

RECORDS TRANSMITTAL NUMBER /////  
 REMEDIATION PROJECT MANAGEMENT  
 OU9 TANK DISPOSITION

<u>Specific Record Idet.</u>	<u>Subject</u>	<u>No. of Pages</u>	<u>Record Date</u>	<u>Areas</u>
Fax from Jacobs Engineering Group Inc. to B Peterman	Table 1-1 Tank Descriptions OU9 Original Process Waste Lines; Memo Dated November 2, 1993 Re: Questions Regarding OU9 Technical Memorandum No. 1	4	11/05/93	OU9
Letter from Jacobs Engineering Group Inc.	Notification of 75 Percent of Budget Expended - OU9	1	12/13/93	OU9
Final Report/Review Draft Revision 0	Tank Disposition Process Improvement Team	1	12/21/93	
TOTAL PAGES		6		

1/35





# JACOBS ENGINEERING GROUP INC.

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## Facsimile Cover Sheet

To: Bruce Peterman  
 Company: EG & G  
 Fax: 966-8556  
 Phone: \_\_\_\_\_

From: Juice Miyagishima  
 Project #: OSH60020  
 WBS Code: 10902  
 Date: 11/5/93

Pages including this cover page: 2

**Comments:**

Bruce,  
 Sorry you didn't get a copy  
 of this on Tuesday.  
 Talk to you soon.

*Juice*

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TABLE 1-1  
TANK DESCRIPTIONS  
OU9 ORIGINAL PROCESS WASTE LINES

TANK NUMBER	HSS	BUILDING NO.(1)	NUMBER OF TANKS	CONSTRUCTION TYPE(2)	VOLUME (gal)	CONSTRUCTION MATERIAL(3)	TANK STATUS(4)	YEAR INSTALLED
T-29	NA	774	1	OG	200,000	Stl	Abandoned (1985)	1952
T-30	NA	707 (731)	1	SU	23,111	Conc	Active(e)	1959
T-31	NA	N/A	N/A	N/A	N/A	N/A	Invalid tank location	N/A
T-32	NA	881 (887)	1	SU	131,160	Conc	Active(e)	1952
T-33	NA	N/A	N/A	N/A	N/A	N/A	Invalid tank location	N/A
T-34	NA	N/A	N/A	N/A	N/A	N/A	Invalid tank location	N/A
T-35	NA	N/A	N/A	N/A	N/A	N/A	Invalid tank location	N/A
T-36	NA	771C	1	SU	500	Stl	Abandoned (1984)	1965
T-37	NA	771C	1	SU	500	Conc	Abandoned (1984?)	Unk.
T-38	NA	779	1	AG2	1,000	Stl	Active(e)	Unk.
T-39	NA	881	4	AG1	250 ea	Stl	Removed (1975)	1952

Notes:

(1) Building numbers in parentheses are process waste pits adjacent to production buildings.

(2) Tank Types:

- FS Floor Sump (used for spill control)
- SU Sump (open-top or covered)
- UG Underground (sealed, permanently closed top)
- AG1 Above-Grade
- AG2 Above-Grade in sump
- OG On-Grade

(3) Tank Materials:

- SS Stainless Steel
- Stl Steel
- Conc Concrete

(4) Active Tank Categories (as marked):

- a Incidental spill control; not RCRA-permitted
- b RCRA-permitted process waste tank
- c 90-day transuranic waste tank
- d Converted to the RFP plenum fire deluge system as a firewater catch tank
- e Secondary containment for RCRA-permitted waste tank

N/A = Not Applicable

NO = Number

RCRA = Resource Conservation and Recovery Act

RFP = Rocky Flats Plant

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TABLE 1-1  
TANK DESCRIPTIONS  
OU9 ORIGINAL PROCESS WASTE LINES

TANK NUMBER	HSS	BUILDING NO. (1)	NUMBER OF TANKS	CONSTRUCTION TYPE(2)	VOLUME (gal)	CONSTRUCTION MATERIAL(3)	TANK STATUS(4)	YEAR INSTALLED
T-1	NA	122	1	UG	800	SS	Removed (Jan 1984)	1955
T-2	122	441	1	UG	3,000	Conc	Abandoned (June 1982)	1952
T-3	122	441 (429)	2	1 - UG, 1 - AG1	UG-3,000, AG-3,200	UG-Conc, AG-Stl	Abandoned (June 1982)	1952
T-4	NA	447	3	FS	60 ea	Conc	Active(s)	1962
T-5	NA	444	2	AG1	4,000 ea	Stl	Active(s)	1952
T-6	NA	444	2	FS	500 & 300	Conc	Active(s)	1952
T-7	159	559 (528)	2	AG2	2,000 ea	Stl	Active(s)	1969
T-8	126	771 (728)	2	UG	25,000 ea	Conc	Plenum deluge(s)	1952
T-9	132	776 (730)	2	UG	22,500 ea	Conc	Plenum deluge(s)	1955
T-10	132	776 (730)	2	UG	4,500 ea	Conc	Abandoned (Dec 1982)	1955
T-11	NA	707 (731)	2	UG	2,000 ea	Conc	Active(s)	1959
T-12	NA	N/A	N/A	N/A	N/A	N/A	Invalid tank location	N/A
T-13	215	774	1	SU	600	Conc	Abandoned (1972)	1952
T-14	124	774	1	UG	30,000	Conc	Active (?)	1952
T-15	148	774	2	UG	7,500 ea	Conc	Removed (1972)	1969
T-16	124,125	774	2	UG	14,000 ea	Conc	Active	1952
T-17	146	774	4	UG	2-3,750; 2-7,500	Conc	Removed (1972)	1969
T-18	NA	778	1	SU	Unknown	Conc	Abandoned (1982?)	Unk.
T-19	NA	779	2	SU	1,000 ea	Conc	Plenum deluge(s)	1964
T-20	NA	779	2	SU	8,000 ea	Conc	Abandoned (Dec 1982)	1964
T-21	NA	886 (828)	1	FS	250	Conc	Abandoned (1978)	1963
T-22	NA	886 (828)	2	AG2	250 ea	SS	Abandoned (1978)	1963
T-23	NA	865	1	SU	6,000	Conc	Abandoned (May 1982)	1979
T-24	NA	881 (887)	7	AG2	2,700 ea	Stl	Active(s)	1962
T-25	NA	863	2	AG1	750 ea	Stl	Active(s)	1962
T-26	NA	883	3	AG1	750 ea	Stl	Active(s)	1965
T-27	NA	881	1	AG1	500	Stl	Removed (July 1982)	Unk.
T-28	NA	669	2	FS	1,000	Conc	Active(s)	1965

jmiyagi/questm1

November 2, 1993

Via Telefax

To: Bruce Peterman and Suzanne Berman  
 From: Joyce Miyagishima

Re: Questions Regarding OU9 Technical Memorandum No. 1

I contacted Karen Schoendaller regarding the Alpha Survey proposed in the Technical Memorandum (TM). She indicated that the Alpha Survey is not currently under a laboratory SOW but that it could be added to Version 3 of the GRASP contract. Will this meet our schedule requirements? Shall I keep the Alpha Survey in the TM or change it back to analyses for Gross Alpha and Gross Beta?

Kirk Ticknor gave me information on some of the tanks whose status was questioned by CDH. Kirk said this information may be available for OU9 tanks but you would have to request it. Could you request information from him on the rest of the tanks? Table 1-1 (attached) from the TM would be a good reference for him to use.

Matt Garton said he could add exotic metals analysis to the next SOW for laboratories or he could amend the current SOW, depending on the schedule. He'll need this information from you. The exotic metals for TM No.1 includes, tantalum (Ta), titanium (Ti), and Lithium (Li). Cerium (Ce), curium (Cm), tin (Sn), and tungsten (W) could be needed (for future sampling). Could you confirm the sample analyses and schedule with him?

Ed Mast suggested that we consider using the hydropunch rather than the BAT-sampler so we could get more sample (groundwater) volume for analyses. We proposed to analyze for TCL volatiles using the BAT-sampler, similar to OU8 Work Plan, per Bruce Thatcher's suggestion. If we use the hydropunch, as they did with OU5, we could increase our sample parameter list. Depending on sample volume available we could collect samples based on the following priority: TCL volatiles, TCL semivolatiles/PCBs, metals, radionuclides, and perhaps pesticides and herbicides. If the formation water doesn't give us sufficient sample volume we will have collected the most important parameters first. Does this approach meet your approval?

There is still a question on whether we should show our proposed HPGe locations on 25 foot grids using the tripod, or whether we should show them using the truck-mounted HPGe at the best available physical locations. Which approach shall we use?

Frank Blaha indicates that we can shorten our proposed analytical parameter list if we can research information on the building waste streams. We need to discuss this option and its effect on the schedule.

When we get answers to these questions and as soon as we get Bruce Thatcher's decision on active tanks we can discuss a deliverable date for the Final draft of the TM.

Please call if you have questions.

Bruce:  
 Since we  
 want investigate  
 active tanks  
 Ta is the  
 only exotic  
 metal in  
 TM # 1  
 (for now).

-Resolved



# JACOBS ENGINEERING GROUP INC.

75per December 10, 1993

600 SEVENTEENTH STREET, SUITE 1100N • DENVER, COLORADO 80202  
TELEPHONE (303) 595-8855 FAX (303) 595-8857

December 13, 1993

Mr. Bruce Peterman  
Rocky Flats Plant - Interlocken  
EG&G Rocky Flats, Inc.  
P.O. Box 464  
Golden, Colorado 80402-0464

**Subject: Notification of 75 Percent of Budget Expended - Operable Unit 9**

**Ref: (a) Master Task Subcontract No. MTS225449RR; Task Order Contract No. MTS237441GG3**

Dear Bruce:

This letter is to inform you that we will reach 75 percent of the hourly budget for OU9 in December. Labor and dollar expenditures from 28 November show that we have expended 67 percent of the total labor hours and 57 percent of the dollar budget (excluding other direct costs and subcontractor cost). According to our work load projections we estimate that 75 percent of the labor hours will be expended by approximately 30 December and that 75 percent of the dollar budget will be expended by approximately 30 January.

As indicated in previous budget reports to you, explanation of the budget variances indicate additional funding is required.

Please do not hesitate to call if you need additional information or would like to meet to discuss this matter.

Sincerely,

JACOBS ENGINEERING GROUP INC.

Joyce Miyagishima  
OU9 Project Manager

to Farrel Hobbs  
Project Manager  
Denver Operations

cc: G. Greene, EG&G  
M. Tobin, Jacobs  
Project File

TANK DISPOSITION PROCESS IMPROVEMENT TEAM

FINAL REPORT

REVIEW DRAFT 12/21/93

Revision 0

Comments due 1/4/94

\*REVIEWED FOR CLASSIFICATION/UCM\*

by J. Dugdale u/w  
date 12/31/93

TANK DISPOSITION PROCESS IMPROVEMENT TEAM  
FINAL REPORT  
Revision 0

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# TANK DISPOSITION PROCESS IMPROVEMENT TEAM

## 1. INTRODUCTION

### 1.1 BACKGROUND

The Tank Process Management Team (PMT) was formed in September, 1993, to assess and integrate the tank management activities at the Rocky Flats Plant (RFP). After identifying its objectives and goals, several Process Improvement Teams (PITs) were established to accomplish the team's mission. The Tank Disposition PIT was formed to investigate and recommend improvements in the plant tank disposition planning and management.

The first Tank Disposition PIT team meeting was held on October 12, 1993. After brainstorming the team objectives, the following mission statement was decided on: "To develop a strategy for the disposition of all tanks at the Rocky Flats Plant." The term "disposition" was chosen to prevent any possible confusion with "closure", which is normally associated with Resource Conservation and Recovery Act (RCRA) regulated systems.

### 1.2 OBJECTIVES

The team's primary objectives were to (1) identify the necessary thought processes or strategy necessary to determine tank dispositions, (2) solicit input from various operations, user/owner groups, and environmental coordinators, and (3) issue a summary report to the Tank PMT and EG&G/Rocky Flats Office management containing observations, conclusions and recommendations. The draft strategy and final report will be reviewed by responsible organization and management personnel in order to decide on the necessary follow-on actions and development of the Integrated Plant and the Master Site Planning schedules.

The disposition strategy developed by the team began with the establishment of tank system categories. The scope of the PIT includes all tanks at RFP, regardless of contents, both active and inactive status. This report addresses all tanks at RFP, including fissile, non-fissile, product, chemical, fuel, interior/exterior, regulated/non-regulated, above-ground, and underground storage tanks (10% or more of system volume below ground). With the change in plant mission and future detailed planning yet to be performed, the PIT decided to develop a strategy and identify the necessary activities to assist building operations/management personnel in determining how to plan for, or disposition, all existing tank systems.

### 1.2 MEMBERSHIP

The Tank Disposition PIT members are as follows:

<u>Name</u>	<u>Organization</u>	<u>Extension</u>	
S. G. Berman	ERM Remed. Projects	8670	
D. E. Hepler	Fluid Process Eng.	2276	
T. M. Karas	Fac. Remed. Proj.	2987	Team Leader
G. E. Kwitek	Fac. Ops. 776/777	5549	

D. Mauer	DOE Waste Programs	5598
N. Matsuura	DOE Waste Programs	2926
L. D. McManus	RCRA Reg. Programs	2135
K. G. Peter	RCRA Reg. Programs	6345
W. J. Prymak	DOE Waste Programs	5979
K. W. Ticknor	RCRA Reg. Programs	6344

This report discusses the Tank Disposition PIT approach, the disposition process, and the report summary. The Approach section contains the background information and drivers concerning the tank disposition approach. The Process section includes the information, flow charts/narratives, responsibilities and actions necessary to determine the tank system dispositions. Finally, the summary section contains all observations, recommendations, and conclusions reached by the team.

## 2. APPROACH

When the change in plant mission was announced, the transition activity planning and integration effort was begun. Since the transition effort is still relatively new, no detailed guidance exists for the tank disposition process. The Tank Disposition PIT mission was to develop a strategy for the disposition processes. The following sections describe the tank system disposition approach taken by the PIT.

### 2.1 TANK SYSTEM STRATEGY AND CATEGORIZATION

Because of the many different types of tanks and the large number of technical considerations for determining ultimate disposition of tanks, the PIT decided that a "draft strategy" was needed to help develop a master plan for dispositioning all tanks at Rocky Flats. It was decided to develop the "draft strategy" in the form of flow charts to define a logical approach for determining the disposition requirements for all RFP tanks.

The Federal and State regulations and the Environmental Restoration Inter-Agency Agreement (ER IAG) dictate the disposition requirements for regulated tanks that have no further use at RFP. We chose to use these requirements to develop the flow charts because it appeared to be the most straightforward approach available. However, once these requirements are defined through the use of flow charts, risk and many other factors must be considered to determine the priorities and methods for dispositioning tanks.

A risk-versus-benefit basis for the disposition requirements was considered but rejected for several reasons. The regulatory requirements approach is less complicated than using the risk/benefit basis. Also, since the regulatory requirements would have had to be included eventually in the risk-based approach, both approaches would have yielded the same result.

Dividing the tank systems into 3 major categories resulted naturally from using the disposition requirements approach, since the regulations and IAG apply to specific categories of tanks. The three categories are (1) RCRA Permitted/Interim Status/90-Day Tanks, (2) IAG Tanks, and (3) Other Tanks. The "Other Tanks" category includes all tank systems that do not meet the definition of the first two categories. It should be noted that a tank

includes all its associated ancillary equipment. Once categorized, the flow charts are used for the purpose of determining the required disposition.

## 2.2 ORGANIZATIONAL RESPONSIBILITIES

In addition to providing operations and user/owner personnel with tank disposition strategies and processes, this report identifies and summarizes organizational responsibilities in the Tank Disposition Process section. These responsibilities have been determined based upon the tank disposition flow charts within this report (Figures 3.5 - 3.7).

## 2.3 DISPOSITION CONSIDERATIONS

A Tank System Disposition Considerations section addresses certain regulatory, Department of Energy (DOE), and EG&G requirements/criteria for transition, closure and demolition activities. The disposition considerations narrative and chart (Figure 3.8) are contained in the Tank Disposition Process section of this report.

The tank system disposition strategy or process is somewhat complex, depending on the system purpose, contents, or configuration. Certain topics may need to be addressed during the disposition planning or implementation phase. Organizations which may be contacted for guidance are also detailed in the section on Tank System Disposition Considerations.

## 2.4 ACTIVITY PLANNING AND INTEGRATION

Until the Rocky Flats Integrated Plant and Master Site Planning schedules are developed further and provide user/owner organizations with detailed building deactivation and decommissioning plans, operations and facility representatives must be provided the required guidance and support necessary to plan properly for the disposition of all tank systems. The tank categories, flow charts, and the associated narratives contained in Section 3 of this report detail the risk-based approach and methodology discussed previously to assess and plan for the tank system dispositions. The following steps outline the general process that will be used to integrate the required actions for tanks.

- a) The PIT final report identifies the organizations responsible for developing the necessary tank disposition strategies.
- b) For tasks that are determined to be small or limited scope work, Operations or Building Management will initiate and fund a Work Control Form (WCF) for the required actions. Contact Facilities Project Management (FPM) if additional scope guidance is required.
- c) For larger or more complex projects, FPM, Engineering & Technology (E&T), and Transition Management will assist Operations and Building Management in developing a detailed plan to initiate and implement the required actions. In this case, an Engineering Job Order (EJO) must be submitted to obtain a Scope and Estimate, e.g. to blank-off or remove tank system(s); this process is usually initiated by Operations or the

User through FPM.

- d) Operations/User management determines the work task and project priorities for inclusion in the next or future fiscal year budget call(s). The work or project is included in the appropriate fiscal year budget work package.
- e) Once funded, the small/limited scope work will be initiated via the WCF or for the large/complex tasks, the project planning and work will be initiated by the responsible organization through the FPM organization. If the work or project will be performed as part of the Building Deactivation/D&D effort, it should be included in the appropriate out-year schedule through the Transition Management organization.

## 2.5 ITEMS CONSIDERED

The Tank Disposition PIT solicited input from various personnel and organizations throughout its mission. A Tank Disposition PIT review meeting was held on November 19, 1993, to discuss the disposition strategy, the draft flow charts and the considerations table. A second review meeting to discuss the Final Report Draft was held on December 17, 1993. The team considered all comments and suggestions and made every attempt to address or incorporate these items in this report.

Several topics and inputs received during the course of the PIT's mission were discussed but not addressed in this report. The following is a brief summary of the subjects and team's decisions.

Basic Rules vs. Flow Charts - One approach discussed was to list a set of basic rules for tank disposition planning. However, it was decided that personnel could not easily use these rules and get consistent, correct decisions for ultimate tank disposition. The basic rule and risk-based approach/flow chart was chosen (along with references to the responsible organizations that can provide additional guidance).

Management of Non-IAG Tanks (associated with IAG governed environmental releases) - It was suggested that tanks (not currently in the IAG) could be managed by IAG concerning releases associated with them. Since the IAG deals with historical system investigations, it was determined that tanks not included in the current agreement should remain outside of the IAG. New releases both within or outside of the Individual Hazardous Substance Site (IHSS) are covered under the current Rocky Flats Plant spill response requirements.

Example Work Package - A generic/example tank system disposition work package was considered. However, due to the many variables in system purpose/configuration, responsibilities, and lack of removal or closure experience, it was decided that this was premature. This subject should be considered for future action after management review of the summary and conclusions portion of this report.

### 3. TANK DISPOSITION PROCESS

#### 3.1 MASTER TANK INVENTORY/DATA BASE REFERENCE

A master tank database is being created as a centralized data storage system. This database, funded by the Surface Water Division (SWD) on Authorization 986959, is being created by a joint SWD, Non-Destructive Testing (NDT), RCRA Regulatory Programs, and Engineering venture to inventory and inspect all tanks at the Rocky Flats Plant. A copy of the Master Tank Data Base input forms (Figure 3.9), which identifies and summarizes the data inputs, is included in this report. This database is scheduled for completion by September 30, 1994, and will be accessible for review on the VAX.

#### 3.2 TANK SYSTEM CATEGORIES

The tank disposition process includes three major tank system categories; RCRA Permitted/Interim Status/90-Day Tanks, IAG Tanks, and Other Tanks. Once the proper tank system category is identified, the flow charts and step narratives will be used for the tank system disposition process. It should be noted that tank systems can be further categorized into various subcategories. These categories and subcategories can be used to aid in future transition planning and risk-based priority determinations.

#### 3.3 RISK-BASED APPROACH

~~In addition to regulatory compliance, the most important element in~~ determining tank disposition priorities is the risk-based approach. A variety of factors such as contents, health and safety risks, and system integrity must be considered in properly assessing and planning tank system dispositions. The following sections and narratives incorporate this risk minimization strategy.

#### 3.4 FLOW CHARTS & STEP NARRATIVES

To help determine disposition requirements for tanks, 3 flow charts were developed. Figure 3.5 describes steps for RCRA permitted/interim status/90-day tank systems. The IAG tank systems steps are given in Figure 3.6 and Figure 3.7 applies to all other tank systems.

In order to use the flow charts, first choose the proper tank system category. If the tanks are currently regulated, they will be governed by either RCRA or IAG (contact RCRA Regulatory Programs or Remediation Program Management for further guidance). All remaining tank systems that do not meet the above definitions should be categorized as "Other". These flow charts are described in detail below.

#### 3.5 NARRATIVE FOR RCRA PERMITTED/INTERIM STATUS TANK SYSTEMS DISPOSITION FLOW CHART

The RCRA flow chart is used to determine disposition requirements for: RCRA permitted/interim status/90-day tank systems, including tank systems destined for closure in accordance with the Mixed Residue Tank Systems Management Plan.

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BLOCK NUMBER

ACTION

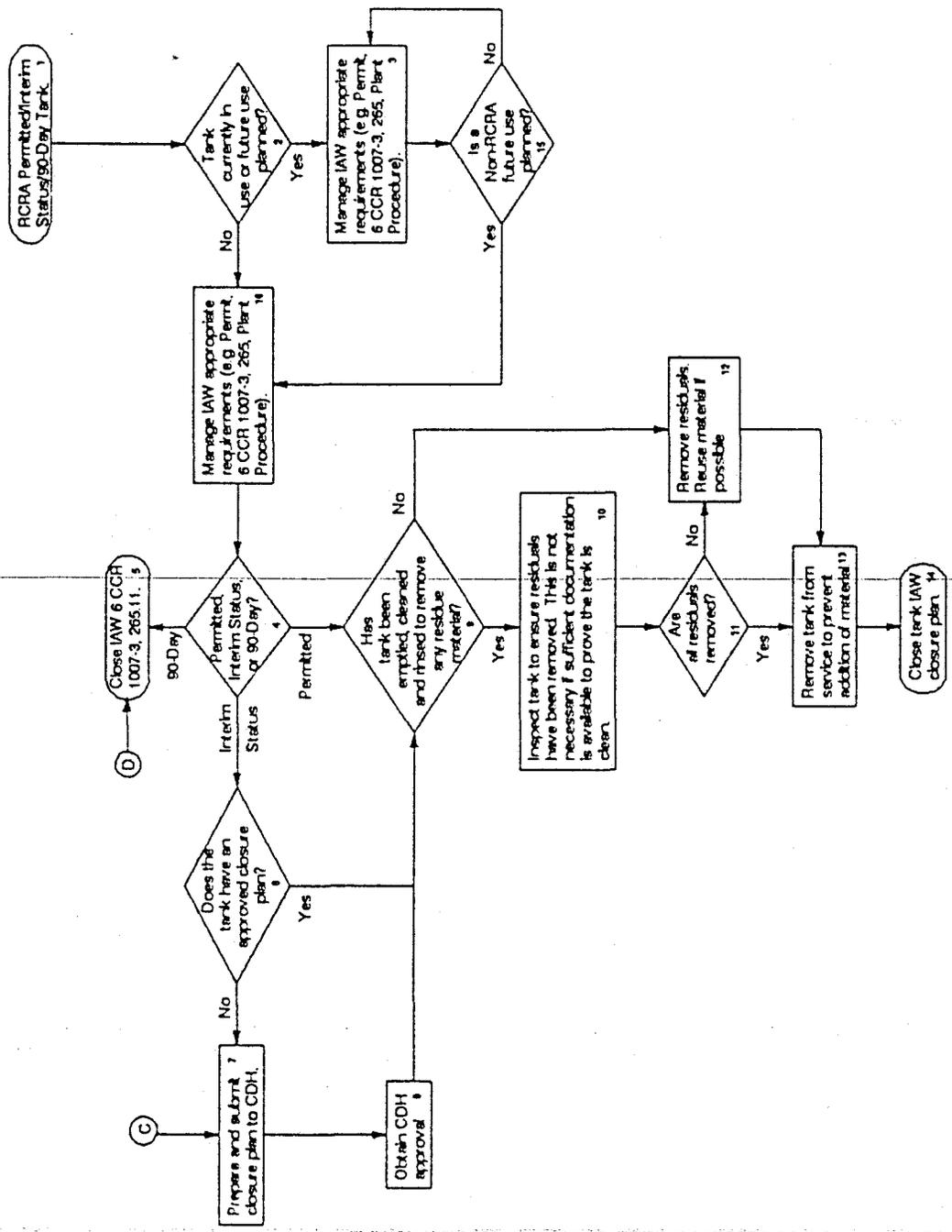
- 1 OPERATIONS/USER - *Note: All mixed residue tanks are considered RCRA regulated tanks.* If you need assistance in determining whether a tank is permitted, interim status, or 90-day, contact RCRA Regulatory Programs.
- 2 OPERATIONS/USER - Determine tank current and future plans; assistance from Transition Management may be required.
- 3 OPERATIONS/USER - The tank should be managed in accordance with the appropriate sections of the Hazardous Waste Requirements Manual. The manual will provide specific requirements for 90-day tanks, permitted tanks, and interim status tanks. For example, the hazardous waste requirements manual will state that permitted tanks should be managed in accordance with the State RCRA Permit and 6 CCR 1007-3, Part 264. Also, if at any time releases from the tank are discovered, respond in accordance with the Spill Response section of the Hazardous Waste Requirements Manual. Releases which impact soils will also need to be reported to Environmental Restoration Management (ERM) to ensure that the required actions specified in the Environmental Restoration IAG are completed.
- 4 OPERATIONS/USER - Determine whether tank is interim status, permitted, or 90-day. The information for each tank should be contained on Waste and Environmental Management System (WEMS). Contact RCRA Regulatory Programs if assistance is needed to answer this question.
- 5 OPERATIONS/USER - Close the tank in accordance with the Hazardous Waste Requirements Manual sections for 90-day tanks and for closure. The manual requires closure in accordance with 6 CCR 1007-3, Part 265.111. A CDH-approved closure plan will not be required for closure. Contact RCRA Regulatory Programs if assistance is needed.
- 6 OPERATIONS/USER - Determine if the tank has an approved closure plan. Contact RCRA Regulatory Programs if not known.
- 7 OPERATIONS/USER - Request FPM Facility Remediation Projects (FPM FRP) to coordinate and initiate the necessary planning and engineering work to accomplish closure.
- 7a FPM FRP - Coordinate planning and engineering work with RCRA Regulatory Programs to prepare a closure plan (after plan information has been gathered). Proceed to the question in Block Number 9.
- 8 RCRA REGULATORY PROGRAMS - Submit Closure Plan to CDH and

obtain their approval.

- 9 OPERATIONS/FPM FRP - Determine if tank has been emptied, cleaned, and rinsed to remove any residual materials (e.g., rings, liquids, sludges).
  - 10 OPERATIONS - Inspect tank to ensure residuals have been removed. This is not necessary if sufficient documentation is available to prove that residual materials have been removed. This documentation, and documentation of the inspection, if necessary, should be maintained as part of the operating record.
  - 11 OPERATIONS/FPM FRP - Determine if residual materials are removed.
  - 12 OPERATIONS - Remove residual material from the tank. *Note: an approved closure plan is not needed to perform this step.*
  - 13 OPERATIONS/USER - Remove the tank from service to prevent the addition of material.
  - 14 OPERATIONS/FPM FRP - Upon receipt of CDH approval of the closure plan, fund and close the tank system in accordance with the approved closure plan and the Closure Section of the Hazardous Waste Requirements Manual.
- 
- 15 OPERATIONS/USER - Answer yes to this question if a tank is to no longer be used for hazardous waste, but will continue to be used (e.g., for storage of non-hazardous wastewater).
  - 16 OPERATIONS/USER - The tank should be managed in accordance with the appropriate sections of the Hazardous Waste Requirements Manual. The manual will provide specific requirements for 90-day tanks, permitted tanks, and interim status tanks, including requirements for tanks that are no longer being used but have not yet been closed. Also, if at any time releases from the tank are discovered, respond in accordance with the Spill Response section of the Hazardous Waste Requirements Manual. Releases which impact soils will also need to be reported to ERM to ensure that the required actions specified in the Environmental Restoration IAG are completed.

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# RCRA PERMITTED/INTERIM STATUS/90-DAY TANK SYSTEMS DISPOSITION FLOW CHART



December 20, 1993

Figure 3.5

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### 3.6 NARRATIVE FOR IAG TANK SYSTEMS DISPOSITION FLOW CHART

#### NARRATIVE FOR IAG TANK SYSTEM DISPOSITION FLOW CHART

The IAG flow chart is used to determine disposition requirements for all IAG governed tank systems. If you need assistance, contact Remediation Program Management.

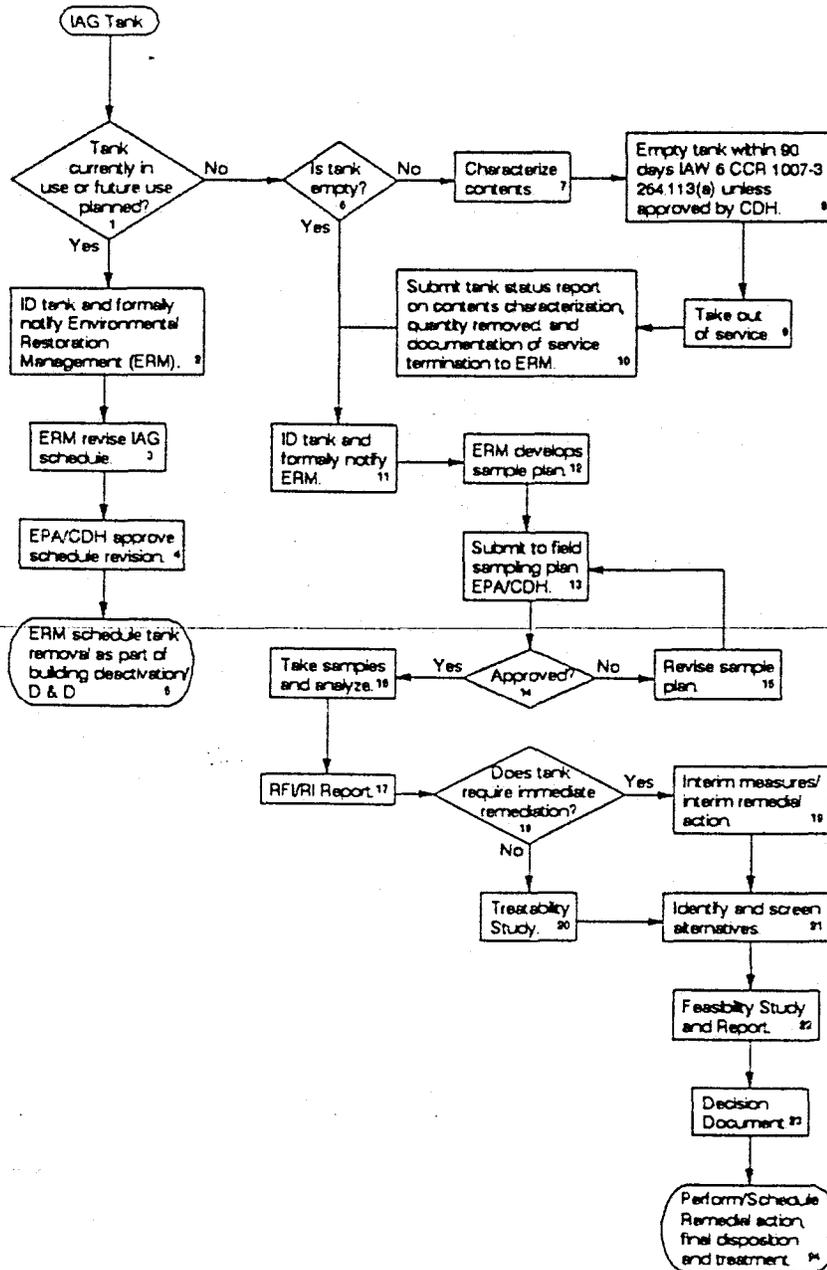
<u>BLOCK NUMBER</u>	<u>ACTION</u>
1	OPERATIONS/USER/TRANSITION - Determine tank current and future plans.
2	OPERATIONS/USER - Determine tank current and future plans; assistance from Transition Management may be required. Notify Environmental Restoration Management (ERM) in writing of tank's usage and approximate date when the tank may be no longer used.
3	ERM - Remediation Program Management will formally request DOE/RFO negotiate with the regulatory agencies to revise the affected portion of the Interagency Agreement.
4	EPA/CDH - Regulatory agencies formally approve scheduling revision for the tank.
5	ERM - Remediation Program Management schedules tank removal in coordination with D&D/Transition groups.
6	OPERATIONS/USER - Determine if tank is empty.
7	OPERATIONS/USER - If the tank is not empty, the contents need to be characterized. Contact the proper support personnel if necessary. Copies of the characterization should be forwarded to ERM - Remediation Program Management.
8	OPERATIONS/USER - Tank is not planned for future use, therefore, it must be emptied within 90 days unless there is formal written documentation approval from CDH.
9	OPERATIONS/USER - Blank off tank system. Contact Engineering for required assistance.
10	OPERATIONS/USER - Submit documentation to ERM - Remediation Program Management on contents characterization, quantity removed and termination of service verification.

- 11 OPERATIONS/USER - Formally notify ERM - Remediation Programs Management about tank.
- 12 ERM - Remediation Program Management prepares in depth field sampling plan and submits to DOE/RFO.
- 13 DOE/RFO - Submits field sampling plan to the regulatory agencies for approval.
- 14 EPA/CDH - The field sampling plan must be approved by the regulatory agencies before samples can be taken.
- 15 ERM - If the plan is not approved or is conditionally approved, comments from the regulatory agencies must be addressed by Remediation Program Management and the plan must be resubmitted.
- 16 ERM - Remediation Program Management takes samples according to the approved field sampling plan. Samples are analyzed by an approved laboratory.
- 17 ERM - Remediation Program Management tallies and evaluates the analytical results in a RCRA Facilities Investigation/Remedial Investigation (RFI/RI) Report. The RFI/RI report is submitted to the regulatory agencies for approval.
- 
- 18 EPA/CDH - The regulatory agencies can decide from the results if a tank requires an Interim Measures/Interim Remedial Action.
- 19 ERM - If the tank requires immediate remediation, Remediation Program Management develops an Interim Measures/Interim Remedial Action.
- 20 ERM - If the tank does not require immediate remediation, Remediation Program Management with the proper support groups (Environmental Sciences and Engineering) develops a Treatability Study.
- 21 ERM - Remediation Program Management and Environmental Sciences and Engineering identify and screen alternative methods of remediation.
- 22 ERM - Remediation Program Management and Environmental Sciences and Engineering evaluate and discuss the alternatives in a Feasibility Study and Report.
- 23 ERM - Remediation Program Management issues a Decision Document outlining the desired alternative.

ERM - Once the decision document is approved, the Remedial Action/Final disposition and treatment is implemented. After disposition, notify SWD or Engineering for update of the Master Tank Data Base.

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# IAG TANK SYSTEMS DISPOSITION FLOW CHART



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Figure 3.6

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### 3.7 NARRATIVE FOR "OTHER" TANK SYSTEM DISPOSITION FLOW CHART

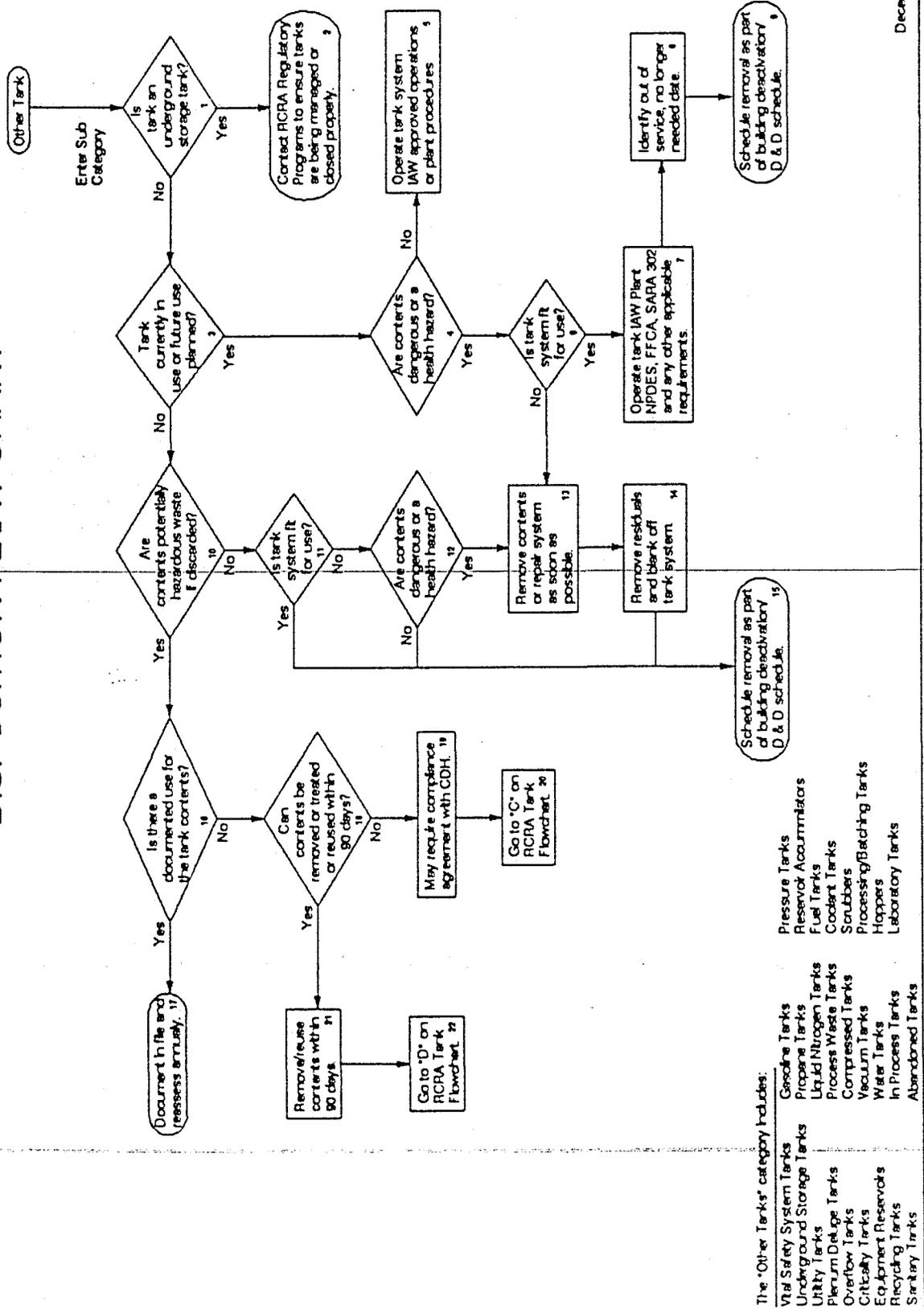
The "Other" flow chart is used to determine disposition requirements for all non-regulated tanks (not governed by RCRA/Figure 3.5 and IAG/Figure 3.6). This category includes all remaining tank systems not meeting the previous RCRA and IAG definitions. Choose the proper tank subcategory, shown in Figure 3.7.

<u>BLOCK NUMBER</u>	<u>ACTION</u>
1	OPERATIONS/USER - Determine if tank is an underground storage tank (UST). <i>Note: A UST has 10% or more of the system volume below ground level.</i>
2	OPERATIONS/USER - For USTs contact RCRA regulatory programs for guidance.
3	OPERATIONS/USER/TRANSITION - Determine tank current and future plans; assistance from Transition Management may be required.
4	OPERATIONS/USER - Determine if tank contents are dangerous or a health hazard. Contact Engineering for assistance if required.
5	OPERATIONS/USER - Operate tank system in accordance with operations and plant procedures.
6	OPERATION/USER/ENGINEERING - Determine if tank system is sufficient for service. OPERATION/USER contact Engineering for desired assistance.
7	OPERATIONS/USER - Operate tank system per applicable requirements. Contact support organizations as necessary for assistance.
8	OPERATIONS/USER/TRANSITION - determine tank system end-of-life date and initiate supporting documents, e.g. Engineering Job Order (EJO), Operational Requirements Document (ORD), or Work Control Form (WCF).
9	OPERATIONS/USER/TRANSITION - schedule removal.
10	OPERATIONS/USER - Determine if tank contents are potentially a hazardous waste when discarded. Contact RCRA regulatory program and/or Engineering for assistance.
11	OPERATIONS/USER - Determine if tank system is sufficient for service. Contact Engineering for assistance as necessary.
12	OPERATIONS/USER - Determine if tank contents are dangerous

or a health hazard. Contact Engineering for assistance as necessary.

- 13 OPERATIONS/USER - Remove contents or repair system as soon as possible. Contact Engineering for required assistance.
- 14 OPERATIONS/USER - Remove residuals and blank off tank system. Contact Engineering for required assistance.
- 15 OPERATIONS/USER/TRANSITION - Schedule removal.
- 16 OPERATIONS/USER/TRANSITION- Determine if there is a possible use for the material contained in the tank. Transition and other groups on plant site (e.g., Waste Minimization and Chemical Tracking) may be utilized to find uses for the material.
- 17 OPERATIONS/USER - If there is a documented use for the tank contents, maintain documentation regarding the intended use and reassess the documentation annually. Contact RCRA regulatory programs if there are questions about what would constitute a valid future use for the material in the tank.
- 18 OPERATIONS/USER - Can the tank system contents be removed, treated or reused within 90 days from the date of no-future-use determination? ~~If material is to be treated, contact~~ RCRA Regulatory Programs to make sure that the selected method of treatment can be done without a permit.
- 20 N/A - Go to "C" on RCRA flow chart (Figure 3.5).
- 21 OPERATIONS/USER - Reuse or remove contents within 90 days. Contact support organizations as required.
- 22 N/A - Go to "D" on RCRA flow chart (Figure 3.5).

# "OTHER" TANK SYSTEMS DISPOSITION FLOW CHART



December 20, 1993

- The "Other Tanks" category includes:
- |                           |                           |
|---------------------------|---------------------------|
| Vital Safety System Tanks | Gasoline Tanks            |
| Underground Storage Tanks | Propane Tanks             |
| Utility Tanks             | Liquid Nitrogen Tanks     |
| Plenum Diluge Tanks       | Process Waste Tanks       |
| Overflow Tanks            | Compressed Tanks          |
| Criticality Tanks         | Vacuum Tanks              |
| Equipment Reservoirs      | Water Tanks               |
| Recycling Tanks           | In Process Tanks          |
| Sanitary Tanks            | Abandoned Tanks           |
|                           | Pressure Tanks            |
|                           | Reservoir Accumulators    |
|                           | Fuel Tanks                |
|                           | Coast Tanks               |
|                           | Scrubbers                 |
|                           | Processing/Batching Tanks |
|                           | Hoppers                   |
|                           | Laboratory Tanks          |

Figure 3.7

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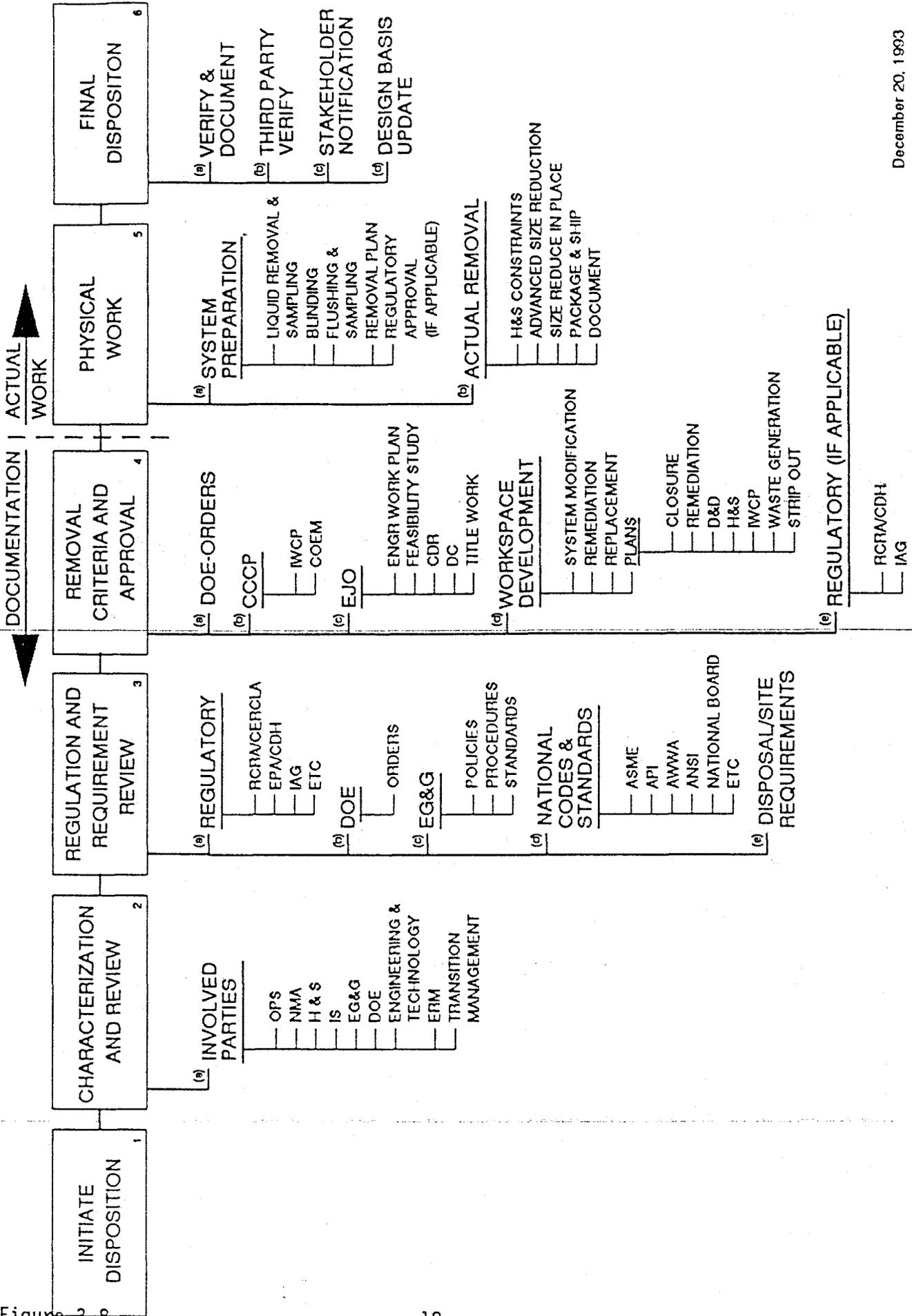
### 3.8 TANK SYSTEM DISPOSITION CONSIDERATIONS

This chart diagrams and identifies the major considerations and criteria for the tank disposition process. Although not inclusive of all requirements, it identifies DOE, Regulatory, and EG&G disposition requirements/criteria which may need to be addressed. The disposition criteria should be reviewed and addressed as part of the disposition planning/implementation process, following the flow chart requirements phase.

<u>BLOCK NUMBER</u>	<u>REQUIREMENT</u>
1	Initiate Disposition - This step starts the disposition sequence and should be initiated per Operations, User, or Transition request.
2	Characterization and Review - The degree of work is dictated by the risk analysis of the tank system. This risk is based on fluid hazards and properties and must be reviewed by the listed organizations and others as necessary.
2a	List of involved parties - others may be required depending upon tank system function and attributes.
3	Regulation and Requirement Review - This step establishes the required regulation and requirements for system disposition and establishes the basis for the removal criteria.
3a	Regulatory Requirements - This is a review based upon fluid properties of national and local regulatory requirements. This review shall be conducted by Environmental Restoration Management (ERM).
3b	DOE Orders - This review is to verify DOE disposition requirements. This review shall be conducted by Transition Management (TM) and ERM.
3c	EG&G Policies, Procedures and Standards - This review shall be conducted by TM, ERM and Engineering and Technology (ET) and shall identify EG&G disposition requirements.
3d	Required National Codes and Standards - This review shall be conducted by ET to ensure compliance with codes and standards.
3e	Disposal/Site Requirements - This review shall be conducted by Radioactive Waste Programs to establish disposal requirements.
4	Removal Criteria and Approval - This step provides for the documentation and approval of removal criteria.

- 4a DOE Orders - based upon order review, DOE criteria will be established for approval during the review cycle. This criteria will be established by ERM, TM, and ET.
- 4b Configuration Change Control Program (CCCP) - This program governs changes and modifications at the Rocky Flats Plant. It establishes removal criteria and philosophies as determined by Operations (OPS), Maintenance (MT), and ET.
- 4c Engineering Job Order (EJO) - This process, based upon OPS/USER inputs and requests, establishes the Engineering and removal criteria. It will dictate the required plans and studies to accomplish disposition. The EJO is a joint responsibility between OPS/USER/ET and Facilities Project Management (FPM).
- 4d Workspace Development - This criteria establishes workspace requirements to support disposition and D&D. It is a joint responsibility between OPS/USER/MT/ET/TM and ERM.
- 4e Regulatory Criteria - This criteria establishes any regulatory removal criteria and is the responsibility of ERM.
- 
- 5 Physical Work - This step establishes the work requirements for disposition and D&D.
- 5a System Preparation - This step identifies fluid removal, sampling and approval requirements. OPS/MT/ET and ERM are responsible for these operations.
- 5b Actual Removal - This step identifies hardware removal requirements as established by the EJO (block 4c), CCCP (block 4b) and workspace development (block 4d) requirements. OPS/MT/ET and FPM are responsible for this step.
- 6 Final Disposition - This step documents, notifies stakeholders and establishes the design basis updates created by removal. ERM/OPS and ET are responsible for this step.

# TANK SYSTEM DISPOSITION CONSIDERATIONS



December 20, 1993

Figure 3.8

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### 3.9 ORGANIZATIONAL RESPONSIBILITIES AND ACTIONS

#### SPECIFIC ORGANIZATION RESPONSIBILITIES (Ref. Organization Manual, dated April 5, 1993)

##### 1.0 ENVIRONMENTAL RESTORATION MANAGEMENT

- 1.1 Ensures implementation and compliance of major regulations including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), Clean Water Act (CWA), Clean Air Act (CAA), Section 3004 (u) of the RCRA, and NEPA.
  - 1.2 Ensures implementation of the "Agreement-in-Principle", the Interagency Agreement (IAG), and other Federal Facility Compliance Agreements (FFCAs) as they are negotiated.
  - 1.3 Conducts environmental restoration activities to include remedial action, investigation, design, and construction along with feasibility and treatability studies.
  - 1.4 Monitors the environment, assesses environmental data, and conducts various activities to include air/water/soil sampling, laboratory analysis, data quality assurance/quality control and validation, databases, modeling, trend analyses, assessments, trend and predictive analyses, and meteorological forecasting.
- 
- 1.5 Manages surface water activities to include National Pollutant Discharge Elimination System permit negotiation/compliance, surface water discharges/treatment, zero discharge strategy/design/construction, and ponds/streams maintenance and improvements.
  - 1.6 Directs the resources of ERM Remediation Project Management (ERMRPM).
  - 1.7 Supervises and directs line managers in the areas of Operable Units, Program Management Support, and Sitewide Programs to ensure support of production operations and safe management of site waste.
  - 1.8 Directs resources within ERMRPM in support of internal and external agreements with regulatory agencies in assuring compliance with environmental laws.
  - 1.9 Ensures procedural compliance and a disciplined approach to each remediation project management process.
  - 1.10 Ensures all subordinate organizational elements understand all relevant environmental compliance requirements, establishes effective compliance self-evaluations (reporting and correcting identified deficiencies), and verifies environmental compliance of all activities within areas of responsibilities.

## 2.0 ENVIRONMENTAL AND WASTE MANAGEMENT (E&WM)

- 2.1 Maintains close communications with federal and state agencies, community agencies, public officials, business leaders, and community-based organizations on matters that impact on public affairs and the EG&G and Rocky Flats public image.
- 2.2 Identifies environmental and waste issues and concerns, and elevate these issues and concerns to appropriate organizational levels of management for resolution.
- 2.3 Ensures that all subordinate organizational elements understand all relevant environmental compliance requirements, establishes effective compliance self-evaluations (reporting and correcting identified deficiencies), and verifies environmental compliance of all activities within areas of responsibilities.
- 2.4 Ensures that Safeguards maintains the security of critical materials and accountability systems.
- 2.5 Monitors environmental and waste operations and waste support activities.
- 2.6 Manages environmental programs, waste programs, and waste operations to accomplish program mission.

---

2.7 Promotes interrelationships with business, community and public officials.

2.8 Directs the resources of E&WM Waste Programs.

2.9 Waste Programs (WP) is responsible for the safe management, coordination, and integration of program management activities within the EWM department.

2.10 WP is accountable for the successful implementation of all Environmental Protection and Waste Management Rocky Flats upgrades in accordance with Plant Policies, budget, DOE guidance/orders, and regulatory commitments.

2.11 Waste Programs gives direction to the following branches: FFCA Programs, Radioactive Waste Programs, RCRA Regulatory Programs, Resumption Support, Waste Identification and Characterization, Waste Minimization, Waste Programs Plans, Waste Project Support, Waste Regulatory Programs, Waste Technical Support, and WEMS Program.

## 3.0 TRANSITION MANAGEMENT (TM)

3.1 Provides management for the sitewide planning, integration, and control of transition activities to ensure safe, secure, timely, environmentally sound, and cost effective changes in the RFP mission.

3.2 Directs the resources of Facilities Project Management.

- 3.3 Gives direction to the following branches: Environmental, Safety, and Health Projects; Facility Remediation Projects; Plant Facilities Projects; Plant Fire/Security System Projects; Process Improvement and Transition; Project Services; and Waste Management Projects.
- 3.4 Ensures that all subordinate organizational elements understand all relevant environmental compliance requirements, establishes effective compliance self-evaluations (reporting and correcting identified deficiencies), and verifies environmental compliance of all activities within areas of responsibilities.
- 4.0 ENGINEERING AND TECHNOLOGY
- 4.1 Provides guidance, direction, management control, and leadership for all Engineering activities that will develop new facilities or modify the configuration of existing facilities, systems, processes, or site lands at RFP.
- 4.2 Is responsible for managing, coordinating, and directing plant Engineering Programs to perform all Engineering activities professionally in a manner that protects personnel and public health and safety through formal application of applicable DOE Orders, national codes, and industry consensus standards.
- 4.3 Directs the resources of Mechanical/Process Engineering.
- 
- 4.4 Mechanical/Process Engineering (M/PE) is responsible for providing environmental, chemical, and mechanical engineering discipline support to RFP.
- 4.5 Directs M/PE engineering teams in the overall coordination and execution of complete engineering designs and specifications delivered to Operations (through Plant Systems Engineering), Waste Programs, Environmental Management, and Facilities Project Management.
- 4.6 Supports specific AGM of sponsored projects for FPM and provides programmatic studies and analyses as required to support the overall RFP.
- 4.7 Works to the Conduct of Engineering Manual under the Configuration Change Control Program. Provides compliance with DOE Order 6430.1A. Maintains the safety envelope of the approved Safety Analysis Reports and ensures configuration change control of the RFP facilities.
- 5.0 FACILITY MANAGEMENT AND OPERATION
- 5.1 Facility Management and Operations (FMO) is responsible for the management of plutonium and non-plutonium operations and facilities, including the residue and recovery operations, and maintenance of facilities.

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5.2 With the assistance of reporting directors and in concert with DOE, establishes current and long-range plans for Environmental and Waste Programs within associated facilities.

#### 6.0 MAINTENANCE AND PLANT SUPPORT

6.1 Is responsible for the management of the technical support functions and activities. Provides technical and programmatic assistance to reporting directorates of the Maintenance and Plant Support organization.

6.2 Directs the resources of Area Maintenance.

6.3 Area Maintenance (AM) is responsible for all functional areas within Area Maintenance. Gives direction to the following branches: 371/374 Maintenance, 400 Maintenance, 559 Maintenance, 707 Maintenance, 771/774 Maintenance, 776/777 Maintenance, 800 Maintenance, 995 EO and 664 Maintenance, Area I Maintenance, Area II Maintenance, and Utilities Maintenance.

#### 4. SUMMARY

##### 4.1 OBSERVATIONS & RECOMMENDATIONS

During the course of the PIT's mission, several important observations and recommendations were discussed and are provided below. The PIT recommendations are included for further management review and consideration.

##### (1) OBSERVATION

Limited resources, numerous technical considerations, and limited waste storage space dictate the need for a master plan that would include all activities and schedules for the ultimate disposition of all tanks at RFP. Also, additional tank management guidance is required for operations and facility personnel to determine future tank system use, including possible material recycling, or for deactivation and removal planning.

##### RECOMMENDATION

Management should establish a plant policy to govern tank system management and dispositions. The above items should also be addressed and included in the Master Site Planning process and the Integrated Plant Mission Planning/Schedule. The draft strategy included in this report should be the starting point for developing the plant policy and procedure. At a minimum, tank disposition planning needs to address/include the Tank System Disposition Considerations section of this report and must be included as a part of the transition and facility deactivation planning process.

(2) OBSERVATION

Current tank system "ownership" is not well defined and is fragmented. Also, tank system drawings and documents are incomplete and may be insufficient for future disposition planning/activities.

RECOMMENDATION

Additional assessments and improved integration are required for the disposition of all tanks at the Rocky Flats Plant. Tank system ownership and organizational responsibilities need to be better defined and integrated.

(3) OBSERVATION

Guidance is required for operations and facility personnel in the interim period between cessation of operation and closure implementation. Tank system management requirements need to be better defined from the time the tank/system is shut down to the time it is closed.

RECOMMENDATION

Tank system interim management requirements need to be developed and provided to the responsible personnel in the level 1 procedure to be provided by the Plant Policy Manual. Additional guidance and requirements for interim tank management should be included in the Hazardous Waste Requirements Manual.

(4) OBSERVATION

Guidance is needed about what type of treatment, if any, is allowed in an unpermitted tank and under what circumstances.

RECOMMENDATION

RCRA Regulatory Programs should research this issue and provide guidance in the Hazardous Waste Requirements Manual. RCRA Regulatory Programs should inform CDH or request their approval, if deemed necessary.

(5) OBSERVATION

Further guidance is required for the circumstances and definitions in order for a material in a tank to be considered product.

RECOMMENDATION

RCRA Regulatory Programs should research this issue and provide guidance in the Hazardous Waste Requirements Manual. RCRA Regulatory Programs should inform CDH or request their approval, if deemed necessary.

## 4.2 CONCLUSIONS

The information and documents contained in this report were developed during the course of the Tank Disposition PIT's three month mission. This report should not be considered as a final solution to the identified mission statement which was "To develop a strategy for the disposition of all tanks at the Rocky Flats Plant." The PIT has identified a preliminary strategy and recommended additional actions thought to be required for the plant to develop and implement the necessary policies and procedures for tank system dispositions.

This report should be used by all intended personnel and organizations as a guide in assessing/developing tank system disposition planning. Communication and detailed integration of this planning is necessary for the plant to effectively implement its identified mission goals. The strategy contained in this report is recommended in order to safely manage and plan for the disposition of all tanks at RFP.

As the Integrated Plant and Master Site Planning efforts continue, additional direction and documentation should result. Until this is achieved, the strategy and recommendations contained in this report should be utilized by all affected personnel to implement the risk-based management and regulatory approaches contained herein.

## 4.3 TANK DISPOSITION PLANT POLICY

Based on the above summary data, the Tank Disposition PIT recommends that RFP Management establish a plant policy to govern tank system management and dispositions. The policy should authorize preparation and release of an upper level or level 1 procedure for tank system management, disposition planning and implementation. Such a procedure would serve as a master plan for defining the scope, planning, responsibilities/accountabilities, and implementation activities for tank system disposition activities at the plant. As included in this report, it should also identify organizational responsibilities and personnel to be contacted for additional instructions and guidance. Without a policy and an upper level procedure which clearly defines and integrates tank disposition requirements, development of the Rocky Flats Integrated Plant and Master Site Planning documents/schedules for the overall mission of the plant will be difficult to achieve.

## 4.4 FUTURE OR FOLLOW-UP RECOMMENDATIONS

The risk-based assessment and determination approach recommended for the tank disposition strategy is readily adaptable to other systems on plantsite. Organizations/personnel can utilize this approach for other tasks and systems requiring assessment and integration with future plant activities. Some examples of adapting this strategy to other systems and tasks are excess chemicals, glovebox disposition/closures and management of product and excess materials.

ENTERED DATE: \_\_\_\_\_ INITIALS: \_\_\_\_\_  
 INITIAL REVIEW DATE: \_\_\_\_\_ INITIALS: \_\_\_\_\_  
 FINAL REVIEW DATE: \_\_\_\_\_ INITIALS: \_\_\_\_\_

DATE: \_\_\_\_\_  
 NAME: \_\_\_\_\_  
 EMPL. NO: \_\_\_\_\_  
 NDT INV. NO: \_\_\_\_\_

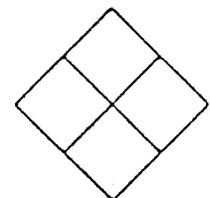
**TANK INVENTORY REPORT**

BUILDING: \_\_\_\_\_ ROOM: \_\_\_\_\_ COLUMN # \_\_\_\_\_

LOCATION: \_\_\_\_\_

TANK INFORMATION		COMMENTS
TANK NAME:		
TANK ID NO:		
TANK NAT'L BOARD NO:		
RCRA NO:		
MANUFACTURE NAME:		
SERIAL NO:		
LABELED AIR RECEIVER: Y / N		
OTHER ID:		
YEAR BUILT:		
YEAR ALT/REP:		
*TANK TYPE:		
TANK MATERIAL (PROBABLE):		DIAMETER (APPROX.):
TANK SURFACE FINISH:		LENGTH (APPROX.):
CAPACITY:		DESIGN TEMP:
		DESIGN PRESSURE:
		OPER. TEMP:
		OPER. PRESSURE:
LABELED CONTENTS		
INSULATED: Y/N	SHIELDING: Y/N	OVERFILL/OVERFLOW PREV: Y/N
PRESSURE RELIEF: Y/N	PRV ID NO.:	PRV CONT: Y/N
OVERFLOW CAPAB: Y/N	SECONDARY CONT.: Y/N	ALARMS/LEAK DET.: Y/N

GENERAL DESCRIPTION OF TANK: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



HAZARD RATING

\*See back for Tank Type codes and/or Tank Sketch:  
 (Rev 4, September 1, 1993)

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# VISUAL INSPECTION REPORT

7/1/93

NDT Inventory#	Equipment Description	Building	Room	Module	Column

EMPM Equip. ID#	Other Tank ID's	RCRA Tank	RCRA#
		<input type="radio"/> Y <input type="radio"/> N	

NFPA Hazard Class			

Is advanced notice required to prepare equipment prior to inspection?  Y  N

Number of days required.

Constraints limiting inspection	<input checked="" type="checkbox"/> Shielding	<input checked="" type="checkbox"/> Insulator	<input checked="" type="checkbox"/> Contamination	Ultrasonic Tested	DOS Name
Description: <input style="width: 400px;" type="text"/>				<input type="radio"/> Y <input type="radio"/> N	

Inspection Date	Inspection Frequency	Next Inspection Date	Notification Date	NCR Issued
	<input type="radio"/> Yearly <input type="radio"/> 2 Years <input checked="" type="radio"/> undefined			<input type="radio"/> Y <input type="radio"/> N

Vessel/Equipment Condition:	Yes/No	Accept/Reject	Location/Remarks
Identification	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Leaks	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Cracks	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Distortion	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Rust/Corrosion	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Paint/Coating	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
<b>Tank Welds</b>			
Cracks	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Pinholes	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Threaded Fasteners	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
<b>Tank Support Welds</b>			
Cracks	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
<b>Tank Shell Heads, Supports, Misc.</b>			
Physical Damage	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
<b>Tank Supports</b>			
Cracks	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Rust/Corrosion	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Distortion	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Threaded Fasteners	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
<b>Connections for Piping, Gages, etc.</b>			
Leakage	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Damage	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Corrosion	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Missing Fasteners	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	

Distribution:

Surface Water Division  
Design Engineering

Building Operations Manager  
Systems Engineering

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# VISUAL INSPECTION REPORT

7/1/93

NDT Inv#

Secondary Containment:	Yes/No	Accept/Reject	Location/Remarks
Exists	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Cracks	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Holes	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Bubbles	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Erosion	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Caulking	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Seal Penetrate	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	

Pressure Relief			
Device Exists	<input type="radio"/> Y <input type="radio"/> N	ID#	
Damage	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Leakage	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Calibration	<input type="radio"/> Y <input type="radio"/> N	Date:	
Setting	<input type="radio"/> Y <input type="radio"/> N	Setting:	

Unusual Conditions	X	Remarks
Arc Strikes	<input checked="" type="checkbox"/>	
Grind Marks	<input checked="" type="checkbox"/>	
Defective Insulation	<input checked="" type="checkbox"/>	
Unusual Attachments	<input checked="" type="checkbox"/>	
Other	<input checked="" type="checkbox"/>	

RCRA Tanks			
Overflow Prevention	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Bypass/Standby	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
Sightglass	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	
High Level Alarm	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> A <input type="radio"/> R	

Assessment of the General Tank Condition Based Upon Visual Inspection.

Listing of Corrective Actions in Progress i.e. Authorization Projects, Work Orders, Procedures, NCR's.

Comments

Procedure # - Revision	Inspector Employee#	CWI Signature	Reviewer Signature