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WOLF K		
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VONFELDT R	X	
HOPKINS T	X	X
MARTINEZ, G L	X	X
BRACKEN G	X	X
ROMANO S E	X	X
LEE C	X	X
LANGLOIS L	X	X

August 31, 1999

99-RF-03466

Victor Pizzuto
Senior Project Manager
Kaiser-Hill Company, L L C
Building 111

TRANSMITTAL OF BUILDING 771/774 CLOSURE PROJECT WASTE MANAGEMENT PLAN (REVISION 4) DATED AUGUST 1999 - HCW-036-99

- Refs (a) H C Wolf ltr, to Victor Pizzuto, Transmittal of Building 771/774 Closure Project Waste Management Plan (Revision 1) dated May 26, 1999, May 27, 1999
- (b) Chris S Gilbreath ltr, to Victor Pizzuto and Joe Springer, Mismanagement of Waste Under the Building 771/771 Decommissioning Operations Plan, May 17, 1999

As requested by Jeff Kerridge, attached is a copy of the Building 771/774 Closure Project Waste Management Plan (Revision 4) This revision deleted the Applicable, Relevant and Appropriate Requirements (ARARs) It is our understanding that based on these changes this revision will be forwarded directly to CDPH&E

If you have any questions, contact Greg Martinez at 966-5696 or pager 212-4988, or Gary Bracken at 966-9881 or pager 212-5220

H C Wolf
Building 771/774 Closure Project Manager

RF CORRES CONTROL	X	
TRAFFIC		
PATS/T130G		

CLASSIFICATION:

UCNI		
UNCLASSIFIED	X	X
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER

SIGNATURE

H C Wolf
Date 8-31-99

IN REPLY TO RF CC NO

SER slt

ACTION ITEM STATUS

PARTIAL/OPEN
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Attachment
as Stated

LTR APPROVALS

ORIG & TYPIST INITIALS
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ADMIN RECORD

39

BUILDING 771/774 CLOSURE PROJECT
WASTE MANAGEMENT PLAN

Prepared by

Building 771/774 D&D Waste Team
Building 771/774 Environmental Compliance Team

Rocky Mountain Remediation Services, LLC

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

Revision 4

August 1999

Reviewing
Official *R. Altmach U/NU*
Date *8-31-99*

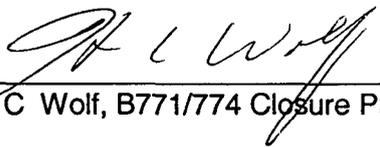
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**BUILDING 771/774 CLOSURE PROJECT
WASTE MANAGEMENT PLAN**

Revision 4

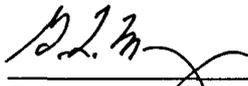
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Reviewed and Approved by



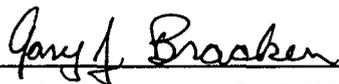
H C Wolf, B771/774 Closure Project Manager

8/31/99
Date



G L Martinez, B771/774 Environmental Compliance Manager

8/31/99
Date



G J Bracken, B771/774 D&D Waste Manager

8/31/99
Date

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LIST OF ACRONYMS

ACM	Asbestos-Containing Materials
ACR	Administrative Control Requirement
ARAR	Applicable or Relevant & Appropriate Requirements
BFO	Basis For Operations
CA	Contaminated Area
CCA	Configuration Control Authority
CCR	Code of Colorado Regulations
CDD	Closure Description Document
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CHWA	Colorado Hazardous Waste Amendments
WGS	Waste Generator Support (site organization)
D&D	Decontamination & Decommissioning
DOE	Department Of Energy
DOP	Decommissioning Operations Plan
DOT	Department Of Transportation
ECT	Environmental Compliance Team (Building 771/774)
FY	Fiscal Year
HVAC	Heating, Ventilation and Air Conditioning
LCO	Limiting Condition of Operations
LLM	Low-Level Mixed waste
LLW	Low-Level Waste
LRA	Lead Regulatory Agency
NDA	Non-Destructive Assay
NRWOL	Non-Routine Waste Origination Log
NTS	Nevada Test Site
PA	Protected Area
PCB	Poly-Chlorinated Biphenyls
PU&D	Property Utilization & Disposal
RAAMP	Radioactive Ambient Air Monitoring Program
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Clean-up Agreement
RFETS	Rocky Flats Environmental Technology Site
SBA	Supplied Breathing Air
SCO	Surface Contaminated Object
SME	Subject Matter Expert
SWB	Standard Waste Box
TID	Tamper Indicating Device
TRM	Transuranic Mixed waste
TRU	Transuranic waste
TSCA	Toxic Substances Control Act
TU	Temporary Unit
WAC	Waste Acceptance Criteria
D&D WT	D&D Waste Team (Building 771/774)
WEMS	Waste and Environmental Management System
WGI	Waste Generating Instruction
WIPP	Waste Isolation Pilot Plant
WSRIC	Waste Stream and Residue Identification and Characterization

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Introduction

The Building 771/774 Cluster includes Buildings 771/774 and 24 ancillary buildings, trailers and structures. Its primary mission during the Cold War was the recovery of plutonium from scrap metal and oxide residues to feed the War Reserve plutonium stream. The Building 771/774 Cluster is now scheduled for Decontamination and Decommissioning (D&D) between 1999 and 2006 under a Decommissioning Operations Plan (DOP) (Ref 1) approved by the Colorado Department of Public Health and Environment (CDPHE). Except for holdup in piping, gloveboxes and ventilation ducts, Special Nuclear Material and Residues have been removed from the facility as part of previous risk reduction and deactivation activities. D&D will generate liquid and solid radioactive waste, mixed waste, hazardous waste, and sanitary waste which must be managed in accordance with applicable State and Federal regulations, relevant Site Waste Management procedures, applicable Waste Acceptance Criteria (WAC) and Applicable or Relevant and Appropriate Requirements (ARARs) for each waste type. This Waste Management Plan describes how that waste will be managed to ensure the safety of the public, the worker, and the environment.

1 0 PURPOSE

The purpose of this plan is twofold: (1) To identify the volume, type, and volume generation rate for each waste type that will be produced during facility closure and (2) to describe the waste management practices that will be employed to ensure compliance with applicable regulatory requirements. These management practices will affect work associated with waste characterization, processing, packaging, and interim staging and storage.

2 0 SCOPE OF THIS PLAN

2 1 General Description

This plan describes the current Building 771/774 waste management system. It identifies practices and procedures used to ensure compliance with regulatory requirements, DOE Orders, and Rocky Flats Environmental Technology Site (RFETS) policies and standards.

The B771/774 Cluster at the RFETS consists of Buildings 771/774 and their ancillary support buildings and structures. These include trailers, maintenance and utility structures, underground tank systems, and waste storage facilities. This former plutonium processing facility is scheduled for decommissioning per the B771/774 DOP, as approved by the CDPHE on January 11, 1999. To facilitate the planning and execution of this D&D project, the facility was subdivided into 97 "sets" which represent logical groupings of equipment and hardware in the same geographical areas within a building or within the cluster. Decommissioning of each of these sets will be managed as a separate sub-project during the course of the entire D&D effort. The decommissioning of these Sets will generate waste that must be appropriately managed to minimize risk to the public, worker and the environment. An estimated 134,000 ft³ of low-level and low-level mixed waste, and 111,000 ft³ of TRU- and TRU-mixed waste will be generated from this project, excluding the building shell and ancillary structures. The

Building 771/774 shell is expected to contribute and additional 286,000 ft³ of construction debris. All wastes will be stored temporarily at RFETS pending shipment to disposal sites.

2.2 Relationship to Other Waste Management Documents

This plan describes the process by which waste generated during the D&D of Building 771/774 will be managed to ensure compliance with regulatory requirements and the safety of workers, the public and the environment. Waste operations will be conducted according to approved Site procedures for both routine and non-routine waste.

2.3 Waste Management Strategy

2.3.1 General

The Rocky Flats Clean-up Agreement (RFCA) (Ref 2) provides that process wastes and wastes generated during deactivation activities are RCRA-regulated. These include backlog liquid wastes generated from the Liquids Removal effort (a.k.a. "Tap & Drain"), and all hazardous waste chemicals generated by the project. Remediation wastes generated during decommissioning activities are CERCLA-regulated (RFCA 70-71). These include all other wastes generated during activities necessary to achieve the project's building closure mission. Waste generated from RCRA-unit closures conducted under the Decommissioning Operations Plan (DOP) can be managed as remediation waste, with the exception of any liquids and sludges held-up in these units. These liquids and sludges, if characterized as hazardous, will be managed under CHWA/RCRA as process waste.

The project will engage in deactivation and decommission activities simultaneously. The option of managing both categories of waste under the more conservative RCRA regulatory protocol will be considered in some instances. However, in most cases, the project will manage process waste separately from remediation waste.

2.3.2 RCRA Strategy

The 771/774 Closure Project will meet all applicable regulations and compliance agreements, including RFCA, the site RCRA permit, and the Residue Compliance Order #93-04-23-01 (Ref 3). Closure of permitted and interim status areas will be conducted in accordance with the substantive closure requirements in the Site's RCRA Part B permit and the Closure Plan for Interim Status Units at the Rocky Flats Environmental Technology Site (ISU Closure Plan). The permitted storage, 90-day, satellite accumulation areas, and permitted treatment units are listed in Appendix I. The operating record of each RCRA unit will be reviewed to characterize wastes and determine the constituents relevant for closure performance. Closure Description Documents (CDD) are unit-specific plans that are written to meet the closure requirements called out in the RCRA permit or ISU Closure Plan. CDDs will be submitted to CDPHE as necessary, in accordance with the appropriate Closure Plan. Closure process flow diagrams for tanks and gloveboxes, idle equipment, and waste chemicals are identified in Appendix F. The strategy to close the following categories of RCRA units is as follows:

- Mixed Residue tank systems – Piping and liquids will be removed in conjunction with Tap & Drain and the Process Piping Removal plan. The tanks will be left in place and removed subsequently with the associated Decommissioning set. Tanks will be

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dismantled, sludges removed and dried if necessary, size-reduced as necessary and packaged for shipment/disposal

- Rooms – RCRA waste will be removed. The units will be “clean closed,” e.g., removed and disposed, washed and certified clean, or final closure may be deferred to decommissioning for that room (i.e. RCRA –stable)
- Gloveboxes – Material will be removed and gloveboxes dismantled and size-reduced as necessary, then packaged for shipment/disposal

If a RCRA closure is conducted pursuant to the Building 771/774 DOP, the information that would be contained in the CDD will be submitted to the Lead Regulatory Agency (LRA). The waste associated with that closure activity, with the exception of liquids and sludges, is remediation waste. Throughout the closure process, efforts may be made to bring each RCRA unit to a RCRA stable condition, thus allowing for reduced inspection frequency.

2.3.3 CERCLA Strategy Through RFCA Compliance

The project will continue to manage hazardous process wastes (backlog liquids and sludges), and hazardous waste chemicals under the RCRA regulatory requirements. Under CERCLA, the Building 771/774 ARARs are considered the requirements for properly managing remediation waste.

2.4 Used Materials Recycling Strategy

The Building 771/774 Closure Project pursues recycling opportunities as part of the Site’s Pollution Prevention/Waste Minimization (P2/WM) initiative. The project shall adhere to the procedure, “Rocky Flats Recycling”, 1-B27-REC-001. Currently, the project actively manages D&D items such as spent circuit boards, lead, and lead-acid batteries as recyclable materials. The ECT waste characterization subject-matter expert records the recycle materials on a log sheet. The log sheet specifies, among other details, the amount of potential waste averted by recycling. This data is submitted to the RMRS P2/WM Coordinator in the Environmental Protection Department.

3 RESPONSIBILITIES/POINTS OF CONTACT

The following identifies primary roles and responsibilities of key organizations associated with waste management activities. Refer to Appendix G for a detailed organizational chart of D&D Waste Team and the Environmental Compliance Team.

3.1 Closure Project Senior Management

- Overall project management
- Assign responsibilities of tasks to appropriate teams
- Communicate strategic plans for the B771/774 Closure Project to all team managers to assure understanding of expected performance standards

3.2 D&D Waste Team

- Request Waste Generating Instructions (WGIs) from the Waste Generator Support (WGS) organization
- Correct waste container Non-Conformance Reports (NCRs)
- Waste planning
- Maintain Waste and Environmental Management System (WEMS)

- Waste planning
- Maintain Waste and Environmental Management System (WEMS)
- Receive new waste containers
- Coordinate shipments of full waste containers
- Provide RCRA/Waste generator qualification training
- Perform packaged waste inspection

3 3 Environmental Compliance Team

- Review/comment on IWCP work packages
- Support the WGS in development of WGIs by providing waste characterization data
- Administer Chemical Management
- Coordinate analytical sampling for waste characterization activity
- Inspect waste storage areas
- Provide RCRA/Waste generator qualification training
- Coordinate tours of external audits/inspections
- Maintain waste/environmental operating record
- Waste storage area management

3 4 Waste Generator Support organization

- Develop WGIs as requested by the Building 771/774 D&D, Waste Disposal and SNM Removal Team
- Perform acceptance inspection of waste containers awaiting shipment
- Coordinate RFETS storage of Building 771/774 waste awaiting final disposal

3 5 Closure Planning Team

- Maintain time-phased plan for D&D activities
- Submit long-term waste generation rates to Waste Plan, as requested
- Develop D&D waste projection data to support waste forecasting

3 6 Technical Support (Training)

- Maintain training records for all employees
- Notify employees potential waste generators of necessary training

3 7 Waste Generating Organizations

- Assure adequate preliminary planning of proposed work activities
- Assure that workers are waste generator qualified
- Assure thorough understanding of WGI before beginning any activity that requires waste packaging
- Perform waste packaging as directed in the applicable WGI

3 8 Waste Systems (Site organization)

- Maintain waste characterization data and waste management systems (WSRIC, NRWOL, WEMS)

3 9 Waste Operations Organization (Site organization)

- Arrange packaged waste shipping from Building 771/774

- Receive packaged waste from Building 771/774 and prepare for final transportation and disposal

4 0 WASTE ESTIMATES

4-1 Waste Volumes

Appendix D of this document contains waste volume projections for FY99 and FY00 for the sets currently scheduled for D&D during this time frame. These sets are listed in Appendix C. The basis for waste volume projections is described in Appendix A. These estimates will be updated from time-to-time and issued as a page change to holders of the waste management plan.

Estimates for TRU/TRM waste, LL/LLM waste, and PU&D items are derived from data generated from detailed walkdowns of each of the B771/774 D&D sets. Walkdowns resulted in quantities for each of the following equipment categories:

- electrical conduit, components and electrical cabinets
- external piping and components integral to piping systems
- internal glovebox equipment, piping, racks, and debris
- external equipment, furniture and debris
- gloveboxes and associated exhaust ducting
- tanks and Raschig rings, if present
- containment structures for contamination control during size reduction

Assumptions were made as to the number of pieces that would result from size reduction of each of these units. Estimated piece size was based on a weight of approximately 50 pounds or, where weight was not the limiting factor, the maximum size that could be bagged out of a glovebox or would fit into the preferred approved waste container.

Each piece was then assigned an estimated volume and from these data a total volume by waste category was calculated for each set. Total volumes for each of the above categories were divided into TRU/TRM, LLW, LLM, and free releasable waste based on process knowledge and engineering judgement.

Waste volume for spent Supplied Breathing Air (SBA) suits was estimated separately based upon B779 D&D experience. Volume of secondary waste other than SBA suits is estimated to be sufficiently low such that it can be accommodated in the void spaces of the appropriate waste containers. Volume of TSCA waste by set was estimated separately and is based largely upon the number of PCB containing ballasts from fluorescent light fixtures.

Almost all floor tiles will be Asbestos-Containing Material (ACM), possibly friable. In estimating the volumes, it is assumed it will all be radiological and friable. These are packaged for disposal at Nevada Test Site (NTS).

Volume estimates for low level mixed waste are based upon low-level items co-contaminated with lead. These are largely limited to lead lined gloves, leaded windows

from gloveboxes and lead lined gloveboxes placed in the Contaminated Area (CA) but not placed into service For Building 771/774 these are confined to equipment sets

4.2 Time-Phased Waste Generation Rates

Time-phased waste generation rates are listed in Appendix D

4.3 Waste Container Estimates

Waste container estimates are documented in Appendix E for the sets scheduled for D&D in FY99 and FY00 Standard Waste Boxes and full-size LLW crate requirements are derived from waste volume data in Appendix D divided by the following estimated volumes for each listed container type

TRU/TRM Standard Waste Box	1.90 m ³
TRU/TRM Drum	0.19 m ³
LLW Full Crate	3.17 m ³
LLW Half-Crate	1.58 m ³
LLW Drum	0.21 m ³

5.0 WASTE GENERATION, MANAGEMENT, AND DISPOSITION

5.1 General

This section describes the types and volumes of waste that are expected to be generated during D&D of the Building 771/774 Cluster Estimates are based on engineering walkdowns for each set These data, which include metrics such as feet of overhead piping, square feet of glovebox, number of electrical control panels, etc , were converted into waste volumes in accordance with standard estimating conventions developed by the Closure Planning Team These waste volumes were segregated into categories, i e , TRU/TRM, LLW, LLM, hazardous, TSCA, and sanitary waste, based largely on the input of subject matter experts and the operational history of the set and its equipment items Unrestricted release of uncontaminated equipment is based upon radiological surveys and the free release limits defined in the RFETS Radiological Control Manual (Ref 4) and the B771/774 Economic Disposition Plan (Ref 5) Types and approximate locations of wastes are found in the B771/774 Reconnaissance Level Characterization Report (Ref 6)

Waste characterization data for the waste streams expected during B771/774 D&D are contained in the Site D&D WSRIC book and the building-specific WSRIC book The WSRIC is a reference for obtaining waste characterization New Waste Generation Instructions (WGIS) will be created for any new waste streams resulting from D&D activities

5.2 Transuranic (TRU) and Transuranic-Mixed (TRM) Waste

TRU waste is defined as radioactive waste contaminated with alpha-emitting TRU radionuclides having half lives greater than 20 years and concentrations ≥ 100 nCi/gram of alpha emitting transuranic nuclides at the time of assay

TRM waste is a waste that meets the radionuclide concentration levels required for TRU waste and also meets the requirements of a hazardous waste, i e , a characteristic or listed waste per 40 CFR 261 or 6 CCR 1007-3, Section 261, Subpart B TRM estimates

are based primarily on the volume of lead shielded (hazardous) glovebox walls and tanks, lead-lined glovebox gloves and leaded glovebox windows

Closure of Building 771/774 will generate TRU and TRM waste. This includes equipment and debris internal to gloveboxes, gloveboxes and tanks, process piping, flanges and valves, glovebox exhaust ducting, exhaust plenum and filter media, and any temporary structures such as soft sided containments (SSC), permacons, glovebags, sleeves and supplied air suits

TRU and TRM waste is generated and packaged in compliance with Waste Generating Instructions, which assure compliance with higher level policies, procedures, and requirements

5.3 Low-Level (LLW) and Low-Level Mixed (LLM) Waste

Low level waste is defined as radioactive waste that is not classified as high level waste, TRU waste, spent nuclear fuel, or a by product material as identified in DOE Order 5280.2A, Radioactive Waste Management (Ref 7). It is waste that contains <100 nCi/gram of alpha emitting transuranic nuclides or is contaminated with uranium

LLM (RCRA) waste is waste which meets the radionuclide concentration levels required for LLW and also meets the requirements of a RCRA hazardous waste, i.e., a characteristic or listed waste per 40 CFR 261 or 6 CCR 1007-3, Section 261. Estimates for LLM are based primarily on the volume of lead shielded (hazardous) glovebox walls, lead-lined glovebox gloves and leaded glovebox windows from gloveboxes that were installed in a Contaminated Area but never put into service

Closure of Building 771/774 will generate LLW and LLM waste. This includes unattached external equipment and debris, non-process piping, valves and flanges, electrical conduit and control/breaker panels, external structural supports, structural and non-structural walls, and ceilings

It is possible that selected items of low level equipment may be decontaminated and free released to the public in accordance with the procedure Radioactive Material Transfer and Unrestricted Release of Property and Waste (Ref 8)

Low level waste will be packaged in 55 gallon drums, crates or cargo containers in accordance with the Waste Generating Instructions and disposed of primarily at the Nevada Test Site or at commercial disposal sites such as Envirocare

Waste which meets the radionuclide concentration levels required for LLW and also meets the requirements of a TSCA waste will be classified as low-level TSCA (LLT) waste. For Building 771/774 this is largely confined to low level waste co-contaminated with PCB oils. The known volume B771/774 waste meeting these criteria include approximately 10,000 gallons of PCB-contaminated oils stored in Building 774

5.4 Regulated – Non Radioactive Waste

A waste is regulated waste when it meets the criteria of hazardous as defined in 40 CFR 261 or 6 CCR 1007-3, Colorado Hazardous Waste Regulations. This can be described as any solid waste or waste-like material that exhibits any one or a combination of the hazardous characteristics of corrosivity, ignitability, reactivity or toxicity or that is

specifically listed as a hazardous waste in these regulations. Any PCB or asbestos waste is also a regulated waste under the Toxic Substances Control Act (TSCA)

5.5 Liquids

Most liquid wastes to be generated from closure of Building 771/774 are liquids held-up in existing piping. This includes liquids in an estimated 14,000 linear feet of process piping in 38 pipe systems in the building. Most of these liquids will be put in bottles then packaged into drums for transfer to liquid waste processing in Building 374 or Building 774. Included in this category are waste chemicals associated with closure activities.

5.6 Other

Salvage, PU&D items, non-contaminated metal and other recyclable materials. Excluded from this plan is the estimated 286,000 CF of building demolition debris.

6.0 WASTE CHARACTERIZATION

All waste generated to support the Building 771/774 Closure mission is characterized by the waste generator, with support from the Environmental Compliance Team (ECT). Waste characterization will be performed to determine the physical nature, hazardous constituents contained in, and the regulatory and/or radiological classification of the waste (Appendix B). The characterization procedures to be used will conform to those required to satisfy the Site's waste management program and the Waste Acceptance Criteria (WAC) of the applicable disposal site.

6.1 Waste Characterization Methodology

The responsible Building 771/774 waste generator initiates the waste characterization effort by notifying the ECT of a proposed waste generating activity. The generator provides information to the ECT on the proposed activity that includes the building location, process knowledge, equipment or material to be removed, removal/demolition procedures to be used, and a time-schedule of activities. The ECT researches the waste characterization of the activity first by researching the Waste Stream & Residue Identification and Characterization (WSRIC) documentation applicable to the building. Two WSRIC books are applicable to the closure mission of Building 771/774. The Building 771/774 WSRIC (Ref. 9) contains characterization of wastes generated from Building 771/774 support processes (radiation monitoring, cooling water system, analytical labs, filter plenum systems, tank maintenance and vacuum systems). Also, the glovebox clean-up, general building waste, and maintenance processes are identified in this WSRIC. The Decontamination & Decommissioning WSRIC (Ref. 10) identifies the waste streams that are generated from decontamination and decommissioning activities.

The WSRIC Characterization and Re-verification Procedure (Ref. 11) is used to modify WSRIC documents. These modifications include adding waste streams, and re-characterization and re-verification of waste streams. The ECT performs annual re-verification of WSRIC processes to determine their applicability to the Building 771/774 closure mission. Only proposed waste generating activities that are deemed, or reasonably expected, to recur over time shall be added to the WSRIC documents.

If the proposed waste generating activity is deemed to be unique and not reasonably expected to recur, then a Non-Routine Waste Origination Log (NRWOL) (Ref 12) is initiated by the ECT. The NRWOL procedure instructs the originator to identify key characteristics of the proposed waste. These key characteristics include the radiological and regulatory conditions of the waste. The radiological waste categories will include transuranic and low-level wastes. Wastes shall be characterized for regulatory applicability, including hazardous wastes under RCRA and toxic wastes under TSCA. Mixtures of radiological and regulated wastes will also be identified. This information is used to certify on the NRWOL that the appropriate Waste Acceptance Criteria requirements are met for the applicable disposal facility.

The ECT coordinates the physical characterization methods necessary to develop WSRIC and NRWOL documentation. The RFETS Analytical Projects Office (a.k.a. "Sample Team") is summoned by the ECT to perform laboratory analyses, as needed. Process knowledge based on interviews with the ECT subject-matter expert on the associated waste stream is also used to characterize waste streams.

6.2 Waste Generating Instruction (WGI)

The completed characterization of the waste from a proposed activity is used by WGS in developing the WGI. The WGI procedure (Ref 13) instructs the WGS to write a detailed document providing necessary instructions for characterizing, documenting, and packaging waste in a compliant manner. The WGI is specific to a project or activity and includes both the quantity and type of waste packages, labeling requirements, packaging and configuration requirements, and the required documentation to allow subsequent final disposal. The ECT provides characterization information to the WGS group to use for developing WGIs. The D&D WT maintains all applicable WGIs. The ECT maintains the subject-matter-expertise personnel for waste characterization in Building 771/774.

6.3 Waste Characterization Records

All waste characterization data shall be maintained by the RFETS Waste Systems organization. All characterization shall be documented on the associated WGI. The waste characterization information is documented on the Waste/Residue Traveler associated with the containerized waste. RFETS Waste Systems maintains all NRWOL records once they have been satisfactorily completed.

7. WASTE PACKAGING

7.1 Waste Packaging

Waste generated in Building 771/774 is packaged in accordance with established RFETS procedures. The procedures reflect the requirements associated with DOE, Department of Transportation (DOT), Site operating permits, and the waste acceptance criteria of the ultimate waste disposal facility.

Packaging waste into containers is performed by the qualified waste generator(s). The D&D WT supports waste generators by setting up containers, maintaining key custodian responsibility of in-process containers, and closing-up and shipping the containers. New containers are identified and tracked by the D&D WT per the WEMS procedure on controls for updating WEMS (Ref 14). The WGI is the primary guidance document for waste generators to use regarding packaging & labeling of waste.

The Site waste packaging procedures most applicable to Building 771/774 include, Solid Radioactive Waste Packaging (Ref 15) and Non-Radioactive Waste Packaging (Ref 16) The WGI also includes inspection criteria for new containers, container set-up, collection procedures, and closure of the container

7.2 Waste Container/Packaging Inspection

The D&D WT provides a trained, in-process waste inspector to assure that waste packaging specifications and requirements are consistent with the WGI and other applicable Site requirements. Waste inspection is performed as specified in the Site procedure on In-Process Waste Inspection (Ref 17). The waste inspector shall use the Non-Conformance Report document as the primary tool for controlling the quality of waste packages. The waste inspector is certified to an RFETS qualification process. Waste inspectors are trained to the same qualifications as a waste generator, as well as be required to meet established RFETS criteria for waste inspectors.

The Waste Systems Organization Customer Service Representative (CSR) performs an inspection of waste packages to be transferred to the waste management organization. Once the CSR has approved the waste packages, ownership of the containers is transferred to the Site's Waste Operations organization. The RFETS Waste Operations Organization performs the final preparations and all surveys required to certify waste for off-site disposal.

7.3 Non-Conformance Packages

The waste generator is responsible for correcting packaged waste containers that are not in compliance with waste packaging requirements stated in the WGI. Corrective actions shall be performed in accordance with the procedure on Control of Waste Non-Conformances (Ref 18).

7.4 Training Requirements

The Building 771/774 Training coordinator utilizes the Site's Training, Scheduling and Records (TSR) database to document employee training history. Each employee is assigned a training profile, using the Health & Safety Practices (HSP) training matrix. The HSP training matrix matches required training courses to job classifications of employees in Building 771/774. Training applicable to waste management included in the HSP training matrix are:

- 40-Hour Hazardous Waste Operations
- DOT Awareness
- RCRA Compliance
- RCRA Tank
- RCRA Waste Management
- RCRA Custodian
- Waste Generator Qualification

Specially required training can be added to the employee's training matrix, as deemed necessary by the employee's manager or supervisor.

The Training coordinator also maintains the Building 771/774 List Of Qualified Individuals (LOQI). The LOQI identifies all Building 771/774 employees qualified to perform certain tasks necessary to operate the facility in a safe and compliant manner. Waste management tasks identified in the Building 771/774 LOQI include, "Waste Generator – All Areas" and "RCRA Waste Management Qualification".

8 0 WASTE STAGING / INTERIM STORAGE

8 1 Interim Waste Storage

The D&D WT maintains general management authority of waste containers in the building. The D&D WT manages new, in-process, and filled waste containers awaiting shipment. The D&D WT tracks waste container movement within the building on WEMS per the procedure on Controls for Updating Waste Package Information in WEMS (Ref 14). Interim storage of radioactive waste in the building conforms to the applicable Administrative Control Requirements (ACRs) in the current Building 771/774 Authorization Basis document. Continued adherence to ACRs affected by intra-building waste container movement is enforced utilizing Operations Order 162 (Ref 19).

The D&D WT tracks containers of Building 771 Closure Project waste on the WEMS system. The D&D WT acts as key-custodian for in-process waste containers, with the Building 771/774 CCA having access to the key-box for any emergency and off-shift occurrences. Movement of containers within the building shall adhere to the procedure on Transferring Category III and IV Material (Ref 20). Interim storage of transuranic waste adheres to the procedure on Nuclear Materials Safety Limits (NMSLs) and Criticality Safety Operating Limits (CSOLs) Surveillance (Ref 21).

The D&D WT and ECT assures that process waste will be stored in compliance with the RFETS RCRA Permit (Ref 22). Inspections of RCRA satellite accumulation areas and 90-day areas used for process waste are performed as specified in 6 CCR 1007-3, Part 262.34. Permitted waste storage areas shall be inspected as required by the RCRA permit (Ref 22). Inspections of mixed-residue storage tanks applicable to Consent Order No. 93-04-23-01 are performed in accordance with the Mixed Residue Tank Plan. Inspections performed on CERCLA storage areas will be documented on log sheets (Ref Appendix H) maintained by the ECT. The inspection log book and archives of past inspections are also maintained by the ECT.

8 2 Waste Staging & Shipping

Temporary staging of radioactive waste for shipment conforms to the applicable Administrative Control Requirements (ACRs) in the current Building 771/774 Authorization Basis document. Shipment of radioactive wastes is performed as specified in the procedure on Transferring Category III and IV Material (Ref 20). Waste acceptance re-verification by CSR is obtained before waste containers are shipped from Building 771/774. The D&D WT coordinates with the CSR on re-verification, and schedule RFETS Trucking to ship waste to Site waste storage facilities.

The Building 771/774 Operations Order 192 (Ref 23) is implemented when shipping TRU or TRU-mixed wastes from any of the Building 771/774 docks. Shipment of transuranic wastes shall also adhere to the procedure on NMSL/CSOL Surveillance (Ref 21). The D&D WT performs the radioactive contamination surveys (gamma/neutron, alpha swipes) and initiates the Nuclear Material and Drum Transfer Report (NMDTR) with the Building 771/774 Nuclear Material Control specialist.

9 0 STORAGE, TRANSPORTATION, AND FINAL DISPOSITION

9.0 STORAGE, TRANSPORTATION, AND FINAL DISPOSITION

Transportation and final disposition of wastes generated by the Building 771/774 Closure Project is the responsibility of the RFETS Waste Operations group. The Building 771/774 Closure Team interfaces with the Customer Service Representative to coordinate shipments of waste from the building.

The following are the identified final waste disposal areas for Building 771/774 Closure Project waste:

- low-level waste to occur at Nevada Test Site (NTS)
- low-level mixed waste at Hanford and commercial facilities
- TRU/TRU-mixed at the Waste Isolation Pilot Plant (WIPP)
- hazardous and TSCA waste at commercial facilities
- sanitary waste (clean debris) at local commercial facility

REFERENCES

- 1 Building 771/774 Decommissioning Operations Plan, approved January 11, 1999
- 2 Final Rocky Flats Clean-up Agreement (RFCA), signed July 19, 1996
- 3- Settlement Agreement and Compliance Order on Consent No 93-04-23-01
- 4 RFETS Radiological Control Manual (Site RCM) Rev 2, June 1, 1996
- 5 Building 771/774 Economic Disposition Plan
- 6 B771/774 Reconnaissance Level Characterization Report, Rev 2, B771/774 Closure Support Team, 8/2/98
- 7 Radioactive Waste Management, DOE Order 5280 2A
- 8 Radioactive Material Transfer & Unrestricted Release of Property and Wastes
- 9 Building 771/774 WSRIC, PADC-93-01562 (6 A)
- 10 Decontamination & Decommissioning WSRIC, PADC-97-00928
- 11 WSRIC Characterization and Re-verification Procedure, 4-H19-WSRIC-001
- 12 Non Routine Waste Origination Log Procedure, 1-I34-WO1103-NRWOL
- 13 Waste Generation Instruction, 1-PRO-079-WGI-001
- 14 Controls for Updating Waste Package Information in WEMS, 1-PRO-Q11-WO-1221
- 15 Solid Radioactive Waste Packaging, WO-1100
- 16 Non-Radioactive Waste Packaging, 1-C88-WP1027-NONRAD
- 17 In-Process Waste Inspection, 4-H62-WI-4011
- 18 Control of Waste Non-Conformances, 2-U76-WC-4030
- 19 Building 771/774 Work Control Process, Building 771/774 Operations Order 162
- 20 Transferring Category III and IV Material, 1-PRO-015-NMT-003
- 21 Nuclear Material Safety Limits and Criticality Safety Operating Limits Surveillance, 4-B19-COOP-03 12
- 22 RFETS Resource Conservation and Recovery Act (RCRA) Part B Operating Permit, CO-97-05-30-01
- 23 Enhanced Controls for Shipping from Building 771/774 Docks, Building 771/774 Operations Order 192

APPENDIX A

Basis of Waste Projection Estimates

Assumptions

For the purpose of establishing a baseline waste estimate, waste containers are assumed to be crates for low-level waste, Standard Waste Boxes for TRU waste, and drums. Only container volume and maximum container weight limits are considered. Other limits, such as fissile material mass and wattage limits, are not considered. Alternative packages, such as roll-offs or Ten-Drum-Overpacks, are also not considered in this estimate but can be readily estimated from total volume estimates for each waste category. While the *Reconnaissance Level Characterization Report* has identified potentially regulated RCRA constituents, these constituents are generally present only in trace amounts. For the baseline estimates contained in this plan, only the presence of lead shielding was assumed to lead to the designation of a piece as mixed waste.

Methodology

The scope of D&D for each set is documented in standardized walk-down sheets. These sheets identify twenty-one distinct waste units that will result from D&D activities. They include such metrics as a linear foot of pipe or conduit, a glovebox glove, an electrical panel, or a piece of a tank or glovebox cut to fit its waste container. These units, in turn, are applied to six different equipment-types that can be generally divided into low level and TRU contaminated items. Electrical and other equipment external to gloveboxes and tanks is considered low level waste. Gloveboxes, tanks, and their internals are considered TRU waste. The length and density of piping in the facility presented a problem in obtaining accurate estimates. Based on discussions within the planning group and observations during the walkdowns, it was established that piping is approximately 30% TRU and 70% low-level waste in the Contaminated Areas (CA).

A standard waste unit volume and weight were established for each of the waste units. The estimates were based on calculated weights and volumes for each waste unit, modified by estimator-experience to allow for packing inefficiencies, irregular shapes, and minor items not itemized in the walk downs. A B771/774 representative also attended the B776 waste estimating workshop and incorporated input from that source. Total waste projections for each set were then estimated by multiplying the waste unit standard by the number of units observed in each set. The total waste estimate was then divided by the container capacity and rounded up to provide an integer number of containers. The numbers of containers estimated this way for several sets were checked against an experienced individual's judgement. The standard estimates were then applied to each set.

Waste estimates contained in this plan will be used for all long range D&D project planning. Waste estimates for each set will be refined during the detailed work planning by the assigned D&D team. At that time, additional characterization will be identified if needed, waste projections will be refined, and minor streams identified.

APPENDIX B

Waste Stream Identification Table

1 WASTE ITEM DESCRIPTION Criticality drain liquid										
APPROXIMATE VOLUME OBSERVED/DESCRIBE	RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
	Unknown - need analytical data	?	?	?	?	?	?	?		
PCB GUIDANCE			ASBESTOS GUIDANCE			SAMPLING REQUIRED			OTHER WASTE GUIDANCE	
None			None			Sample criticality drain oils, all phases, to determine actinide levels and whether or not the solution is hazardous under RCRA			Can not dispose until analytical data is obtained, waste is characterized, and appropriate waste guidance is issued	

2 WASTE ITEM DESCRIPTION Oils/Unknown suspected oils, water, other liquids										
APPROXIMATE VOLUME OBSERVED/DESCRIBE	RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
	Unknown - need analytical data	?	?	?	?	?	?	?		
PCB GUIDANCE			ASBESTOS GUIDANCE			SAMPLING REQUIRED			OTHER WASTE GUIDANCE	
None			None			Determine volume of oils contained inside equipment Sample oils, all phases, to determine actinide levels and whether or not the solution is hazardous under RCRA			Can not dispose until analytical data is obtained, waste is characterized, and appropriate waste guidance is issued, Also need to determine volume where not visible for disposition	

APPENDIX B

Waste Stream Identification Table

<p>3 WASTE ITEM DESCRIPTION 1) Metal equipment, parts, and pieces, glovebox supports (legs), fluorescent light fixtures, metal file cabinets and other cabinets, , metal tool cabinets, 2) Posting Holders – mounted on room walls and on gloveboxes, plastic drums, 3) Alpha mets – mounted on the outside of gloveboxes, 4) Non-PCB Ballast's 5) Includes incidental glass and plastic/rubber parts and pieces.</p>										
<p>RADIOLOGICAL CHARACTERIZATION METHOD</p>	<p>SCO-1</p>	<p>CONTAINER TYPE</p> <p>Half or full crates</p>	<p>LINE GENERATED (YES OR NO)</p> <p>No</p>	<p>WGI #</p> <p>WGI9907711261A</p>	<p>IDC #</p> <p>5001/480 5001/337 5001/480 5001/440</p>	<p>IDC Description</p> <p>Light metal Plastics Ballasts Glass</p>	<p>RCRA Hazardous Waste Characterization</p> <p>Non-Hazardous</p>	<p>WASTE STREAM #</p> <p>D&D-3-11 D&D-3-8 D&D-3-73 D&D-3-19</p>		
<p>PCB GUIDANCE</p> <p>None</p>	<p>ASBESTOS GUIDANCE</p> <p>None</p>	<p>SAMPLING REQUIRED</p> <p>None</p>	<p>OTHER WASTE GUIDANCE</p> <p>-drain oils and grease, if any, from any equipment -equipment must be striped of capacitors and/or circuit boards, compressor oil, plastic, freon, and any other non-incidental IDCs (if any) -Alpha mets must be striped of circuit boards and sources (the sources can be reused-see guidance below), -drums must be free of liquids -remove light bulbs and ballasts from light fixtures -check light ballasts and if clearly marked "NO PCBs", then dispose in this package, if not, assume PCB and see waste guidance below</p>							
<p>4 WASTE ITEM DESCRIPTION Circuit boards for Recycle</p>										
<p>RADIOLOGICAL CHARACTERIZATION METHOD</p> <p>Non-radioactive</p>	<p>CONTAINER TYPE</p> <p>1 bag</p>	<p>LINE GENERATED (YES OR NO)</p> <p>No</p>	<p>WGI #</p> <p>Not Applicable</p>	<p>WFC #</p> <p>1480</p>	<p>WFC Description</p> <p>Circuit boards for recycle</p>	<p>RCRA Hazardous Waste Characterization</p> <p>Non-Hazardous</p>	<p>WASTE STREAM #</p> <p>D&D-2-15</p>			
<p>PCB GUIDANCE</p> <p>None</p>	<p>ASBESTOS GUIDANCE</p> <p>None</p>	<p>SAMPLING REQUIRED</p> <p>None</p>	<p>OTHER WASTE GUIDANCE</p> <p>RCT Survey pursuant to Radiological Engineer Guidance PWRE offsite release evaluation Number each board (example 1 of 54, 2 of 54, etc) Put in bag, write PRL number and survey results on bag, Contact Leslie Langlois for final packaging and shipping Note If survey fails for offsite release, obtain new guidance from Waste Characterization</p>							

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APPENDIX B

Waste Stream Identification Table

10 WASTE ITEM DESCRIPTION Glovebox Non-Leaded Glass Windows									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Assume TRU	DRUM	Yes	GI997711590A	440	Line generated glassware	Non-Hazardous	D&D-3-18		
PCB GUIDANCE		ASBESTOS GUIDANCE		SAMPLING REQUIRED		OTHER WASTE GUIDANCE			
None		None		None		Remove contents			

11 WASTE ITEM DESCRIPTION Glovebox Lead Shielding, Small glass bottles - wrapped with lead shielding, Lead Bricks, etc									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Assume TRU	DRUM	Yes	GI977710059C	321	Line generated lead	Hazardous	D&D-4-20		
PCB GUIDANCE		ASBESTOS GUIDANCE		SAMPLING REQUIRED		OTHER WASTE GUIDANCE			
None		None		None		-Hazardous Waste - must be managed in Satellite Unite Number 2375 in Room 164 -Strip lead shielding from its glovebox location Limited to a total of 24 grams weapons grade Pu (Note that we have the option of using a vented bag to allow higher grams - see Waste Characterization Group for further guidance) Must be moved to and managed in a RCRA storage unit by the end of each shift Use Unit 771 1 permitted storage in Room 172 or 181A Contact Leslie Langlois for final drum placement based on available space			

12 WASTE ITEM DESCRIPTION Glovebox HEPA Inlet and exhaust filters									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Assume TRU	Drum	Yes	GI9707710226B	335	Non-acid contaminated filters	Non-Hazardous	771-35-36		
PCB GUIDANCE		ASBESTOS GUIDANCE		SAMPLING REQUIRED		OTHER WASTE GUIDANCE			
None		None		None		None			

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APPENDIX B

Waste Stream Identification Table

13 WASTE ITEM DESCRIPTION: Glovebox Leaded Gloves									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Assume TRU	Drum	Yes	G19707710061B	339	Line generated, Leaded Glovebox gloves	Hazardous	771-35-35		
PCB GUIDANCE		ASBESTOS GUIDANCE		SAMPLING REQUIRED		OTHER WASTE GUIDANCE			
None		None		None		Must be moved to and managed in a RCRA storage unit by the end of each shift. Use Unit 771 1 permitted storage in Room 172 or 181A. Contact Leslie Langlois for final drum placement based on available space.			

14 WASTE ITEM DESCRIPTION: Glovebox Leaded Glass Windows									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Assume TRU/Mixed	Drum	Yes	G1997711591A	444	Line-generated leaded glass from glovebox windows	Hazardous	D&D-4-18		
PCB GUIDANCE		ASBESTOS GUIDANCE		SAMPLING REQUIRED		OTHER WASTE GUIDANCE			
None		None		None		Must be moved to and managed in a RCRA storage unit by the end of each shift. Use Unit 771 1 permitted storage in Room 172 or 181A. Contact Leslie Langlois for final drum placement based on available space.			

15 WASTE ITEM DESCRIPTION: Glovebox Plexiglas Windows									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Assume TRU	Drum	Yes	G1997711589A	302	Line-generated Plexiglas from glovebox windows	Non-Hazardous	771-35-58		
PCB GUIDANCE		ASBESTOS GUIDANCE		SAMPLING REQUIRED		OTHER WASTE GUIDANCE			
None		None		None		Use vented bags to maximize the drum gram loading, see Waste Characterization Group for a variance from vented bags if so desired or if you have questions.			

APPENDIX B

Waste Stream Identification Table

16	WASTE ITEM DESCRIPTION: Cement generated from Glovebox Supports									
	RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
	Low Level Waste	Drums	No	G19707710227A	374	Cement/construction rubble	Non-Hazardous	Unknown		
	PCB GUIDANCE			ASBESTOS GUIDANCE			SAMPLING REQUIRED			
	None			None			No			
	OTHER WASTE GUIDANCE									
	Do not generate this waste. Waiting for a new WGI version B - has been requested.									

17	WASTE ITEM DESCRIPTION: Circuit Boards removed from electronic equipment									
	RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	WFC #	WFC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
	Non-radioactive	Use DOT strong-type container for recyclable material	No	Not Applicable	1480	Circuit boards for recycle	Non-Hazardous	D&D-2-15		
	PCB GUIDANCE			ASBESTOS GUIDANCE			SAMPLING REQUIRED			
	None			None			None			
	OTHER WASTE GUIDANCE									
	RCT Survey pursuant to Radiological Engineer Guidance PWRE offsite release evaluation. Number each board (example 1 of 54, 2 of 54, etc). Put in bag, write PRL number and survey results on bag. Contact Leslie Langlois for final packaging and shipping. Note if survey fails for offsite release, obtain new guidance from Waste Characterization.									

18	WASTE ITEM DESCRIPTION: Freon Gas									
	RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
	Non-radioactive	Not Applicable	No	Not Applicable	N/A	N/A	Non-hazardous	N/A		
	PCB GUIDANCE			ASBESTOS GUIDANCE			SAMPLING REQUIRED			
	None			None			None			
	OTHER WASTE GUIDANCE									
	A certified Freon handler from Maintenance must remove Freon from refrigeration equipment for reuse. Make the appropriate arrangements prior to equipment Dismantlement.									

APPENDIX B

Waste Stream Identification Table

19 WASTE ITEM DESCRIPTION: Compressor Oil from Refrigeration Unit									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Non-radioactive	Drum	No	Not Applicable	529	Used Oil	Non-hazardous	D&D-3-22		
PCB GUIDANCE	ASBESTOS GUIDANCE		SAMPLING REQUIRED			OTHER WASTE GUIDANCE			
None	None		None			This is a sealed unit, material not exposed within the CA. Drain oil into a 4-Liter bottle, then pour oil from bottle into the oil drum stored in room 182. Contact Leslie Langlois to supervise the off-loading of the oil into the drum to ensure the right drum is selected.			

20 WASTE ITEM DESCRIPTION: Capacitors									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Characterization	WASTE STREAM #		
Low Level	Unknown	No	Not Applicable	971	Non PCB Capacitor	Unknown	D&D-3-73		
PCB GUIDANCE	ASBESTOS GUIDANCE		SAMPLING REQUIRED			OTHER WASTE GUIDANCE			
None	None		None			Do not disposition these capacitors at this time. Contacting manufacturer for more information.			

21 WASTE ITEM DESCRIPTION: Glovebox									
RADIOLOGICAL CHARACTERIZATION METHOD	CONTAINER TYPE	LINE GENERATED (YES OR NO)	WGI #	IDC #	IDC Description	RCRA Hazardous Waste Description	WASTE STREAM #		
Assume TRU	Standard Waste Box	Yes	GI997711576B	480	Painted Metal	Non-Hazardous	D&D-3-12		
PCB GUIDANCE	ASBESTOS GUIDANCE		SAMPLING REQUIRED			OTHER WASTE GUIDANCE			
None	None		No			Stripped of lead, gloves, Plexiglas, alpha mets, wiring, and piping.			

APPENDIX C

B771/774 Sets Scheduled for D&D in FY99 and FY00

Set Number	Description
12	Room 114, Glovebox 8, 8E, and 9
34	Room 148 Process Area
35	Room 147 Office Area
36A	Room 146C Process Area
37	Room 181A Process Area
39	Room 182A Process Area
40	Room 183 Storage Area
41	Room 186 Process Area
44	Room 179 Maintenance Area
50	Room 158 Lab Area
25	Room 149, Glovebox 27
27	Room 149, Glovebox 30
42	Rooms 180G, H, I, and J
46	Room 164 Lab Area
7	Room 114 Glovebox 2
14	Room 114, Glovebox 12
29	Room 149, Glovebox 40 & 44
33	Room 149 Tank Farm
8	Room 114, Glovebox 3
16	Room 114, Gloveboxes 15 & 16
26	Room 149, Glovebox 29

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APPENDIX D

Projected Waste Volume/Generation Rates in FY99 & FY00 (m3)

Category	FY99 Q3	FY99 Q4	FY00 Q1	FY00 Q2	FY00 Q3	FY00 Q4	TOTAL
TRU/TRU -Mixed	1	122	90	0	130	57	400
-Low-Level	88	5	23	23	0	111	250
Low-Level Mixed	0	0	0	2	1	1	4
Regulated Non- Radioactive	0	0	0	0	0	0	0
Sanitary	0	0	0	0	0	0	0
Liquids	0	0	0	0	0	0	0
Other	11	9	8	8	0	0	36

APPENDIX E

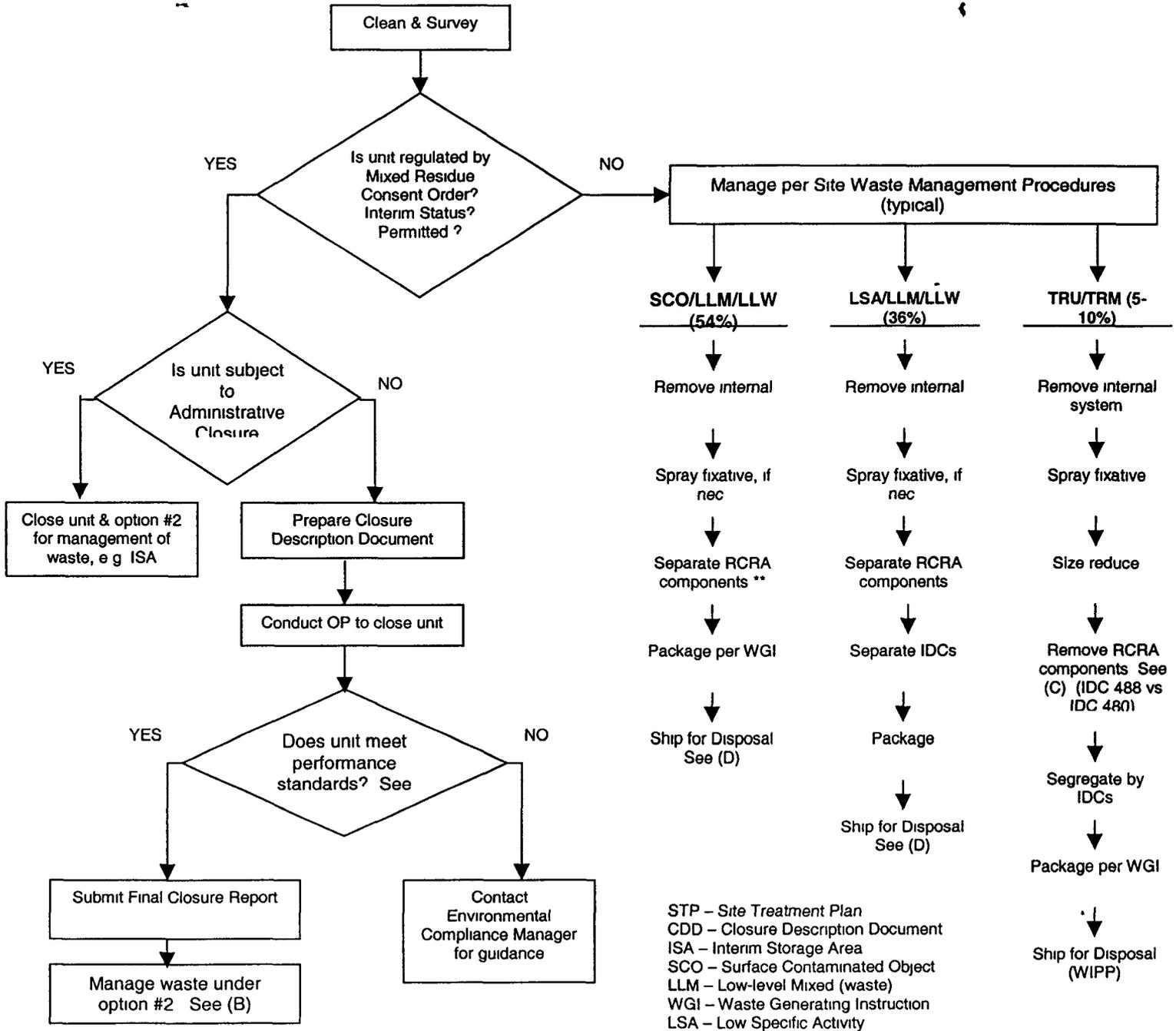
Projected Waste Container Requirements for FY99 & FY00

Project Waste Generation	FY99 Q3	FY99 Q4	FY00 Q1	FY00 Q2	FY00 Q3	FY00 Q4	Total
TRU/TRM (SWBs)	1	65	48	0	69	30	213
TRU/TRM (Drums)	10	10	10	10	10	10	60
LLW/LLM (Crates)	28	2	8	8	0	36	82
LLW/LLM (Drums)	35	35	35	35	35	35	210
Regulated-Non Radioactive (Drums)	18	2	4	22	4	18	68

APPENDIX F

Process Flow Diagrams

Tanks & Gloveboxes



Note (A) Performance Standards

- Removal
- Rinsate
- Debris Treatment

Note (B) Units managing characteristic wastes meeting LDR may be managed as non-hazardous LLW RCRA listed waste units meeting MCLS – may exit RCRA as “No Longer Contained In, Contact Environmental Compliance Management for guidance

Note (C) RCRA wastes greater than 10 n/g and less than 100 n/g have no identified disposal options – add to STP, e.g Pb glass, shielding, Pb gloves

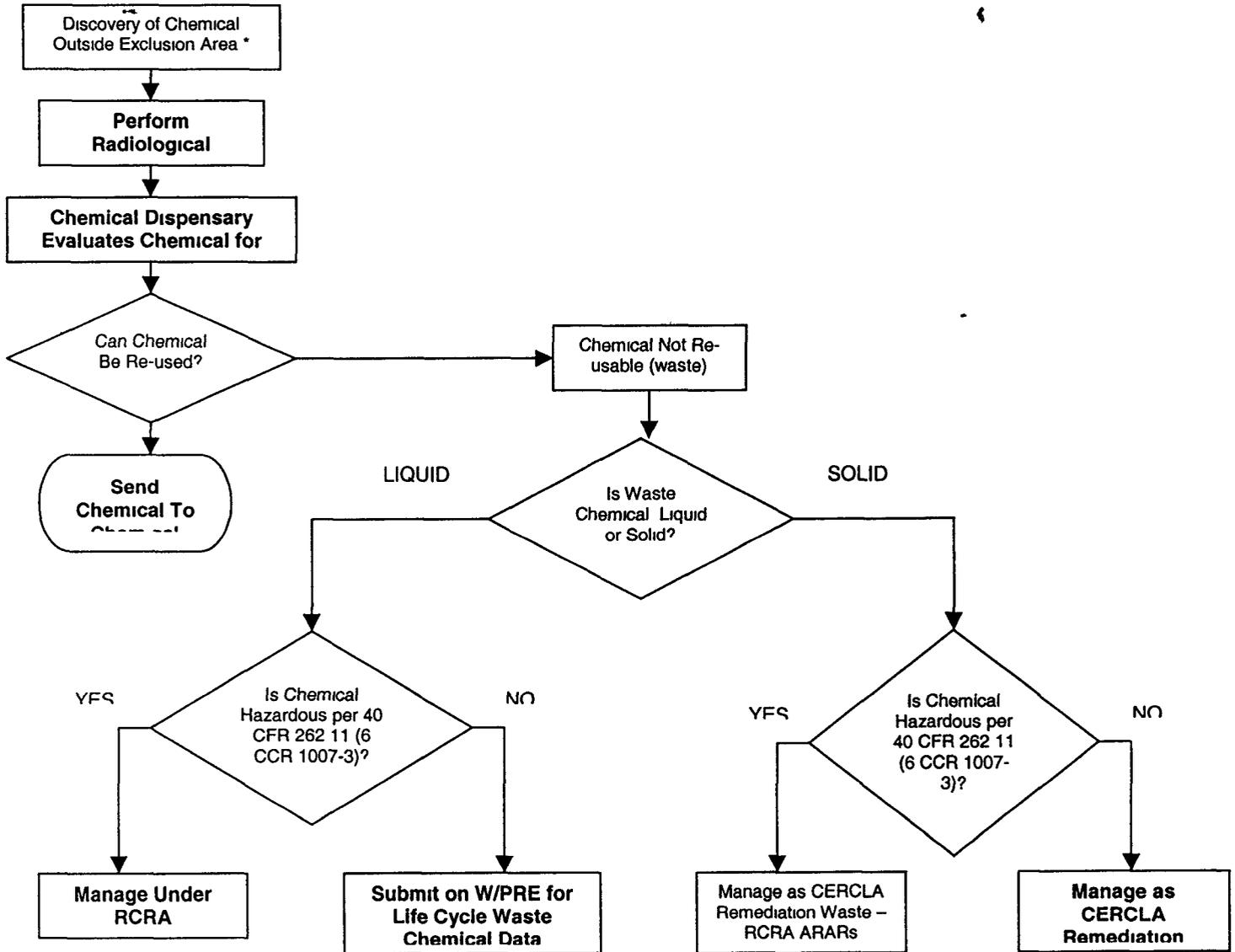
Note (D)
 SCO – Non-RCRA goes to NTS
 LLM – less than 10 n/g goes to EnviroCare
 LSA – Non RCRA goes to NTS

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APPENDIX F

Process Flow Diagrams

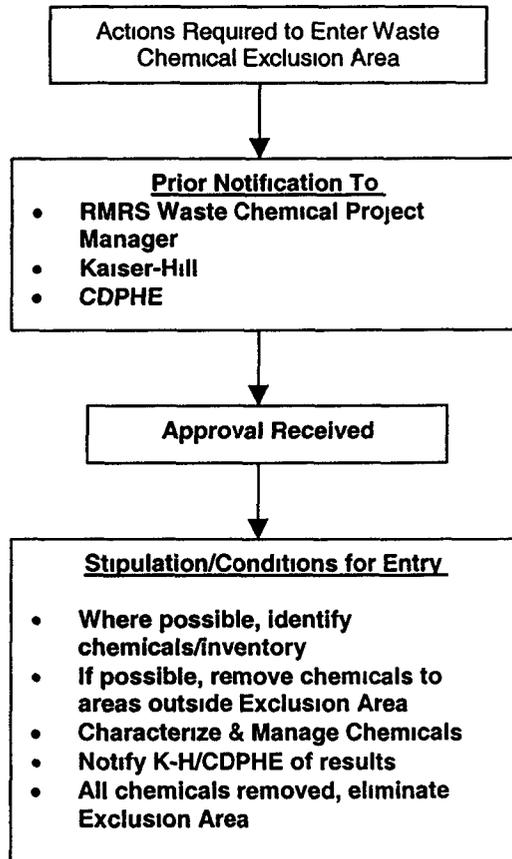
Management of Waste Chemicals



* Note For entry into the Waste Chemical Exclusion Area, see flow chart on next page

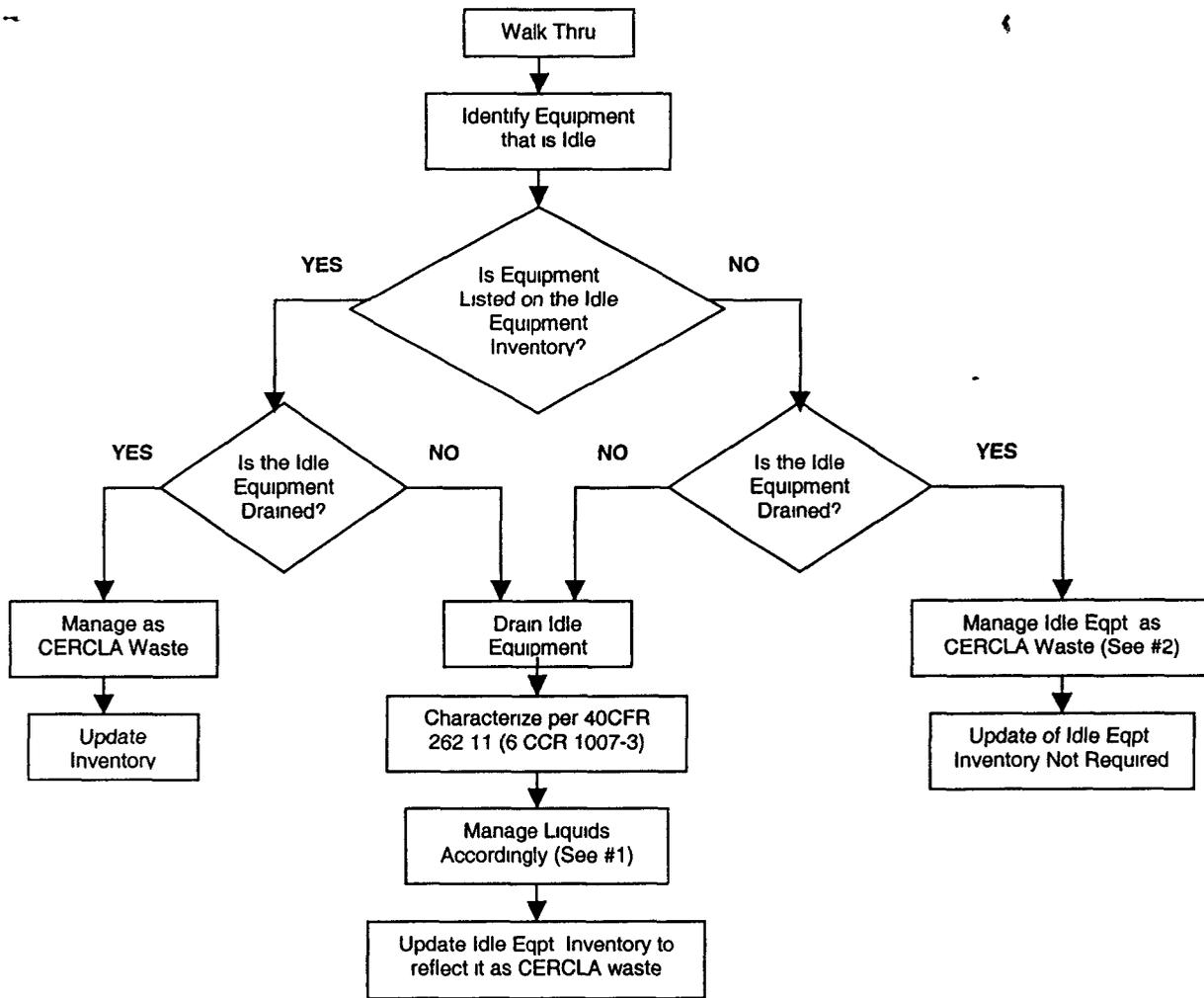
APPENDIX F
Process Flow Diagrams

Entry Into Waste Chemical Exclusion Area



APPENDIX F
Process Flow Diagrams

Idle Equipment



#1 Management Options Under RCRA for Liquids Drained from Idle Equipment

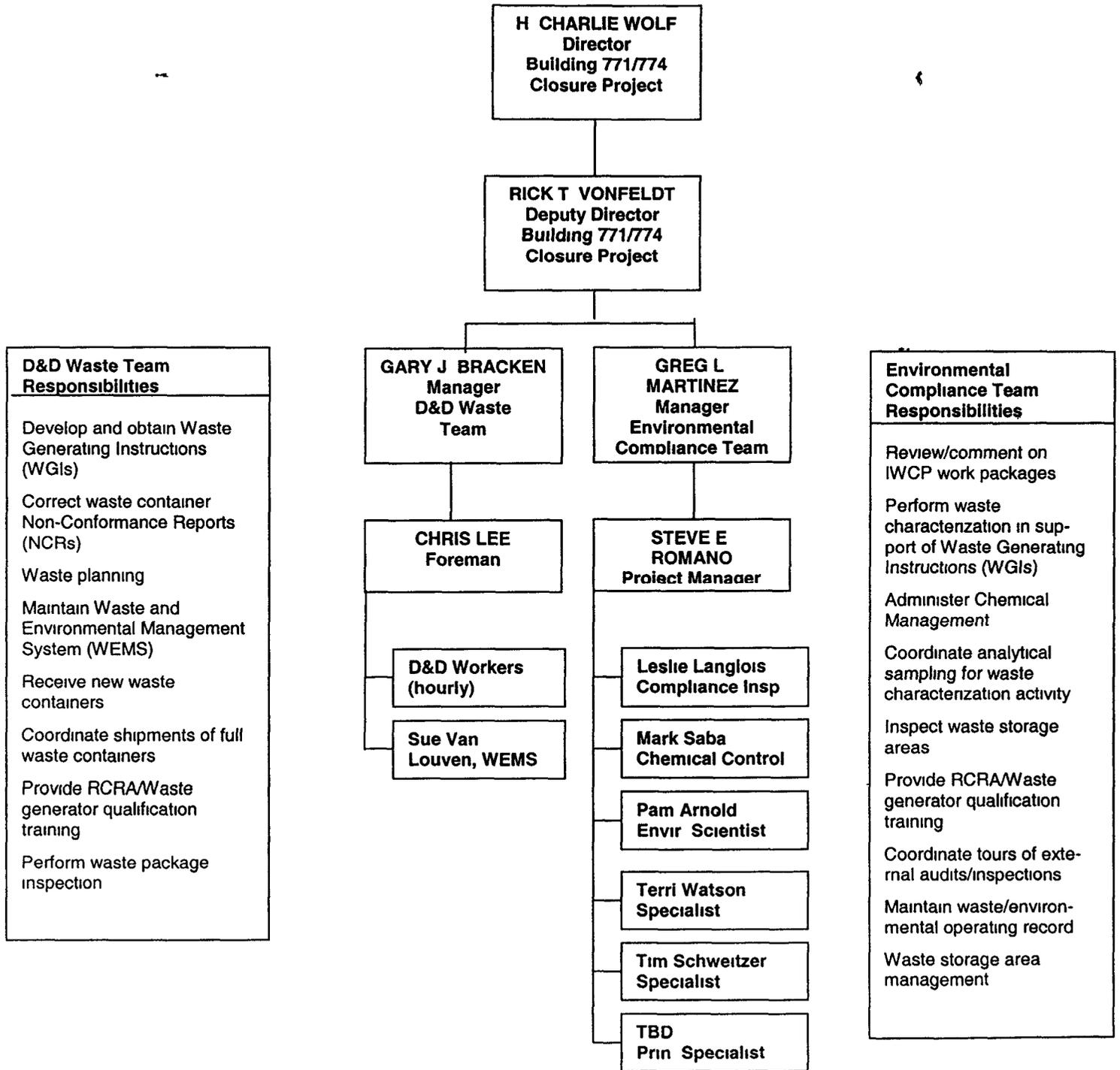
- Used Oil, 40 CFR 279 (6CCR 1007-3)
- Hazardous/LLM Waste
- LLW
- Non-hazardous Waste
- Recycling – Solvents, etc

#2 Management Options for Idle Equipment Follow Property Rules

- LLW (including SCO)
- LLM
- TRU
- TRM
- Free Release
- PU&D

APPENDIX G

Building 771/774 Waste and Environmental Organization Chart



APPENDIX H

Waste Area Inspection Logsheets (CERCLA Storage/Satellite Areas)

WASTE MANAGEMENT INSPECTION LOG SHEET FOR LIQUIDS ONLY CERCLA STORAGE AREA

BUILDING	771		
ROOM			
CSA UNIT ID NUMBER			
DATE			
SHIFT			
SIGNATURE OF INSPECTOR			
EMPLOYEE # OF INSPECTOR			

The following logsheet must be filled out completely and accurately. The only acceptable responses are "Yes", "No", or "NA" (except the date of last inspection). Inspections must be performed quarterly. If a container is not present, answer N/A to Questions 4, 5, 6, or 7.

1 Date of last inspection			
2 Is spill/release response equipment accessible, adequate and in good working condition (is the room door seal unbroken)?			
3 Are area signs present, correct, and visible?			
4 Are the container(s) in good condition (closed/locked – no signs of incompatibility (bulges, leaks, pressurization, etc))			
5 Are incompatible wastes separated by elevation (i.e. on angle iron), a berm, wall, dike, or other?			
6 Are container label(s) correct, legible and visible?			
7 Is aisle space adequate (minimum of 26" spacing between rows)?			
8 Is WEMS accurate (are all containers listed in WEMS)?			

Remedial Actions Always notify CCA or supervisor of any problems

"NO" ANSWERS REQUIRE EXPLANATION AND/OR CORRECTIVE ACTION IN THE COMMENTS SECTION

COMMENTS AND CORRECTIVE ACTIONS (If additional space is required the reverse side of this sheet may be used for comments)

	DATE

Owner signature	Date
RCRA Custodian signature	Date

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APPENDIX H

Waste Area Inspection Logsheets (CERCLA Storage/Satellite Areas)

WASTE MANAGEMENT INSPECTION LOG SHEET FOR SOLIDS ONLY CERCLA STORAGE AREA

BUILDING	771		
ROOM			
CSA UNIT ID NUMBER			
DATE			
SHIFT			
SIGNATURE OF INSPECTOR			
EMPLOYEE # OF INSPECTOR			

The following logsheet must be filled out completely and accurately. The only acceptable responses are "Yes", "No", or "NA" (except the date of last inspection). Inspections must be performed quarterly. If a container is not present, answer N/A to Questions 4, 5, 6, or 7.

1 Date of last inspection			
2 Is spill/release response equipment accessible, adequate and in good working condition (is the room door seal unbroken)?			
3 Are area signs present, correct, and visible?			
4 Are the container(s) in good condition (closed/locked - no signs of incompatibility (bulges, leaks, pressurization, etc))			
5 Are incompatible wastes separated by elevation (i.e. on angle iron), a berm, wall, dike or other?			
6 Are container label(s) correct, legible and visible?			
7 Is aisle space adequate (minimum of 26" spacing between rows)?			
8 Is WEMS accurate (are all containers listed in WEMS)?			

Remedial Actions Always notify CCA or supervisor of any problems

"NO" ANSWERS REQUIRE EXPLANATION AND/OR CORRECTIVE ACTION IN THE COMMENTS SECTION

COMMENTS AND CORRECTIVE ACTIONS (If additional space is required the reverse side of this sheet may be used for comments)

	DATE

Owner signature Date

RCRA Custodian signature Date