major replacement, repair, renovation, or modification of equipment or machines is performed and whenever new machines or equipment are installed, energy isolating devices shall be designed to accept a lockout device.
- 5.13 TY-WRAPPS or equivalent shall be used to fasten all tags to the energy isolation devices.
- 5.14 Attachment E is included for locating information applicable to specific subjects.

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

6.0 PROCEDURE

6.1 Lockout and Tagout Procedure

**FACILITY OWNER or
AUTHORIZED EMPLOYEE**

- A. After being notified of an activity or service to be performed in his/her facility, but before authorizing the activity or service, determines if there are sources of energy requiring isolation and verifies that all affected equipment is shut down and ready for energy isolation.
- B. If no energy isolation is required, may authorize/ allow the service or other activity to begin at his/her discretion.
- C. If any of the conditions of 5.7 exist and energy isolation is required, continues at 6.1.F.
- D. If none of the conditions of 5.7 exist and energy isolation is required, then determines the points of energy isolation from the documented specific equipment plan for the equipment, process, or system identified with this activity or service, assuring that each energy source has been drained, vented, or discharged such that energy does not build, accumulate, or discharge while the energy source is isolated.

NOTE: Energy isolation must not jeopardize OSH, fire protection, or environmental requirements.

- E. If no procedure exists, refers to Section 6.3 for creation of a specific equipment plan.
- F. Installs (or authorizes) the installation of a lockout device at each point of energy isolation with a DANGER tag labeling why the source of energy has been isolated.

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

6.0 PROCEDURE - (cont.)

NOTE: This procedure describes the use of two types of Danger tags: DANGER tag (3.5) and "DANGER - PERSONNEL WORKING" tag (3.6). These are two different tags and are not interchangeable.

**FACILITY OWNER or
AUTHORIZED EMPLOYEE**

G. If a lockout device cannot be installed, then just the DANGER tag is hung and additional means of rendering the energy isolation device inoperative must be used to assure that the energy is isolated. The lack of a lock shall be recorded on the DANGER tag and the Lockout & Tagout log. IRS&T and others may be consulted to assist in the finding of additional means of rendering the energy isolation device inoperative.

H. Tags shall each be numbered, and contain information on the date of the energy isolation, the equipment or process being isolated, the activity or service which requires the lockout, the positioning of the lockout device and the name of the person(s) authorizing and installing the lockout device DANGER tags are to be of the type and installed as described in 3.5.

I. Assures that the required entries in the Lockout & Tagout Log are made.

**ELECTRICALLY QUALIFIED
EMPLOYEE**

J. Where electrical energy is involved, must verify that the electrical energy has been isolated. After verifying that the electrical energy has been isolated, initials the DANGER tag for the electrical energy isolation device.

**FACILITY OWNER or
AUTHORIZED EMPLOYEE**

K. Records in the Lockout/Tagout Log, kept in his/her office, the installation of each lock and DANGER tag.

688

354

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02/15/91
------------------------	----------------	-------------------------

6.0 PROCEDURE - (cont.)

RESPONSIBLE SUPERVISOR L. Reviews the points of energy isolation and confirms that all energy sources have been isolated as required. If he/she cannot confirm the points of energy isolation, resolves those conflicts with the Facility Owner.

AFFECTED EMPLOYEES M. Observe the locks and tags, observing the reason for the energy isolation.

 N. Review the points of energy isolation and confirm that all energy sources have been isolated. As the review of the points of energy isolation is made, will each install their own "DANGER - PERSONNEL WORKING" tag (3.6) and personal lock (where possible).

NOTE: The hanging of the "DANGER - PERSONNEL WORKING" tag and personal lock signifies the agreement of the Affected Employee with the energy isolation. If the Affected Employee does not agree, he/she must resolve the conflict with his/her supervisor. No activity or service is to begin until each Affected Employee has installed his/her own personal lockout and tagout devices.

 O. Assure that energy sources have been isolated by attempting to operate the equipment, (if electrical energy is involved see also 6.1.J).

NOTE: If the Affected Employee is not qualified to operate the equipment, it will be necessary to find an employee qualified to operate the equipment.

6.2 Removal of Energy Isolation Device

AFFECTED EMPLOYEES A. Remove their "DANGER- PERSONNEL WORKING" tags and personal locks from each point of energy isolation as they complete their work or leave the worksite. Assure that all tools etc. are removed and that the work site is clean.

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02/15/91
------------------------	----------------	-------------------------

6.0 PROCEDURE - (cont.)

AFFECTED EMPLOYEES

B. Notify the Responsible Supervisor that their assigned work is complete.

RESPONSIBLE SUPERVISOR

C. Checks the worksite to confirm the completion of the work and that all Affected Employees have completed their work and have removed their "DANGER - PERSONNEL WORKING" tags and personal locks, along with any unnecessary materials from the work site.

D. Notifies the Facility Owner of the completion of the work.

FACILITY OWNER OR AUTHORIZED EMPLOYEE

E. Checks the work site to confirm the completion of work including the removal from the work site of tools and excess material.

F. If work is complete, removes or authorizes the removal of the lock(s) and/or DANGER tag(s) from energy isolation devices, notifies other Affected Employees of the restoration of energy and then restores or authorizes the restoration of the energy to the process, machinery, and/or equipment. Assures that the system is returned to normal configuration.

NOTE: If an Affected Employee has left his/her personal lock and/or "DANGER - PERSONNEL WORKING" tag installed and is not available, refer to 5.6.

FACILITY OWNER

G. Makes the required notations in the Tagout & Lockout Log of the restoration of energy and the removal of the lockout/tagout device(s).

6.3 Development of Specific Equipment Plans for Energy Isolation

FACILITY OWNER

A. Assures that the equipment is not excluded from requiring a specific equipment lockout/tagout plan as covered in 5.7.

358

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

6.0 PROCEDURE - (cont.)

FACILITY OWNER

- B. Shall assure that the specific equipment lockout/tagout plan includes:
1. A statement of the intent of the plan.
 2. The specific steps of the plan for shutting down, isolating, blocking and securing the specific machine, equipment, or components to control the hazardous energy.
 3. The specific steps of the plan for the placement, removal, and transfer of lockout devices, tags, and the responsibility for them.
 4. The specific requirements for testing of a machine or equipment to determine and verify the effectiveness of the lockout devices, tags, and other energy control measures.
 5. Any special instructions such as checks to be made or people to be notified.
 6. Notification of energy isolation to all Affected Employees.
 7. Any specific plans for testing that are required after the work is completed.
 8. Any specific detailed steps for the restoration of energy.
- C. Approves and signs the specific equipment plan, then forwards to IRS&T for their concurrence.
- D. Reviews, approves or disapproves the specific equipment lockout/tagout plan and returns to the Facility Owner.

IRS&T

588

357

6.0 PROCEDURE - (cont.)

NOTE: The Facility Owner may choose to have, or IRS&T may require the additional review/approval of the specific equipment plan by Maintenance, Engineering, and/or others.

FACILITY OWNER

- E. Places a copy of this approved specific equipment's lockout/tagout plan in a file in his/her office in a location that is readily available to Affected Employees. It is suggested that an additional copy be placed near the process, machinery, and/or equipment to make this information more available to the Affected Employees.

6.4 Installing and Removing CAUTION Tags

FACILITY OWNER or AUTHORIZED EMPLOYEE

- A. Confirms the need for a CAUTION tag to assure that notice of some precaution or some information that is necessary prior to the operation of a piece of equipment and/or process. The equipment or process must be functional and safe to operate.
- B. Hangs the CAUTION tag in such a manner that the tag, and thus the information on the precaution, is readily apparent to an individual but does not interfere with or obscure indicators, switches, or other control devices and such that the CAUTION tag cannot be inadvertently or accidentally detached during use.
- C. Shall assure that CAUTION tags:
 - 1. Contain the information on the precaution in clear concise wording.
 - 2. Be uniquely numbered.
 - 3. Contain the date of the precaution's notice.
 - 4. The equipment or process on which the precaution is given.

458

358

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

6.0 PROCEDURE - (cont.)

**FACILITY OWNER or
AUTHORIZED EMPLOYEE**

5. The name of the person(s) authorizing and installing the CAUTION tag.
6. Have a 90 day limit of existence.
- D. Logs the hanging of the CAUTION tag with the same information on the tag in the Lockout & Tagout log kept in his/her office.
- E. When the reason for the CAUTION tag ceases to exist, the Facility Owner first confirms that the CAUTION tag is no longer required, removes the tag, and notes the removal in the Lockout & Tagout log.

6.5 Audits

FACILITY OWNER

- A. Using the Lockout & Tagout log kept in his/her office, conducts a complete inspection of all locks, DANGER tags, and CAUTION tags hanging in his/her facility every three months.

NOTE: While personal locks and "DANGER - PERSONNEL WORKING" tags are not tracked, the audit should observe any improper usage of these tags.

- B. Resolves any conflicts between the field observations and the logs.
- C. On CAUTION tags older than 90 days, after assuring that the need still exists for the CAUTION tag, removes the old tag and replaces it with a new tag documenting as required in 6.4.
- D. Initials and dates the bottom of each log as the audits are complete.

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02/15/91
------------------------	----------------	-------------------------

6.0 PROCEDURE - (cont.)

IRS&T

E. Performs random field inspections of each facility such that each facility is inspected at least once annually.

PERFORMANCE ASSESSMENT

- F. Audits a minimum of ten (10) facilities annually to assure compliance with this procedure.
- G. Reviews the procedure with each Authorized Employee and Affected Employee at the facility.
- H. Submits a letter to IRS&T certifying that the audit has been performed, identifying the facilities and the equipment inspected, the employees included in the audit the person(s) performing audit.

6.6 Training

IRS&T

A. Coordinates the training for each new Affected Employee such that he/she is aware of this procedure and his/her responsibilities outlined within.

NOTE: After each revision resulting in a revision number change, or after significant negative audit findings, all FMPC affected employees will be retrained accordingly.

B. Coordinates the annual refresher training for all Affected Employees, assuring that all applicable minor changes to this procedure are covered.

RESPONSIBLE SUPERVISOR

C. Assures that all Affected Employees under his/her supervision have received training on this procedure.

AFFECTED EMPLOYEES

D. Attend training on this procedure.

FACILITY OWNER

E. Assures that Authorized Employees are trained such that they have sufficient knowledge to accept the responsibilities given then.

NUMBER:	REVISION:	ISSUE DATE:
PP-FMPC-719	0	02/15/91

6.0 PROCEDURE - (cont.)**FACILITY OWNER**

- F. Attend what training is offered to teach the Facility Owner about energy sources and methods of energy isolation in his/her area.

7.0 APPLICABLE DOCUMENTS

Federal Register, Vol 54, No. 169, Rules and Regulations Part 1910.147 - Occupational Safety and Health Standards (September 1, 1989)

FMPC Conduct of Operations

NFPA 26-1983, Factory Mutual Data Sheet 2-81 IHS-F-02

NFPA E-1988, Part II, chapter 4 B

8.0 FORMS USED

No Number - "Suggested Lockout and Tagout Log Sheet"

9.0 ATTACHMENTS

ATTACHMENT A: DANGER TAG

ATTACHMENT B: DANGER-PERSONNEL WORKING TAG

ATTACHMENT C: CAUTION TAG

ATTACHMENT D: "SUGGESTED" LOCKOUT & TAGOUT LOG SHEET

ATTACHMENT E: LOCKOUT AND TAGOUT INDEX

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02-15-91
------------------------	----------------	-------------------------

ATTACHMENT A
DANGER TAG

DANGER

DANGER — DO NOT OPERATE

DATE: _____

EQUIPMENT OR PROCESS: _____

REASON FOR LOCKOUT: _____

PERSON APPLYING LOCK / TAG OUT: _____

X _____
FACILITY OWNER / ALTERNATE

X _____
EMPLOYEE HANGING TAG

DANGER

DO NOT OPERATE

DO NOT REMOVE THIS TAG WITHOUT PROPER AUTHORITY

SEE OTHER SIDE.

NUMBER: PP-EMPC-719	REVISION: 0	ISSUE DATE: 02-15-91
------------------------	----------------	-------------------------

**ATTACHMENT B
DANGER - PERSONNEL WORKING TAG -Do Not Operate**

DANGER

PERSONNEL
WORKING
DO NOT
OPERATE

X _____
AFFECTED EMPLOYEE

_____	_____
BADGE #	DEPT. OR PLANT
_____	_____
SHIFT	DATE

DANGER

PERSONNEL
WORKING
DO NOT
OPERATE

REMOVAL OF THIS TAG
WITHOUT PROPER AUTHORITY
IS A VIOLATION OF SITE
SAFETY PROCEDURES

SEE OTHER SIDE.

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02-15-91
------------------------	----------------	-------------------------

ATTACHMENT C
CAUTION TAG

CAUTION

TAG NO. _____ DATE: _____

COMPONENT OR SYSTEM: _____

SPECIAL INSTRUCTION: _____

AUTHORIZED BY: _____

Posted by: _____

CAUTION

DO NOT OPERATE UNTIL
SPECIAL INSTRUCTIONS
ON OTHER SIDE ARE
THOROUGHLY UNDERSTOOD

**DO NOT REMOVE THIS TAG
WITHOUT PROPER AUTHORITY**

SEE OTHER SIDE.

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02-15-91
------------------------	----------------	-------------------------

ATTACHMENT E
Page 1 of 3

ATTACHMENT E
LOCKOUT AND TAGOUT PROCEDURE INDEX

AEDO

3.1, {{see Utility Engineer}}

AFFECTED EMPLOYEE

3.2, 3.3, 3.6, 3.7, 3.12, 4.1, 4.5, 4.7, 4.8, 5.1, 5.2, 5.5, 5.6, 5.8, 5.9, 6.1.M-O, 6.2.A-C, NOTE after 6.2.F, 6.3.B.6, 6.3.E, 6.6.A, 6.5.A, 6.6.D, ATTACHMENT B

AUDITS

1.0, 4.4, 4.5, 4.6, 6.5, ATTACHMENT D

AUTHORIZED EMPLOYEE

3.3, 3.7, 4.2, 5.3, 6.1.A-L, 6.1.K, 6.2.E-G, 6.4, 6.5.H, 6.6.E, ATTACHMENT A, ATTACHMENT C, ATTACHMENT D

CAUTION TAG

3.4, 3.10, 3.13, 4.2, 4.4, 5.4, 5.6.D, 6.4, 6.5.A-C, ATTACHMENT C, ATTACHMENT D

CONSTRUCTION

1.0, 2.0, 4.7, NOTE after 5.8, 5.12, 6.6.A

CONTRACTORS

{{Same as CONSTRUCTION}}

CORD & PLUG ELECTRICAL EQUIPMENT

5.2, 5.7

DANGER TAG

3.5, 3.10, 3.13, 3.15, 4.2, 4.3, 4.5, 5.4, 5.5, 5.6, 5.8, 6.1, 6.2, 6.3, 6.5, ATTACHMENT A, ATTACHMENT D

DANGER -PERSONNEL WORKING TAG

3.6, 4.1, 5.5, 5.6, 5.8, 6.1.N, 6.2.A-C, NOTE after 6.5.A, ATTACHMENT B

ELECTRICALLY QUALIFIED EMPLOYEE

3.7, 4.3, 6.1.J.

END OF SHIFT

5.6, 5.8, NOTE after 6.2.F.

ENERGY ISOLATION DEVICE

3.8, 3.13, 3.14, 4.2, 4.3, 5.5, 5.6, 5.7, 5.10, 5.12, 6.1, 6.2, 6.3, ATTACHMENT D.

ENERGY SOURCE

3.2, 3.3, 3.5, 3.9, 4.4, 4.8, {{see listing for ENERGY ISOLATION DEVICE}}

ENVIRONMENTAL CONCERNS

{{NOTE after 6.1.D}}

788

366

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02-15-91
------------------------	----------------	-------------------------

ATTACHMENT E
Page 2 of 3

ATTACHMENT E - Continued
LOCKOUT AND TAGOUT PROCEDURE INDEX

FACILITY OWNER

3.3, 3.4, 3.5, 3.7, 3.10, 3.12, 3.13, 3.14, 4.2, 4.3, 4.4, 4.7, 4.8, 4.9, 5.3, 5.6, 6.1, 6.2, 6.3, 6.4, 6.5.A-D, 6.6.E-F, ATTACHMENT A, ATTACHMENT C, ATTACHMENT D

HANGING OF TAGS

5.3, {{see also description of individual tags}}

HOT TAP

3.11

INDUSTRIAL RADIOLOGICAL SAFETY & TRAINING (IRS&T)

3.14, 4.5, 5.7, 6.1.G, 6.3.D, 6.5.D, 6.6

LOCKOUT AND TAGOUT LOG

{{see LOGS}}

LOCKS

3.3, 3.5, 3.6, 3.8, 3.10, 3.12, 3.13, 4.1, 4.2, 4.3, 4.4, 4.5, 5.5, 5.6, 5.7, 5.8, 6.1, 6.2, 6.3, 6.5, ATTACHMENT A, ATTACHMENT D

LOGS

3.10, 3.13, 4.4, 4.5, 4.7, 4.9, 5.5, 6.1.I, 6.1.K, 6.2.G, 6.4.D-E, 6.5, ATTACHMENT D

NEW EQUIPMENT

5.12

NO LOCKOUT DEVICE

5.1, 5.2, 5.12, 6.1.G

OSR'S

{{NOTE after 6.1.D}}

PERFORMANCE ASSESSMENT (PA)

4.6, 6.5.F-H

PROJECT MANAGER/ENGINEER

4.7, {{see FACILITY OWNER}}

RESPONSIBLE SUPERVISOR

4.8, 5.5, 5.9, 6.1.L, 6.2.B-D, 6.6.C

SPECIFIC EQUIPMENT PLAN

3.14, 4.5, 5.7, 5.10, 6.1.D-E, 6.3

SUBCONTRACTORS

{{see CONSTRUCTION}}

008

367

NUMBER: PP-FMPC-719	REVISION: 0	ISSUE DATE: 02-15-91
------------------------	----------------	-------------------------

ATTACHMENT E
Page 3 of 3

ATTACHMENT E - Continued
LOCKOUT AND TAGOUT PROCEDURE INDEX

SUBSTITUTION OF TAGS

5.4

TRAINING

3.2, 3.3, 3.7, 4.2, 4.3, 4.5, 5.9, 6.6

TY-WRAPPS

5.13

UTILITY ENGINEER

3.1, 4.9, {{see FACILITY OWNER}}



Westinghouse
Materials Company
of Ohio — FMPC

NUMBER: FMPC-508	REVISION: 1	ISSUE DATE: 10/31/88
---------------------	----------------	-------------------------

TITLE:
SAFETY ANALYSIS DOCUMENTATION
PROGRAM

APPROVED BY:
M. B. Boswell
M. B. Boswell, President

SITE POLICY AND PROCEDURE

1.0 POLICY

Westinghouse Materials Company of Ohio (WMO) shall perform comprehensive safety analyses for all site projects and operations, and produce high-quality safety documentation of those analyses.

2.0 SCOPE

This procedure applies to the design and operation of facilities and the safety analysis process to ensure that: (1) potential hazards are systematically identified for all existing and proposed operations and facilities, including Line Item Projects, Internal Projects, and Plant Test Authorizations; (2) reasonable measures have been taken to eliminate, control, or mitigate the hazards; (3) potential risks from operation have been evaluated; and (4) WMO and Department of Energy authorization of the operation is based upon an objective assessment of the safety analysis and is documented. This procedure also applies to the preparation of Safety Analysis Reports for Packaging (SARPs) which are prepared for containers used to ship fissile materials.

3.0 DEFINITIONS

3.1 Design Features for Safety - Hardware items and/or equipment which are identified in a safety analysis report as providing a safety function by preventing or mitigating accidents and ensuring that the operation of the facility will not cause unacceptable risk to the safety and health of employees or the general public. Design Features for Safety are generally passive in nature.

3.2 Final Safety Analysis Report (FSAR) - A safety document which systematically identifies the hazards associated with a facility; describes and analyzes the adequacy of the measures taken to eliminate, control, or mitigate identified hazards; and analyzes and evaluates potential accidents and associated risks. In the early stages of the safety analysis program, FSARs or Safety Studies will typically be produced separately for each on-site facility. After those are completed, they will be compiled into a single FSAR document for the entire site.

NO.: FMPC-508	REV.: 1	DATE: 10/31/88
------------------	------------	-------------------

3.0 DEFINITIONS (Continued)

- 3.3 Independent Safety Review (ISR) - The review of facilities/systems and their associated safety analysis documentation by a committee comprised of knowledgeable individuals who have not participated in the preparation of said documents, and are not directly involved in the operation of the facility/system under review. (See FMPC-209, "Independent Safety Review Committee Charter.")
- 3.4 Internal Project - Umbrella term encompassing General Plant Projects (GPP), or Capital and Expense Projects generally costing less than \$1.2 million. For purposes of Safety Analysis Documentation, PTAs or any other proposed change to a process or facility will fall into this category.
- 3.5 FMPC Work Request/Order - A document which is used to define impacts (e.g., cost, schedule, operability, etc.) and sources required to perform variable/infrequent repairs and maintenance work. With approved change documentation (e.g., an ECP), a Work Request/Order may also be used to define impacts and sources required to perform alterations, improvements, development, new construction, or other modifications to equipment or plant facilities.
- 3.6 Line Item Project - A capital construction project that is listed as part of the President's budget to the Congress and generally costing more than \$1.2 million.
- 3.7 Non-Standard Hazard - Hazards which are not routinely encountered in industry and are not routinely accepted by the public.
- 3.8 Operational Safety Requirements (OSR) - A binding agreement between the operating contractor and DOE which defines conditions, limitations, administrative controls, and bases thereof required to assure safe operation of a facility.
- 3.9 Plant Test Authorization (PTA) - Documents the approval required to control equipment and process changes outside the scope of Standard Operating Procedures (SOPs) through closely controlled test conditions, closely monitored test results, and closely controlled and documented configuration changes.
- 3.10 Preliminary Safety Analysis Report (PSAR) - A document produced early in the engineering phase of a project which systematically identifies safety design criteria; analyzes potential hazards of the operation of a facility and the proposed measures for their elimination, control, or mitigation; and evaluates the potential risks of operation.
- 3.11 Project Authorization (PA) - A document which describes a proposed project and requests approval by valid authority.
- 3.12 Safety Analysis Documentation - Formal documents required by DOE Order 5481.1B: Safety Assessments, PSARs, FSARs, and OSRs.

988

NO.	REV.	DATE
FMPC-508	1	10/31/88

3.0 DEFINITIONS (Continued)

- 3.13 Safety Assessment (SA) - A brief, factual, and objective document which determines if activities involve hazards -- other than those standard to industry -- that require elimination, control, or mitigation, thereby establishing the need for a safety analysis report.
- 3.14 Safety Analysis Report for Packaging - Provides the administrative requirements and procedures associated with the review and approval for designing, implementing, and testing of specific packages for transporting fissile materials.
- 3.15 Safety Study - A safety document which systematically describes an existing operating facility, identifies the hazards associated with that facility, and analyzes and evaluates potential accidents and their associated risks. A Safety Study is comprised of Section IV (Facility and Process Description) and Section V (Accident Analysis) of what will become the FSAR for the entire FMPC site. Safety Studies may serve as the basis for OSRs until the "existing-plant" FSAR for the site is completed and approved.
- 3.16 Safety System - Hardware items and/or equipment which are identified in a safety analysis report as providing a safety function by preventing or mitigating accidents, thus ensuring that the operation of the facility will not cause unacceptable risk to the safety and health of employees or the general public. Safety Systems are generally active in nature.
- 3.17 Standard Industrial Hazards - Hazards which are routinely encountered in industry and accepted by the public.

4.0 RESPONSIBILITIES

- 4.1 Manager - Operations Safety and Health - Has primary responsibility for implementation of the Safety Analysis Documentation Program.
- 4.2 Manager - Nuclear and System Safety (N&SS) - Responsible for an evaluation of existing and proposed facilities to determine the risk of operation and for generation of the resultant SAs, PSARs, Safety Studies, and FSARs.
- 4.3 Chairperson - ISR Committee - Presides over an objective and independent review of Safety Analysis Documentation to ensure that the various documents are thorough, accurate, and are consistent with each other and satisfy the requirements of this program.
- 4.4 Manager - Production Operations - Supports the Safety Analysis Documentation Program by providing assistance in the preparation of portions of Safety Analysis Reports. Ensures that all applicable elements of the OSR are included in the SOPs and Manufacturing Specifications as appropriate. With assistance from Technical, writes the OSR documents for existing facilities.

NO: FMPC-508	REV: 1	DATE 10/31/88
--------------	--------	---------------

4.0 RESPONSIBILITIES (Continued)

- 4.5 VP & Technical Director - Supports the Safety Analysis Documentation Program by providing assistance in the preparation of portions of Safety Analysis Reports and with assistance from Production Operations, writes the OSR documents for new facilities.
- 4.6 Manager - Site Remediation - Supports the Safety Analysis Program by providing assistance in the preparation of portions of Safety Analysis Reports and, with assistance of the group performing the remediation work, writes the OSR document for projects under the control of Site Remediation Department.
- 4.7 Manager - Quality Assurance - Supports the Safety Analysis Documentation Program by providing Section VI (Quality Assurance) of PSARs and FSARs.

5.0 GENERAL

- 5.1 It is required that an SA be prepared for all FMPC facilities and projects (except as noted in FMPC-2116) to determine and document the presence of hazards unique to DOE operations or not readily accepted by the public or commonly encountered by industry. If a project is subdivided into subprojects or a work breakdown structure (WBS), a safety assessment may be prepared for each subproject or element of the WBS. If the SA identifies such hazards, detailed accident analyses shall be performed, using accepted methodology, and documented in formal PSARs, FSARs, and OSRs as appropriate. PSARs are required only for Line Item Projects. When a PSAR is required, an FSAR will also be required.
- 5.2 DOE approval is required for PSARs, FSARs, and OSRs. SAs for projects are normally submitted for DOE review along with the Conceptual Design Report or Project Authorization. The PSAR is submitted with the Design Criteria, and the FSAR and OSR are submitted together approximately two months prior to anticipated start-up of the subject facility or facility modification.
- 5.3 It is essential that non-standard hazards are identified early in the design process for new facilities and operations, or for modifications to existing facilities and operations, to allow for adequate funding for the incorporation of Safety Systems and/or Design Features for Safety as part of the original facility design criteria. Early identification of hazards also allows for development of appropriate administrative controls and other operational prerogatives that will complement facility design to reduce the risk of operation.
- 5.4 SAs prepared for existing facilities are used to identify the need for (or existing presence of) Safety Systems, Design Features for Safety, or Administrative Controls to achieve an adequate level of safety. When a need has been identified, the subsequent safety documentation (an FSAR or Safety Study and an OSR) may serve as a basis to prepare design changes, but should not serve to make recommendations. No PSAR is required for an existing facility. When modifications are made to

5.0 GENERAL (Continued)

an existing facility where an FSAR is already in existence, that FSAR and corresponding OSRs will be revised on a timely basis such that the revisions are in place prior to operating the facility as modified.

6.0 PROCEDURE

| Detailed procedures and instructions for implementing this site policy and procedure are provided in FMPC-2116, "Topical Manual for Implementing FMPC Policies and Procedures for System Safety Analysis."

7.0 APPLICABLE DOCUMENTS

DOE Order 5481.1B, "Safety Analysis and Review System."

DOE Order OR 5481.1B, "Safety Analysis and Review System."

| DOE Order 5480.3, "Safety Requirements for the Packaging and Transportation of Hazardous Materials, Hazardous Substances, and Hazardous Materials."

| DOE Order 5480.5, "Safety of Nuclear Facilities."

| FMPC- 209, "Independent Safety Review Committee Charter."

| FMPC- 721, "Plant Test Authorization."

| FMPC-2116, "Topical Manual for Implementing FMPC Policies and Procedures for System Safety Analysis."

8.0 FORMS USED

FMPC-ES&H-2706 - Request for Safety Assessment

9.0 ATTACHMENTS

| None



Westinghouse
Materials Company
of Ohio — FMPC

SITE POLICY AND PROCEDURE

NUMBER: FMPC - 712	REVISION: 0	ISSUE DATE: 4/4/89
TITLE: VULNERABILITY AND RISK ASSESSMENT & MANAGEMENT		
APPROVED BY: M. B. Boswell, President		

1.0 POLICY

New and modified facilities, process systems and components will be assessed to determine if failure could impact health, safety, environment and economics of operation of the Feed Materials Production Center (FMPC).

2.0 SCOPE

This procedure identifies responsibilities and guidance for conducting risk assessments and developing action plans to minimize the chances and mitigate the consequences of risks. It also includes guidance in determining Quality Levels for systems and components based on the results of a risk assessment.

3.0 DEFINITIONS

- 3.1 Risk Assessment - Identification of potential process hazards and probabilities of occurring by using Failure Modes and Effects Analysis concepts.
- 3.2 Vulnerability - An area of weakness in FMPC operations that could have an adverse effect if not corrected.
- 3.3 Risk - The possible consequences of taking no action in response to an identified vulnerability.
- 3.4 Risk Management Plan - A formal document which describes the specific actions to be taken, and the responsibilities for accomplishing those actions, to eliminate or mitigate the consequences of failures or concerns identified in the Risk Assessment.
- 3.5 Project - An activity which has a definable scope of work, scheduled beginning and ending dates, prescribed budget or cost constraints, and an approved schedule for its accomplishment. This term includes General Plant Projects (GPP) line item projects or Capital and Expense Projects. For purposes of Risk Assessment documentation, Plant Test Authorizations or any other proposed changes to a process or facility will fall into this category.
- 3.6 Program (Production) - An organized set of activities directed toward a common purpose, such as the manufacture of a product. The 2" flats production and site restoration activities fall within this definition.

358

374

NUMBER:	REVISION:	ISSUE DATE:
FMPC - 712	0	4/4/89

3.0 DEFINITIONS (Continued)

3.7 Failure Modes and Effects Analysis - A methodology in which the possible modes of failure of a given system or component are postulated and the consequences of such failure are analyzed.

4.0 RESPONSIBILITY

4.1 Facility Owner - As the responsible operations manager of a new or existing facility or process system/component to be constructed or modified, fills out Request for Engineering Services for performance of the risk assessment by the appropriate engineering group and provides operation oriented input to the risk assessment. Reviews and concurs in the Risk Assessment and Risk Management Plan.

4.2 Technical Department - Prepares the risk assessment for new or modified process system projects. Prepares the Risk Management Plan, where required.

4.3 Site Remediation Department - Prepares the risk assessment for site remediation projects including new water pollution control projects needed for compliance with environmental regulations. Prepares the Risk Management Plan, where required.

4.4 Quality Assurance - Review and concur in the risk assessment and the Risk Management Plan.

4.5 Nuclear and Systems Safety (Operations Safety and Health Department) - Performs a Safety Assessment as part of the input to the Risk Assessment and in accordance with FMPC - 508, "Safety Analysis Documentation Program". Reviews and concurs with Risk Assessment and Risk Management Plan.

5.0 GENERAL

5.1 The risk assessment (referred to in the past as a Quality Assurance Analysis) will be performed in accordance with guidelines contained in Attachment A. Process hazards associated with normal operation of the facility or process system and those resulting from equipment failure are identified and the seriousness of consequences and failure probability are quantitatively estimated. The values derived are used to determine the relative risks associated with operation of the new or modified facility or process system.

5.2 As a minimum, the following will be considered when making the Risk Assessment:

1. Health and safety of personnel and the general public.
2. Insult to the environment.
3. Ability to meet scientific and technical program objectives.
4. Accessibility to perform maintenance, service or repair.
5. Potential for delays in production schedules or other programs.
6. Potential for monetary loss.
7. Potential for adverse public reaction.
8. Damage or loss to critical units of production.

375

NUMBER: FMPC - 712	REVISION: 0	ISSUE DATE: 4/4/89
-----------------------	----------------	-----------------------

5.0 GENERAL (Continued)

5.3 The Safety Assessment performed by OS&H is the source of information concerning risks to the health and safety of FMPC personnel and to the public. Risks of monetary loss, production delay and adverse public reaction are derived by the Facility Owner or the Technical organization.

5.4 A Risk Management Plan shall be prepared for the project when the risk assessment indicates the need for additional controls to prevent or reduce the chance of failures or mitigate the possible consequences of accepted risks. Generally this occurs when the failure or concern identified by the risk assessment merits a Quality Level 1 or 2 designation, however, some Quality Level 3 projects may merit a Risk Management Plan. Refer to FMPC - 711, "Quality Levels."

6.0 PROCEDURE

6.1 Performing the Risk Assessment

<u>RESPONSIBILITY</u>	<u>ACTION</u>
PROJECT MANAGER/ PROJECT ENGINEER	A. Upon inception of program, project Plant Test Authorization, or Project Authorization, initiates preparation of the Risk Assessment.
NUCLEAR AND SYSTEMS SAFETY	B. Requests OS&H to perform a Safety Assessment per FMPC-508.
FACILITY OWNER	C. Performs the Safety Assessment per FMPC-508. Returns the approved Safety Assessment to the Project Manager/Project Engineer.
PROJECT MANAGER/ PROJECT ENGINEER	D. Provides operations-related input to the Project Manager/Project Engineer for completing the Risk Assessment.
	E. Completes the Risk Assessment using the results of the Safety Assessment and the instruction provided in Attachment A together with judgment as to monetary loss, production delay, and adverse public reaction.
	F. Prepares a Risk Management Plan, where required.

NUMBER: FMPC - 712	REVISION: 0	ISSUE DATE: 4/4/89
-----------------------	----------------	-----------------------

6.2 Approval and Records Maintenance of the Risk Assessment and Risk Management Plan

RESPONSIBILITY

ACTION

PROJECT MANAGER/
PROJECT ENGINEER

A. Obtain the concurrences of the cognizant Facility Owner, Nuclear and Systems Safety, and Quality Assurance and submit for final approval to his/her responsible manager.

COGNIZANT MANAGER

B. Approves the Risk Assessment when all technical requirements have been satisfied and all concurrences obtained.

PROJECT MANAGER/
PROJECT ENGINEER

C. Maintains records of Risk Assessment and Risk Management Plan in accordance with FMPC - 609, "Records Management."

6.3 Review and Update of the Risk Assessment and Risk Management Plan

INITIATOR/
FACILITY OWNER

A. Perform and document an annual review of the Risk Assessment and Risk Management Plan.

7.0 APPLICABLE DOCUMENTS

- DOE Order 5700.6B, "Quality Assurance"
- DOE Order OR 5700.6, "Quality Assurance - ORO Site Implementation Plan"
- FMPC - 609, "Records Management"
- FMPC - 508, "Safety Analysis Documentation Program"
- FMPC - 711, "Quality Levels"
- FMPC - 2063, "Project Management Procedures for the Technical Department"

8.0 FORMS USED

Form FMPC-T-2501, Risk Assessment Report

9.0 ATTACHMENTS

Attachment A - Risk Assessment Report and Instructions For Making A Risk Assessment

NUMBER FMPC - 712	REVISION: 0	ISSUE DATE: 4/4/89
----------------------	----------------	-----------------------

ATTACHMENT A
PAGE 2 OF 4

INSTRUCTIONS FOR PERFORMING A RISK ASSESSMENT

Using Form FMPC-T-2501:

1. List "Possible Failures/Concerns" in the project being analyzed (Column 1.)
2. Determine the "Seriousness" of each failure/concern by using the following table as a guide and circle the appropriate number in Column 2.

"Seriousness Rationale" Guide

Possible Result of Failure/Concern	Very High <u>5</u>	High <u>4</u>	Moderate <u>3</u>	Low <u>2</u>	Negligible <u>1</u>
Injury	Death	Permanent Injury	Hospital Treatment	WACO Treatment	None
\$ Loss	> \$1M	\$500K-\$1M	\$100K-\$500K	\$50K-\$100K	<\$50K
Adverse Public Reaction	National	Local	DOE	WACO	None
Production Delay	1 Year	< 6 mo.	< 3 mo.	< 1 mo.	None

If "Seriousness" of a specific "possible failure/concern" is determined to be "Negligible," there is no need to complete other columns. For all "Seriousness" levels assigned, document the reason under "Seriousness Rationale" (Column 2).

3. Enter the "Possible Cause of Failure/Concern" in Column 3.
4. Enter in Column 4 the "Effect of Failure/Concern", such as an estimate of dollar loss, production delay, etc.
5. Column 5 is to show the actions taken to minimize the chance of failure/concern. For example, the specific part of a standard or procedure which minimizes the chance of failure/concern.

Circle the "Probability" of the failure or concern based on familiarity with the operation and confidence that if normal procedures and standards are followed, (recognizing "normal" application) the chances of failure will be minimized. (Column 5)

Assign the appropriate value to the probability using the Probability Rating Scale.

8188

NUMBER: FMPC - 712	REVISION: 0	ISSUE DATE: 4/4/89
-----------------------	----------------	-----------------------

ATTACHMENT A
PAGE 3 OF 4

INSTRUCTIONS FOR PERFORMING A RISK ASSESSMENT (Continued)

Probability Rating Scale

<u>Probability Scale</u>	<u>Description</u>
5 Very High	Likely to occur one or more times per year
4 High	Likely to occur once every ten years
3 Moderate	Likely to occur once every 100 years
2 Low	Likely to occur once every 1000 years
1 Negligible	Occurrence is expected to be less than once every 1000 years.

6. To determine the Quality Level (Column 6), which shall be assigned to each item undergoing failure analysis, the following matrix may serve as a guide:

Guide for Determination of QA Level

Probability Negligible Low Moderate High Very High
 1 2 3 4 5

Seriousness

Very High 5	4	3	2	2	* 1
High 4	4	4	3	2	2
Moderate 3	4	4	3	3	2
Low 2	4	4	4	4	3
Negligible 1	4	4	4	4	4

* Quality Level 1 assignments require WCMCO Staff Manager approval.

288

8489

2213

NUMBER: FMPC - 712	REVISION: 0	ISSUE DATE: 4/4/89
-----------------------	----------------	-----------------------

ATTACHMENT A
PAGE 4 OF 4

INSTRUCTIONS FOR PERFORMING A RISK ASSESSMENT (Continued)

7. Obtain the concurrence of the cognizant facility owners.
8. Obtain Quality Assurance and OS&H review of the assessment. QA concurrence signifies that QA agrees with the assessment relative to mitigating actions identified and the assigned Quality Levels are appropriate. OS&H concurrence signifies that the total Risk Assessment is consistent with the Safety Assessment performed by OS&H.
9. Obtain the approval of the assessment by the responsible section manager.

038

381



Westinghouse
Materials Company
of Ohio — FMPC

NUMBER: FMPC-518	REVISION: 1	ISSUE DATE: 5/7/90
---------------------	----------------	-----------------------

TITLE:
COMPLETION OF NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DOCUMENTATION

SITE POLICY AND PROCEDURE

APPROVED BY: *M. B. Boswell*
M. B. Boswell, President

1.0 POLICY

Westinghouse Materials Company of Ohio (WMO) shall assure that procedures, programs, plans, new or existing operations and facilities and modifications thereto, are properly reviewed and documented with respect to their potential environmental impacts. The implementation of this policy will help to protect the environment and ensure the health and safety of FMPC employees and the surrounding community.

2.0 SCOPE

This policy describes WMO's formal environmental review and documentation program which is implemented to meet the requirements of the National Environmental Policy Act (NEPA), the regulations of the Council on Environmental Quality (CEQ), and the guidelines and orders of the DOE and the Oak Ridge Operations office. This program covers all NEPA activities and their integration with: the Resource Conservation & Recovery Act (RCRA) activities; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and other applicable environmental protection statutes. The projects for which NEPA compliance shall be assessed include: renovation, remediation, removal, and other actions such as General Plant Projects (GPPs) and Capital Equipment Projects (CEPs). A "NEPA Document Flow Diagram", Attachment A, is included in this site policy and procedure.

3.0 DEFINITIONS

3.1 Action - A new or continuing activity which involves facility construction, operation, decontamination, or other modifications to the project facilities or site. Actions also include the adoption of the plans, policies, and decisions which define programmatic direction and objectives of WMO.

3.2 Action Description Memorandum (ADM) - An ADM is not a NEPA document but is used in the NEPA process to facilitate a determination of the level of NEPA documentation required for a proposed action. An ADM is prepared if the proposed action does not fit clearly into one of the classes of action listed in NEPA guidelines, and if it fails the Memo-to-File (MTF) test of "clearly insignificant". An ADM contains, as appropriate, a concise description of the proposed action (including purpose, class, type of energy technology, and size of the proposed action); the location of the proposed action (including environmental setting and economic conditions); and any known or potential issues or problems, particularly environmental issues.

3.0 DEFINITIONS (continued)

- 3.3 Action Plan** - A document prepared by the DOE Secretarial Officer following the completion of an EIS (see Section 3.8), which implements any commitment(s) made in the EIS/Record of Decision for mitigation of environmental impacts. This also applies to an EA/FONSI (see Section 3.7 and 3.9) where the FONSI is based on mitigation.
- 3.4 Categorical Exclusion (Cat. Ex.)** - A category of actions which normally do not individually or cumulatively have a significant effect on the quality of the human environment and which require neither an Environmental Impact Statement (EIS) nor an Environmental Assessment (EA). The list of actions for which categorical exclusions apply is published in the Federal Register and is available from the NEPA Coordinator.
- 3.5 Coversheet** - Either form FMPC-3123, "NEPA Documentation Coversheet" or form FMPC-3124, "NEPA Categorical Exclusion," as appropriate.
- 3.6 Cumulative Impact** - The impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonable foreseeable future actions regardless of their sponsor. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.
- 3.7 Environmental Assessment (EA)** - A concise but flexible NEPA document which has three defined functions: (1) to determine whether a proposed action requires the preparation of an EIS; (2) to facilitate NEPA compliance when no EIS is necessary; and (3) to facilitate the preparation of an EIS when one is necessary. If it is determined, on the basis of an EA, not to prepare an EIS, a Finding of No Significant Impact (FONSI) is issued. EAs are forwarded to DOE Headquarters for approval. All new EAs shall be sent by DOE to the State of Ohio and, as appropriate, adjacent states for a 14-30 day comment period prior to DOE approval.
- 3.8 Environmental Impact Statement (EIS)** - An analytical and concise document, prepared in accordance with the requirements of 40 CFR Part 1502, which provides a full and fair discussion of significant environmental impacts of a project/program under consideration and informs decision makers and the public of reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment. This document requires public review and comment. EISs are forwarded to DOE Headquarters for approval. Scoping meetings are required for all EISs, as are public hearings on all draft EISs. The minimum scoping period for all EISs shall be 30 days.
- 3.9 Finding of No Significant Impact (FONSI)** - A DOE document which provides a statement indicating why an action to be taken (which is not categorically excluded), will not have a significant effect on the human environment and therefore will not require an Environmental Impact Statement.

3.0 DEFINITIONS (continued)

3.10 Impacts - Impacts, as used in this procedure include:

- o Direct impacts, which are caused by the action and occur at the same time and place.
- o Indirect impacts, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.
- o Ecological, natural resource (including air and water), aesthetic, historic, cultural, economic, social or health, whether adverse, beneficial, direct, indirect, or cumulative.

3.11 Implementation Plan - A written plan, prepared by DOE, that records the results of the scoping process and outlines the procedure by which an environmental impact statement is to be prepared. The implementation plan should be prepared in accordance with DOE guidelines (45 FR 20694), paragraph A4(e).

3.12 Memo to File (MTF) - A DOE document, approved by DOE Headquarters (HQ), resulting from the approval of an ADM, when it is immediately clear from the ADM that the environmental impacts from a proposed action will be insignificant. The MTF briefly summarizes the proposed action and states the basis for the conclusion that a proposed action will clearly not have significant environmental impacts. If a proposed action requires environmental data gathering or analysis to reach a conclusion, then it fails the MTF test of "clearly insignificant" and an EA or EIS is necessary. The use of MTFs will terminate as of September 30, 1990. All new MTFs, prepared for the remainder of FY90, will be sent by DOE to the State of Ohio, and adjacent states as appropriate, for information purposes.

3.13 Mitigation - As used in this procedure, mitigation involves action that:

- o Minimizes impacts by limiting the degree or magnitude of the action and its implementation.
- o Rectifies the impact by repairing, rehabilitating, or restoring the affected environment.
- o Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the action.
- o Compensates for the impact by replacing or providing substitute resources or environments.

3.14 Record of Decision - A concise public record of DOE's decision on a proposed action for which an environmental impact statement was prepared which includes the alternatives considered, the environmentally preferable alternatives, factors balanced in the decision, and mitigation measures and monitoring to minimize harm.

NUMBER:
FMPC-518REVISION:
1ISSUE DATE:
5/7/90**3.0 DEFINITIONS (continued)**

- 3.15 **Risk Analysis** - A quantitative description of potential accident scenarios and the likelihood of releases of materials to the environment and the resulting impact.

4.0 RESPONSIBILITIES

- 4.1 **Cognizant Project Engineer (CPE)/Project Manager (PM)** - Responsible for assuring preparation of the required NEPA documentation during the preliminary engineering phase of any project which requires NEPA compliance. In addition, CPE/PMs are responsible for reviewing and approving the technical content of the NEPA documents associated with the project, for assuring an accurate technical description and analyses of project activities, and for assuring that NEPA documents are revised as required.

Where mitigation measures are indicated, CPE/PMs are responsible to assure that mitigating measures are fully implemented.

- 4.2 **Quality Department; Industrial, Radiological Safety and Training (IRS&T); Environmental Engineering; Environmental Compliance; and Operations and Engineering Services** - Conduct technical reviews of NEPA documentation as requested by the NEPA Coordinator.
- 4.3 **Public Affairs and Communication Department** - Coordinates public notification for a project or program that requires an Environmental Assessment, a Finding of No Significant Impact, or an Environmental Impact Statement.
- 4.4 **NEPA Manager** - The NEPA Manager is responsible for developing and managing the NEPA program for the FMPC and for coordinating the NEPA program consistent with DOE guidance. The NEPA Manager is also responsible for approving the "NEPA Compliance Plan for the FMPC" which provides a specific strategy by which the FMPC maintains full compliance with NEPA and associated DOE guidance.
- 4.5 **NEPA Coordinator** - The WMCO NEPA Coordinator is responsible for providing direction to the CPE/PM, for interfacing with DOE, and for approval of NEPA documents for submittal to the WMCO NEPA Manager. Sources of NEPA documents at the FMPC are from engineers responsible to provide environmental permits for construction projects. These construction projects are from, but not limited to, the following sections: General Plant Projects (GPP), Capital Equipment Projects (CE), Environmental Project Engineering (EPE), Restoration Engineering, Facilities Engineering, Productivity Retention Program/Productivity and Radiological Improvement projects (PRP/PRI), and Remedial Investigation/Feasibility Study projects (RI/FS or EIS), which may include removal actions and Engineering Evaluation/Cost Analysis (EE/CA) documents.

4.0 RESPONSIBILITIES (continued)

4.6 NEPA Group - The NEPA Group is responsible for implementing and maintaining the NEPA program at the FMPC. Activities of the group include: (1) assisting appropriate project personnel in the preparation of NEPA documents, (2) maintaining a filing system for NEPA documents prepared at the FMPC, (3) preparing and maintaining procedures required for NEPA compliance at the FMPC, (4) preparing and implementing an approved NEPA training program for appropriate FMPC employees, (5) resolving DOE comments on FMPC NEPA documents, (6) maintaining the current status of all Federal Regulations, DOE Orders, and procedures concerning NEPA, (7) assisting in the integration of NEPA requirements with CERCLA, RCRA, and other regulations and laws, (8) supporting other NEPA associated assignments that may be directed by the NEPA Manager, and (9) tracking NEPA documentation from initial preparation through the DOE approval cycle.

5.0 GENERAL

5.1 The National Environmental Policy Act (42 U.S.C. 4321 et. seq.) requires that DOE, as a Federal agency, prepare Environmental Impact Statements for actions it proposes to undertake which have the potential to significantly affect the human environment. The Council on Environmental Quality (CEQ) has regulations which implement NEPA Policies. These regulations require Federal agencies, including the DOE, to adopt procedures for determining what type of environmental reports (Cat.Ex., EIS or EA) are required. They establish the content for these reports, and identify the review and approval process. DOE has adopted such regulations and has published supplemental guidance for fulfilling these requirements.

5.2 DOE Order OR 5440.1C requires contractors to adopt internal procedures to initiate and participate in the NEPA process. In order to comply with this requirement, and yet avoid unnecessary paperwork, a screening system has been established, which, by means of increasing levels of analytical detail and comprehensiveness, evaluates the potential of the proposed action for producing significant environmental impacts. These increasingly detailed analyses are:

- o Categorical Exclusion
- o Action Description Memorandum
- o Environmental Assessment
- o Environmental Impact Statement

5.0 GENERAL (continued)

- 5.3 The responsibility for deciding whether an EA or EIS is required for a given action rests with DOE. DOE determines whether or not an EIS will be written for certain FMPC actions. All other actions require EAs or interim NEPA documents, pending the completion of the Renovation EIS. This policy and procedure will not address the writing and approval of EISs, as these actions are well-documented and prescribed in the Federal Register. The NEPA documents addressed by this policy and procedure are the EA, Categorical Exclusion, ADM, Interim NF, Interim NC, NTF, and MTF. Upon completion of the Renovation EIS, the interim NEPA documents will no longer be used.
- 5.4 WMCO's NEPA Group is responsible for screening actions under consideration for NEPA compliance, for providing the DOE with sufficient project and environmental information to enable DOE to make NEPA compliance decisions, and for forwarding technically complete and accurate documents to DOE for those actions which require NEPA documentation or interim NEPA documentation. DOE evaluates the initial document presented and, if the analysis is adequate, will use this information for making a decision as to the type of NEPA document required to satisfy compliance with NEPA.
- 5.5 Cognizant Project Engineers and/or their managers should initiate the preparation and review of NEPA documents as early as possible in the conceptual stage of project development and well in advance of the desired date for action implementation.
- 5.6 The preparation of the Renovation EIS draft began in September 1986. Between September 1986 and October 1989, WMCO implemented an Interim NEPA system with the approval of DOE FMPC, DOE OR, and DOE HQ, by which renovation of the facility proceeded. This interim system consisted of:
- o **NEPA Checklist (NC)** - An interim NEPA document used to briefly describe a project, the alternatives considered to the project, and the impacts of the actions to be taken during the course of the Renovation EIS. An NC was used for other than Line Item-funded projects. A risk analysis was not required for a NEPA Checklist; however, a NEPA Questionnaire was attached to NCs.
 - o **NEPA Factsheet (NF)** - An interim NEPA document used to briefly describe a Line Item-funded project, the alternatives considered to the project, and the impacts of the actions to be taken during the course of the Renovation EIS. A risk analysis was not required for a NEPA Factsheet; however, a NEPA Questionnaire was attached to NFs.
 - o **NEPA Questionnaire** - An interim NEPA document used to list the presence, absence, or lack of knowledge of impacts of actions which will be taken during the course of the Renovation EIS. NEPA Questionnaires were attached to NEPA Checklists and NEPA Factsheets.

NOTE: This Interim NEPA system was discontinued in October 1989. The documents, currently on file, address the environmental impact of individual projects. The cumulative impact is being addressed in the Renovation EIS.

6.0 PROCEDURE

NOTE: All NEPA documentation must be approved by the WMCO NEPA manager and/or DOE prior to the beginning of project construction or procurement.

6.1 Preparation of NEPA Documentation

<u>RESPONSIBILITY</u>	<u>ACTION</u>
<p>COGNIZANT PROJECT ENGINEER/ PROJECT MANAGER</p>	<p>A. Consult with the NEPA Coordinator, if necessary, to determine the type and level of NEPA documentation required for the project.</p> <p>B. Based on the appropriate volume of the Federal Register, regarding DOE compliance with the National Environmental Policy Act (see 7.0 Applicable Documents), determine if the project being planned is an action that can be Categorical Excluded. If the project cannot be Categorical Excluded, advance to Step E of section 6.2 in this procedure.</p>

NOTE: Based on regulatory changes, the catch-all exclusion "Actions that are substantially the same as other actions for which the environmental impacts have already been assessed in a NEPA Document and determined by DOE to be clearly insignificant and where such assessment is still valid" is no longer valid.

<p>COGNIZANT PROJECT ENGINEER/ PROJECT MANAGER</p>	<p>C. For Categorical Excluded activities, complete Form FMPC-3124 in accordance with the direction provided (See Attachment B). A NEPA document number for the "Categorical Exclusion" form is obtained from the NEPA Coordinator.</p> <p>D. Advance to Step A of Section 6.2 of this procedure.</p> <p>E. If the planned project cannot be Categorical Excluded, complete the "NEPA Documentation" cover sheet in accordance with the direction provided (See Attachment C).</p>
---	--

NUMBER: FMPC-518	REVISION: 1	ISSUE DATE: 5/7/90
---------------------	----------------	-----------------------

6.0 PROCEDURE

6.1 Preparation of NEPA Documentation (continued)

RESPONSIBILITY

ACTION

- | | |
|--|---|
| NEPA COORDINATOR | F. Attach a NEPA document to the "NEPA Documentation" cover sheet. The NEPA document may be a Action Description Memorandum (ADM) with associated Risk Analysis, or an Environmental Assessment (EA). |
| COGNIZANT PROJECT ENGINEER/
PROJECT MANAGER | G. Consult with the NEPA Coordinator and other WMCO organizations, as necessary, to ensure complete and correct information is incorporated in the attached NEPA document. |
| NEPA COORDINATOR | H. Assist the Cognizant Project Engineer/Project Manager in scoping and preparing NEPA documents to comply with NEPA requirements. |
| NEPA COORDINATOR | I. Obtain the NEPA document number from the NEPA Coordinator and place this number in all appropriate locations on the "NEPA Documentation" cover sheet and the attached NEPA document. |
| NEPA COORDINATOR | J. Assign the NEPA document number when requested by the CPE/PM, set up the NEPA file for that document, and place the document on the NEPA document tracking system. |

6.2 Review of NEPA Documentation

- | | |
|--|---|
| COGNIZANT PROJECT ENGINEER/
PROJECT MANAGER | A. Transmit the completed "NEPA Categorical Exclusion" form or the "NEPA Documentation" cover sheet and attached NEPA document to the NEPA Coordinator. |
| NEPA COORDINATOR | B. Review the NEPA document for completeness and correctness and assure NEPA requirements are adequately addressed in the document. |

NUMBER: FMPC-518	REVISION: 1	ISSUE DATE: 5/7/90
---------------------	----------------	-----------------------

6.0 PROCEDURE (continued)

6.2 Review of NEPA Documentation (continued)

<u>RESPONSIBILITY</u>	<u>ACTION</u>
	C. If the document is complete, correct, and does not require further review, advance to Step I of Section 6.2 of this procedure.
	D. If the document is not complete or correct, coordinate the revision with the CPE/PM before processing.
	E. If the document requires a review, obtain technical reviews by Quality Department; Industrial, Radiological Safety and Training; Environmental Engineering; Environmental Compliance; and Operations & Engineering Services, as needed.
QUALITY DEPARTMENT, IRS&T, ENVIRONMENTAL ENGINEERING, ENVIRONMENTAL COMPLIANCE, and OPERATIONS & ENGINEERING SERVICES	F. Provide technical reviews of NEPA documentation as requested and return to the NEPA Coordinator, within 2 weeks.
NEPA COORDINATOR	G. Transmit all technical comments on the NEPA document to the CPE/PM.
COGNIZANT PROJECT ENGINEER/ PROJECT MANAGER	H. Revise the NEPA document, as necessary, to address technical comments and deficiencies and return the document to the NEPA Coordinator at Step A of section 6.2 in this procedure.
NEPA COORDINATOR	I. Once the NEPA document is judged to be complete and correct, sign the appropriate block on the "NEPA Categorical Exclusion" form or the "NEPA Documentation" cover sheet and forward it, with any required NEPA documentation attached, to the NEPA Manager.
NEPA MANAGER	J. Review the NEPA document for correctness and completeness.
	K. If the NEPA document is judged to require more information, return it to the NEPA Coordinator at Step G of section 6.2 of this procedure.

NUMBER: FMPC-518	REVISION: 1	ISSUE DATE: 5/7/90
---------------------	----------------	-----------------------

6.0 PROCEDURE (continued)

6.2 Review of NEPA Documentation (continued)

RESPONSIBILITY

ACTION

NEPA MANAGER

- L. If the NEPA document is judged to be correct and complete, proceed to Step A of section 6.3 of this procedure.

6.3 Approval of NEPA Documentation

NEPA MANAGER

- A. Approve the completed "NEPA Categorical Exclusion" form or the "NEPA Documentation" cover sheet by signature in the appropriate block, date it for submittal to DOE, obtain internal WMCO approval, and forward both the coversheet and any attached document to the DOE.
- B. If disapproved by DOE, transmit the document to the NEPA Coordinator for revision at Step G of section 6.2 of this procedure.
- C. If approved by DOE, assure that appropriate DOE documents have been attached and transmit the signed document(s) to the NEPA Coordinator.

NOTE: (1) A DOE issued "Memo to File" (MTF) is attached to approved Action Description Memorandum (ADM). (2) A DOE issued "Finding of No Significant Impact" (FONSI) is attached to an approved Environmental Assessment (EA).

NEPA COORDINATOR

- D. Place the approved DOE signed document(s) in the appropriate NEPA file and forward a copy of the document(s) to the CPE/PM.

NEPA COORDINATOR

- E. If the NEPA document is an Environmental Assessment, contact Public Affairs and Communication Department and cooperate in the issuance of a public notification in accordance with Public Affairs Department Procedures.

COGNIZANT PROJECT ENGINEER/
PROJECT MANAGER

- F. Place the approved document(s) in the appropriate project file.

008

NUMBER: FMPC-518	REVISION: 1	ISSUE DATE: 5/7/90
---------------------	----------------	-----------------------

6.0 PROCEDURE (continued)

6.4 NEPA Document Revision resulting from a Project Scope Change

RESPONSIBILITY

ACTION

COGNIZANT PROJECT ENGINEER/
PROJECT MANAGER

- A. Prepare a memorandum, if after NEPA document approval by DOE, the scope of the project changes.
- B. Describe in memorandum format, the action that was to be taken (brief project description), and changes to the scope.
- C. In the case of scope changes, make the statement that, "These changes will not result in a net increase in adverse environmental impacts, and will not limit the choice of reasonable alternatives."

NOTE: Scope changes which occur after DOE approval and result in a net increase in adverse environmental impact shall be processed and approved in accordance with the requirements of this procedure.

NEPA COORDINATOR

- D. Transmit the memorandum to the NEPA Coordinator.
- E. Process the documents per Step B of Section 6.2 of this procedure.

NUMBER: FMPC-518	REVISION: 1	ISSUE DATE: 5/7/90
---------------------	----------------	-----------------------

7.0 APPLICABLE DOCUMENTS

- National Environmental Policy Act, 42 U.S.C. 4321 et. seq.
- Comprehensive Environmental Response, Compensation, and Liability Act et. seq.
- Council On Environmental Quality Regulations, 40 CFR 1500 et. seq.
- Resource Conservation and Recovery Act of 1976 et. seq.
- DOE Environmental Compliance Guide, DOE/EV-0132, Vols. 1 and 2, Draft, Oct 88
- DOE Order 5000.3, Unusual Occurrence Reporting System
- DOE Order 5400.xx, Radiation Protection of the Public and the Environment
- DOE Order 5400.1, General Environmental Protection Program
- DOE Order 5400.4, Integration of Environmental Compliance Processes
- DOE Order 5440.1C, Implementation of the National Environmental Policy Act.
- DOE Order 5480.1B, Environment, Safety, and Health Program for Department of Energy Operations
- DOE Order 5481.1B, Safety Analysis and Review System.
- DOE Order 5480.14, Comprehensive Environmental Response, Compensation, and Liability Act Program
- DOE Order 5480.4, Environmental Protection, Safety, and Health Protection Standards
- DOE Order 5482.1B, Environmental Protection, Safety, and Health Protection Appraisal System
- DOE Order 5483.1A, Occupational Safety and Health Program for Government-Owned Contractor-Operated Facilities
- DOE Order 5484.1, Environmental Protection, Safety, and Health Protection Information Reporting Requirements
- DOE Order 5820.2, Radioactive Waste Management
- DOE Compliance with the National Environmental Policy Act; Final Guidelines; 45 FR 20694 et. seq.
- DOE Compliance with the National Environmental Policy Act; Amendments to the DOE NEPA Guidelines; 47 FR 7976 et. seq.
- DOE Compliance with the National Environmental Policy Act; Amendments to the DOE NEPA Guidelines; 48 FR 685 et. seq.
- DOE Compliance with the National Environmental Policy Act; Amendments to the DOE NEPA Guidelines; 50 FR 7629 et. seq.

NUMBER:
FMPC-518REVISION:
1ISSUE DATE:
5/7/90**7.0 APPLICABLE DOCUMENTS (continued)**

DOE Compliance with the National Environmental Policy Act; Amendments to the DOE NEPA Guidelines; 51 FR 18867 et. seq.

| Ohio Administrative Code

| State of Ohio Consent Decree, signed December 2, 1988

| Ohio Environmental Protection Agency Director's Findings and Orders, signed June 26, 1987

| Ohio State Implementation Plans

8.0 FORMS USED

FMPC-3123 - NEPA Documentation Coversheet

FMPC-3124 - NEPA Categorical Exclusion

9.0 ATTACHMENTS

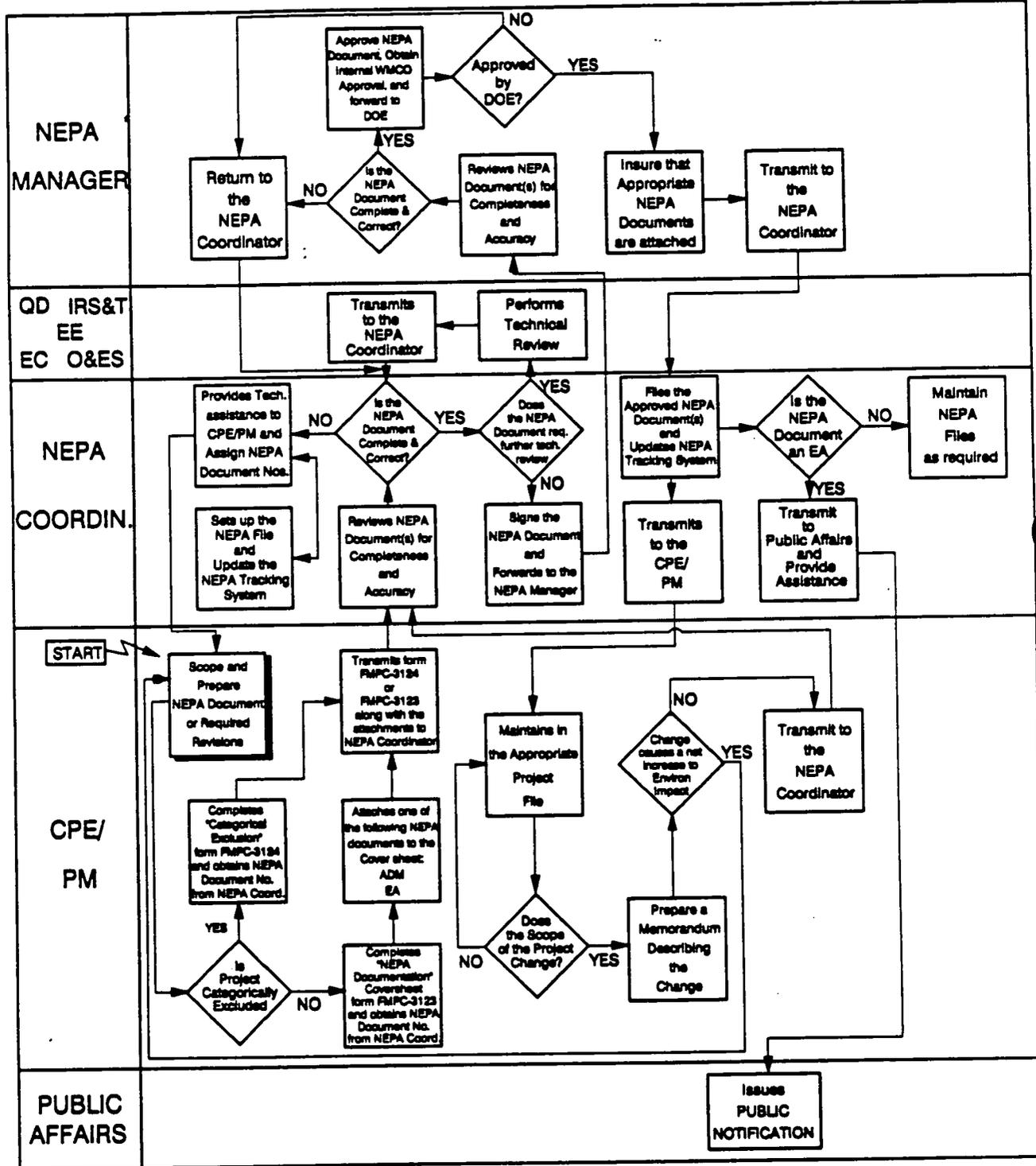
Attachment A NEPA Document Flow Diagram.

Attachment B FMPC-3124 - NEPA Categorical Exclusion.

Attachment C FMPC-3123 - NEPA Documentation Coversheet.

Attachment A

NEPA Document Flow Diagram



8585
03/01

2343

FMPC NEPA DOCUMENTATION - CATEGORICAL EXCLUSION		COGNIZANT PROJECT ENGINEER:	EXT.:
		PROJECT LOCATION:	
PROJECT/PROGRAM TITLE:		PROJECT COST:	
PROJECT/PROGRAM NUMBER:	NEPA DOCUMENT NUMBER:	CONSTRUCTION START DATE:	
DOE BUDGET NUMBER:		NEPA PREPARATION DATE:	
		NEPA SUBMITTAL DATE TO DOE:	
CATEGORICAL EXCLUSION			
<p>This project has been reviewed pursuant to DOE regulations and WMCO directives, and the project is deemed to be of a nature described as Categorical Excluded under current DOE guidelines. Additional NEPA documentation is not required for this project.</p> <p>The basis for the Categorical Exclusion is as follows:</p>			
COGNIZANT PROJECT ENGINEER:		DATE:	
WMCO NEPA COORDINATOR:		DATE:	
WMCO NEPA MANAGER:		DATE:	
DOE/FMPC OFFICER:		DATE:	

FMPC-3124 (5/26/89)

588

396

**DIRECTIONS FOR COMPLETING FORM FMPC-3124
NEPA DOCUMENTATION - CATEGORICAL EXCLUSION**

1. The COGNIZANT PROJECT ENGINEER will complete the following blocks at the top of FMPC-3124 during preparation of the NEPA document:

- **COGNIZANT PROJECT ENGINEER** - Insert name.
- **EXT.** - Insert Cognizant Project Engineer's telephone extension number.
- **PROJECT LOCATION** - Insert the identifying number of the building or plant in which the project will take place entirely or partially, or the nearest adjacent building where a project will be implemented entirely outdoors. In the case of outdoor projects, provide a short direction descriptor such as "North of Plant 1," or "NE of Building 55". If the project involves more than one building or plant, list all. Use the designation "Plant Wide" when a project encompasses multiple buildings and plants too numerous to list singly in the space provided.
- **PROJECT/PROGRAM TITLE** - Insert the title that the project will be known by.
- **PROJECT COST** - Insert the current Total Estimated Cost of the project/program.
- **PROJECT/PROGRAM NUMBER** - Insert the WMCO project/program number.
- **NEPA DOCUMENT NUMBER** - Insert NEPA Document Number, if known. Otherwise, leave blank.
- **CONSTRUCTION START DATE** - Insert the scheduled construction start date.
- **DOE BUDGET NUMBER** - Insert the DOE Budget and Reporting category from which the project is funded.
- **NEPA PREPARATION DATE** - Insert the date the initial or revised NEPA document is sent to the NEPA Coordinator for review.

2. The COGNIZANT PROJECT ENGINEER will complete the **BASIS** statement by typing the exact words from the Federal Register which qualify the project/program as categorically excluded in the space provided.

3. The COGNIZANT PROJECT ENGINEER will attach a project description of no more than one short paragraph to the form.

FMPC NEPA DOCUMENTATION		COGNIZANT PROJECT ENGINEER: <input type="text"/>	ERT: <input type="text"/>
PROJECT/PROGRAM TITLE:		PROJECT LOCATION:	
PROJECT/PROGRAM NUMBER:		PROJECT COST:	
DOE BUDGET NUMBER:		CONSTRUCTION START DATE:	
NEPA DOCUMENT NUMBER:		NEPA PREPARATION DATE:	
NEPA SUBMITTAL DATE TO DOE:			
<p>PROJECT EXECUTIVE SUMMARY AND JUSTIFICATION:</p> <p>The cumulative impacts of this project have been assessed, and it has been determined that this action will not result in net adverse environmental impacts. Other options have not been precluded by this action.</p>			
THIS NEPA DOCUMENT			
NF/NC	ADM	EA	
DOE APPROVAL REQUESTED <input type="checkbox"/> DOE/FMPC <input type="checkbox"/> DOE/HQ	COGNIZANT PROJECT ENGINEER:		DATE:
	WMCO NEPA COORDINATOR:		DATE:
	WMCO NEPA MANAGER:		DATE:
	DOE/FMPC OFFICER:		DATE:
	ADDITIONAL DOE APPROVAL (IF NEEDED):		DATE:

FMPC-3123 (5/26/89)

**DIRECTIONS FOR COMPLETING FORM FMPC-3123
 NEPA DOCUMENTATION**

1. The COGNIZANT PROJECT ENGINEER will complete the following blocks at the top of FMPC-3123 during preparation of the NEPA document:

- **COGNIZANT PROJECT ENGINEER** - Insert name.
- **EXT.** - Insert Cognizant Project Engineer's telephone extension number.
- **PROJECT LOCATION** - Insert the identifying number of the building or plant in which the project will take place entirely or partially, or the nearest adjacent building where a project will be implemented entirely outdoors. In the case of outdoor projects, provide a short direction descriptor such as "North of Plant 1," or "NE of Building 55". If the project involves more than one building or plant, list all. Use the designation "Plant Wide" when a project encompasses multiple buildings and plants too numerous to list singly in the space provided.
- **PROJECT/PROGRAM TITLE** - Insert the title that the project will be known by.
- **PROJECT COST** - Insert the current Total Estimated Cost of the project/program.
- **PROJECT/PROGRAM NUMBER** - Insert the WMCO project/program number.
- **NEPA DOCUMENT NUMBER** - Insert NEPA Document Number, if known. Otherwise, leave blank.
- **CONSTRUCTION START DATE** - Insert the scheduled construction start date.
- **DOE BUDGET NUMBER** - Insert the DOE Budget and Reporting category from which the project is funded.
- **NEPA PREPARATION DATE** - Insert the date the initial or revised NEPA document is sent to the NEPA Coordinator for review.

2. The COGNIZANT PROJECT ENGINEER will attach the NEPA document to the form. The NEPA document may be a NEPA Factsheet, Action Description Memorandum or Environmental Assessment.