



**OAK RIDGE
NATIONAL
LABORATORY**

LOCKHEED MARTIN



**WASTE CERTIFICATION PROGRAM
PLAN**

for

OAK RIDGE NATIONAL LABORATORY

September 1997

MASTER

Prepared by the
ORNL Waste Certification Team

**LOCKHEED MARTIN ENERGY RESEARCH
CORPORATION**
Oak Ridge, Tennessee

MANAGED AND OPERATED BY
LOCKHEED MARTIN ENERGY RESEARCH CORPORATION
FOR THE UNITED STATES
DEPARTMENT OF ENERGY

ORNL-27 (3-96)

Prepared for the U.S. Department of Energy
under U.S. Government contract DE-AC05-96OR22464

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

A handwritten signature in the bottom right corner of the page.

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government of any agency thereof.

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

WASTE CERTIFICATION PROGRAM PLAN
for
OAK RIDGE NATIONAL LABORATORY

September 1997

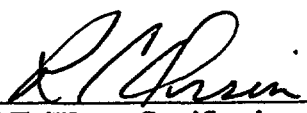
Prepared by the
ORNL Waste Certification Team

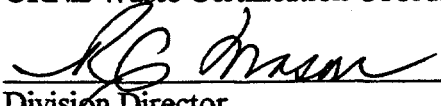
LOCKHEED MARTIN ENERGY RESEARCH CORPORATION
Oak Ridge, Tennessee

Prepared for the U.S. Department of Energy
under U.S. Government contract DE-AC05-96OR22464

WASTE CERTIFICATION PROGRAM PLAN
FOR
OAK RIDGE NATIONAL LABORATORY

September 1997

Prepared by:  Date: 9/23/97
ORNL Waste Certification Coordinator

Approved by:  Date: 9/30/97
Division Director,
Waste Management and Remedial Action Division

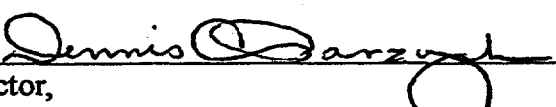
Approved by:  Date: 9/29/97
Director,
Office of Environmental Compliance and Documentation

TABLE OF CONTENTS

FIGURES	iii
ACRONYMS AND ABBREVIATIONS	iv
1. PURPOSE	1
2. SCOPE AND LIMITATIONS	2
3. PROGRAM DESCRIPTION	2
3.1 PROGRAM ELEMENTS	2
3.2 CERTIFICATION PROCESS	5
3.3 NO-RADIOACTIVITY-ADDED DETERMINATION FOR HAZARDOUS WASTE	5
3.4 OFFSITE SHIPMENT REVIEW PROCESS	10
4. ORGANIZATIONAL RESPONSIBILITIES	10
4.1 ORNL WASTE CERTIFICATION COORDINATOR	12
4.2 WASTE MANAGEMENT ORGANIZATION	12
4.3 WASTE GENERATORS	13
4.4 OFFICE OF ENVIRONMENTAL COMPLIANCE AND DOCUMENTATION ...	13
4.5 QUALITY ASSURANCE	14
4.6 OFFICE OF RADIATION PROTECTION	14
4.7 LOCKHEED MARTIN TRANSPORTATION AND PACKAGING MANAGEMENT	14
5. TRAINING	14
6. PROGRAM ASSESSMENTS	15
7. CORRECTIVE ACTIONS	15
8. RECORDS MANAGEMENT	15
9. DOCUMENT CONTROL	16
10. PILOT PROGRAM SCHEDULE	16
11. REFERENCES	16

FIGURES

1	ORNL Waste Certification Program Model	3
2	Certification Activities	6
3	NRA Determination	7
4	Organizational Chart	11

ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
ETTP	East Tennessee Technology Park
L _D	detection limit
LLLW	liquid low-level waste
LMTPM	Lockheed Martin Transportation and Packaging Management
NDE	nondestructive examination
NRA	no-radioactivity-added
PCB	polychlorinated biphenyls
OECD	Office of Environmental Compliance and Documentation
OESH	Operations, Environment, Safety, and Health
ORNL	Oak Ridge National Laboratory
PK	process knowledge
QA	quality assurance
RCRA	Resource Conservation and Recovery Act
RFD	Request for Disposal
RMMA	Radioactive Materials Management Areas
SLLW	solid low-level waste
TRU	transuranic waste
TSCA	Toxic Substance Control Act
TSDF	treatment, storage, and disposal facility
WAC	Waste Acceptance Criteria
WCC	Waste Certification Coordinator
WCP	Waste Certification Program
WCT	Waste Coordination Team
WEAF	Waste Examination and Assay Facility
WM	Waste Management
WMRAD	Waste Management and Remedial Action Division

1. PURPOSE

This document defines the waste certification program (WCP) developed for implementation at Oak Ridge National Laboratory (ORNL). The document describes the program structure, logic, and methodology for certification of ORNL wastes. The purpose of the WCP is to provide assurance that wastes are properly characterized and that the Waste Acceptance Criteria (WAC) for receiving facilities are met. The program meets the waste certification requirements outlined in the U. S. Department of Energy (DOE) Order 5820.2A, *Radioactive Waste Management*, in the *Performance Objective for Certification of Non-Radioactive Hazardous Waste*, and ensures that 40 Code of Federal Regulations (CFR) documentation requirements for waste characterization are met for mixed (both radioactive and hazardous) and hazardous [including polychlorinated biphenyls (PCB)] waste. Program activities will be conducted according to ORNL Level I document requirements.

Requirements for managing radioactive and mixed wastes are established in DOE Order 5820.2A. As part of this Order, heads of DOE field organizations are assigned the authority to establish waste management requirements for waste-receiving facilities under their jurisdiction. The development of WACs is one of the requirements specified by the Order for appropriate management of radioactive and mixed wastes generated by DOE operations. The Order also specifies that each generator of waste shall implement a low-level and mixed WCP to provide assurance that the WACs are met. Generators of waste and Waste Management (WM) are each responsible for their actions in ensuring compliance with the WAC.

In addition to the DOE Order requirement, DOE has mandated that no mixed wastes be shipped off-site to a facility unless it is licensed for receipt of the radioactive component of the waste. As a result, sites are required to implement a program to ensure that (1) DOE activities added no measurable radioactivity, within statistical limits, to hazardous waste and (2) hazardous waste meets the DOE Order 5400.5 surface contamination guidelines. These requirements are described in the *Performance Objective for Certification of Non-Radioactive Hazardous Waste* (DOE, February 1995). The no-radioactivity-added (NRA) process described in this WCP Plan meets these requirements. The NRA process described in this WCP Plan will replace ORNL/TM-13189, *Oak Ridge National Laboratory Program Plan for Certification of Nonradioactive Waste*, which was issued May 1996. The effective date for implementing the WCP NRA process will be at the time ORNL-WM-005, *ORNL Compliance with Hazardous/Low-Level Mixed Waste Acceptance Criteria*, Revision 1, is issued. Revision 1 of ORNL-WM-005 has incorporated the NRA determination requirements, and, as a result, ORNL-WM-002, *Certification of Nonradioactive Hazardous Waste - ORNL*, will also be rescinded. ORNL's goal in combining the WCP Plan with the NRA process is to consolidate these waste certification functions into a single, efficient, and cost-effective program.

Finally, the regulations implemented under the Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA) require accurate characterization of wastes such that development of a WCP for hazardous and toxic wastes is a responsible management practice.

2. SCOPE AND LIMITATIONS

ORNL waste types covered under this program are solid low-level waste (SLLW); transuranic waste (TRU), including TRU mixed and alpha-contaminated waste; liquid low-level waste (LLLW), including all liquid wastes that go to liquid low-level waste, process waste, and nonradiological wastewater treatment facilities; hazardous waste, including both RCRA hazardous waste (40 CFR 261-268) and PCB waste (40 CFR 761); and mixed waste. Requirements for management of these wastes have been incorporated into four ORNL WACs. The four ORNL WACs addressed by this program plan are SLLW WAC (WM-SWO-505), TRU WAC (WM-SWO-506), LLLW WAC (WMRA-WPCPP-201), and hazardous/mixed WAC (WM-SWO-404). NRA determination requirements apply to hazardous and PCB wastes destined for commercial treatment, storage, or disposal. Wastes not included in the program are sanitary, industrial, storm water, Coal Yard Runoff Treatment Facility Basin influent and effluent, and air emissions. Recyclable materials that are not hazardous wastes regulated under RCRA, 40 CFR 261-268, are not included in this program. Free release of recyclables (used oil, silver sludge, fluorescent bulbs, etc.) is addressed under ORNL RPP 420.

3. PROGRAM DESCRIPTION

3.1 PROGRAM ELEMENTS

In keeping with necessary and sufficient or work smart principles, the ORNL WCP is designed to meet applicable DOE orders, the DOE NRA Performance Objective, and regulatory requirements through development or use of existing program documents and Level 1 procedures in place at ORNL. Figure 1 illustrates the structure of this program. This program has been designed to ensure compliance and provide flexibility so that off-site treatment, storage, and disposal facility (TSDF) options can be included. For example, if off-site treatment and disposal is a viable option, the off-site facility's WAC for that particular waste type can be incorporated into the appropriate on-site WAC.

Four WACs have been developed to inform the waste generator of requirements that must be met prior to WM's acceptance of a particular waste type. In addition to specifying the necessary characterization, packaging, labeling, and prohibited items that may or may not be accepted at the TSDF, the WACs also define the basis for those requirements. The process for

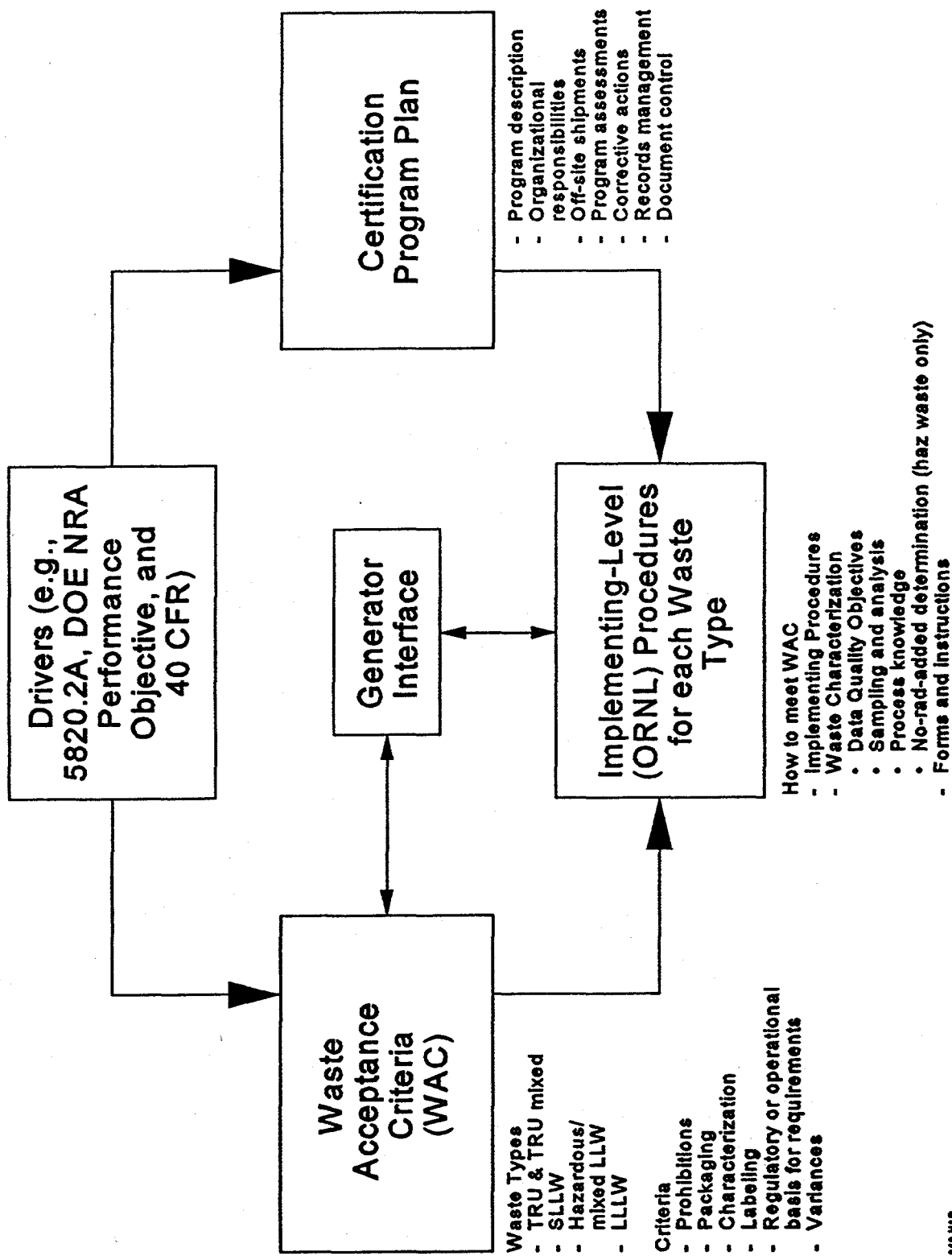


Figure 1. ORNL Waste Certification Program Model.

obtaining WAC variances is described in the individual WACs. WACs can be accessed on the Web at the following sites:

- SLLW WAC (WM-SWO-505)—<http://www-internal.ornl.gov/ORNL/directives/data/sllwwac1.htm>
- TRU WAC (WM-SWO-506)—<http://www-internal.ornl.gov/ORNL/directives/data/WM/truwac.htm>
- LLLW WAC (WMRA-WPCPP-201)—<http://www-internal.ornl.gov/ORNL/directives/data/WM/wpcpp201.htm>
- Haz/Mixed WAC (WM-SWO-404)—<http://www-internal.ornl.gov/ORNL/directives/data/WM/wmswo404.htm>

Waste generator implementation procedures for each WAC have been issued and provide specific instructions to meet the associated WAC. These procedures or guidance documents on waste characterization describe, for example, when and how process knowledge (PK) can be used to characterize a waste. They describe the methods by which generators would properly characterize, segregate, package, and label waste. These procedures can be accessed on the Web at the following sites:

- SLLW (ORNL-WM-006)—<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm006a.htm>
- TRU (ORNL-WM-007)—<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm007a.htm>
- LLLW (ORNL-WM-008)—<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm008a.htm>
- Haz/Mixed (ORNL-WM-005)—<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm005a.htm>

In addition, implementation document ORNL-WM-005, which addresses the process for hazardous waste determination, is currently being revised to incorporate NRA process requirements.

The following documents have been prepared to support generators in meeting characterization requirements. A similar document is being prepared to provide guidance in meeting NRA requirements.

- Radiological Characterization Plan for Solid Low-Level Waste—<http://oecd.wsrv.oecd.ornl.gov/landerin/radchar/radchar.htm>
- Guidance for Characterization of Hazardous, PCB, and Low-Level Mixed Waste—<http://oecd.wsrv.oecd.ornl.gov/landerin/hazchar/charact.htm>

The generator interface function is an ORNL WCP option that is being implemented to support the waste generators with their waste characterization and management responsibilities. This function is currently being provided by the Waste Coordination Team (WCT). Various levels of generator interface services ranging from basic service (accepting properly characterized and packaged waste) to full service (providing total support to generators in meeting the WAC requirements) will be available for individual generators or generator groups. The level of service will be determined on a case-by-case basis between the Waste Management and Remedial Action Division (WMRAD) and the generating organization.

When the program is fully implemented, the support level and the associated cost of generator interface will be outlined in a Memorandum of Understanding between individual generators or generating organizations and WM. WCT personnel will be assigned to generators on the basis of the level of support desired and the types of waste they generate. WCT personnel will be available to provide a wide variety of services to the generator, including completing waste profile descriptions, assisting with characterization and PK requirements, packaging, arranging transportation of waste, assisting with or managing waste accumulation areas, assisting with pollution prevention, and supporting audits and assessments.

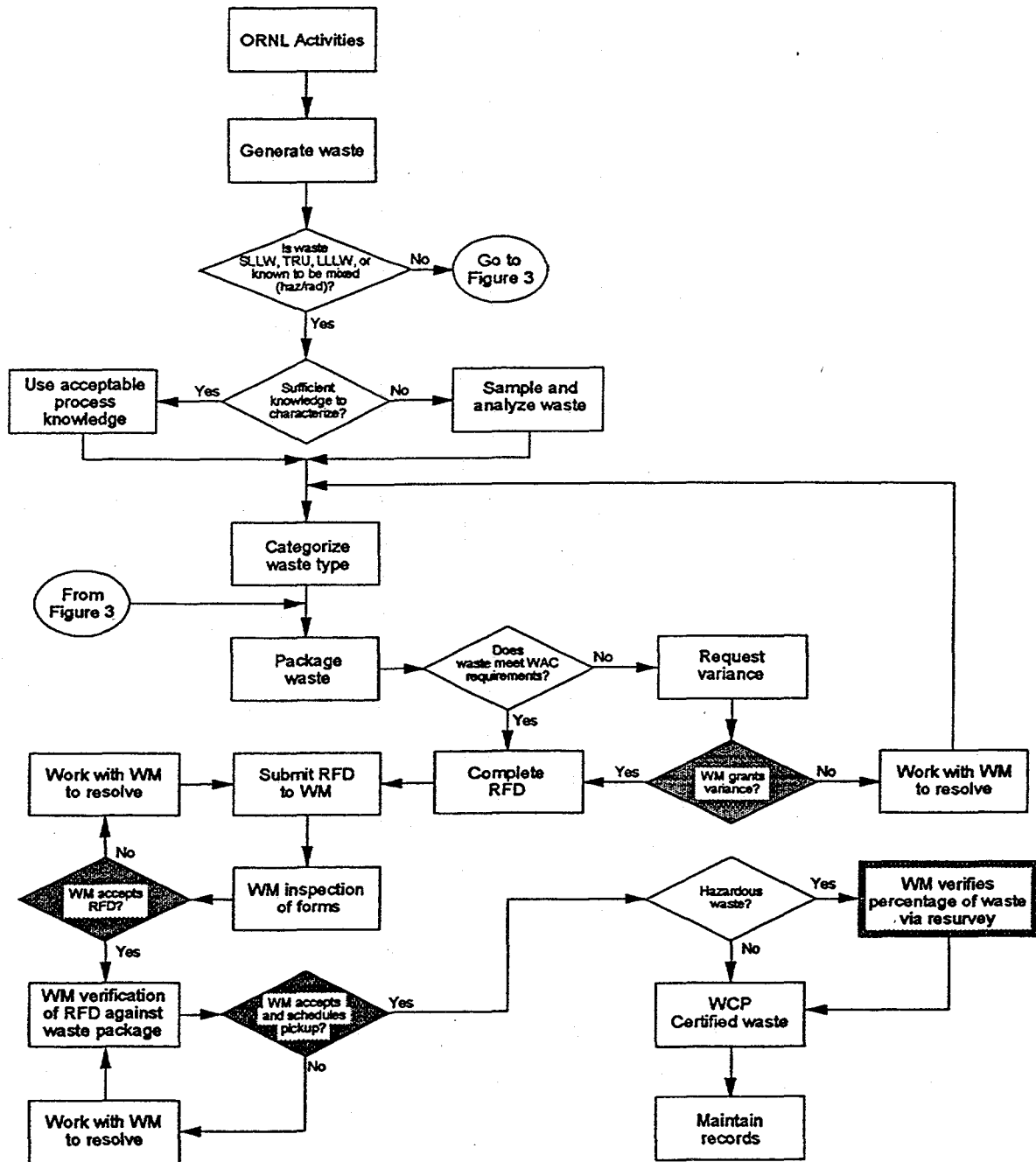
3.2 CERTIFICATION PROCESS

Certification of waste is accomplished through the joint efforts of waste generators, WM personnel, and the Waste Certification Coordinator. The cornerstone of the waste certification process is that individual waste packages will no longer be certified by the generator. The WCP, including NRA determination for hazardous waste, is implemented through the process identified in Figs. 2 and 3. The generator properly characterizes and packages the waste and completes the required waste Request for Disposal (RFD) forms. This includes an NRA determination for hazardous waste. Before accepting waste at a TSDF, WM provides controls for acceptance. RFD forms and associated documentation are inspected, checked, and verified by WM. The first point of control is the review of the RFD forms and additional documents (PK, analytical, etc.) supplied by the generator and verification by WM that applicable WAC requirements have been met. Routine waste inspection of containers will be conducted to verify RFD form information prior to actual waste acceptance and pick up. Some waste containers will undergo an additional inspection control point at the Waste Examination and Assay Facility (WEAF). This inspection may include nondestructive examination (NDE) to ensure that prohibited waste materials are not included in waste packaging; the inspection may also verify certain waste characteristics. TRU waste may be subjected to nondestructive assay in addition to NDE. Hazardous waste that has been classified as NRA will be subject to an additional WM control point for verification of NRA through final resurveying of some waste packages. After the final inspection or control point is completed, the RFD forms become the quality records for that particular waste package. Periodic surveillances (self-assessments) will be conducted on the program to verify that the waste certification and NRA processes are meeting plan objectives. The program assessment process is coordinated by the Waste Certification Coordinator (see section 6). Certified waste is waste that has been confirmed to comply with receiving facilities' WACs under this certification program.

3.3 NO-RADIOACTIVITY-ADDED DETERMINATION FOR HAZARDOUS WASTE

Introduction

No-radioactivity-added determination is one of the requirements in the WAC for hazardous waste to be shipped to an off-site commercial TSDF per the *DOE Performance Objective for Certification of Non-Radioactive Hazardous Waste*. The decision to pursue an NRA determination for a hazardous waste package will be based on having adequate and



802E-HAR

• Shaded areas are certification control points

Figure 2. Certification Activities.

appropriate PK for the package or on the amount of analysis required to make a determination. Analysis beyond that which is required to meet WAC or analytical expenditures that are not cost-effective based on the type and volume of waste, are not required nor desirable. NRA determinations will be based on documented PK, sampling and analysis, or a combination of both. Hazardous waste that does not qualify for NRA will be classified as mixed waste.

Scope and Limitations

No-radioactivity-added classification requirements apply to hazardous waste as defined by 40 CFR 261-268 and TN Rule 1200-1-11-.01 to .10 and waste defined by 40 CFR 761 as TSCA-regulated. Recyclables including used oil, silver sludge, and fluorescent bulbs are specifically excluded from the NRA determination process under this plan, but are subject to ORNL's RPP-420 for free release of materials. Hazardous waste is eligible for NRA evaluation when there is no prior knowledge or evidence that would indicate that the waste has radioactivity added resulting from DOE operations.

No-Radioactivity-Added Determination Process

Generator determination of adequate PK is the first step in the process (Fig. 3). If adequate PK exists, classification of waste as NRA requires only documentation of the PK by the generator [and a surface survey if the waste is being removed from a Radioactive Materials Management Area (RMMA)]. If adequate PK does not exist, a surface survey and/or sampling and analysis is required. WM control points are incorporated into the NRA process by reviewing the generator RFD forms to ensure that the documentation, including the PK and any analytical results, is sufficient for making the NRA determination.

The NRA determination process allows maximum use of any PK that exists for a waste item. Generators are encouraged to collect and document as much PK information as possible about the material while it is being used, generated, and stored. PK is useful in two ways. First, with sufficient PK, wastes can be classified as NRA without additional sampling and analysis (although a surface survey is required per DOE Order 5400.5 and 10 CFR 835 if the waste is exiting an RMMA). Second, if PK is insufficient to classify the waste as NRA, the information may be used to limit the analysis that would be required for NRA classification or mixed waste characterization. Guidance on what constitutes adequate PK for NRA will be issued in a guidance document for generator use.

Sampling for NRA determination will be conducted using WCP-issued guidance on approved methodologies and criteria. NRA guidance will designate the methods and requirements for sampling, sample management, and who will do the sampling [generator, Office of Environmental Compliance and Documentation (OECD), etc.]. Sampling is conducted only as required to provide information necessary to classify the waste as NRA.

A range of analytical protocols that can be used for NRA determination will be identified to address the majority of ORNL NRA wastes. These protocols are based on best available and affordable technology (including appropriate screening methods) and the ability of the method to distinguish added radioactivity in the sample. A waste management information system will integrate measurement results with a database to determine whether measured radioactivity was, in fact, added. Acceptable methods must meet established criteria based on sample size, background, efficiency, and count time, or have demonstrated equivalency.

Interpretation of analytical data will be based on the Currie method of determining L_D on a per sample basis. This method will be used to ensure a maximum 5% probability of false positives and negatives in a single measurement. Analytical results below L_D will qualify as NRA. Sample results above L_D are declared mixed waste, or are eligible for a second sample and/or reanalysis at the generator's option. Items containing or suspected to contain naturally occurring radioactivity or radioactive material "as received" will be evaluated on a case-by-case basis for NRA determination by PK. Use of other protocols by the WCP Team will require approval by the WCP Team based on demonstrated equivalency.

Guidance on sufficient PK, sampling, analysis, and interpretation will be provided in an NRA determination guidance document currently being prepared. Sampling and analysis guidance will include approved methodologies, criteria, and requirements for demonstrated equivalency.

Radioactive Materials Management Area Designation

Under this program plan, generators are responsible for identifying their RMMAs per Radiation Protection Procedure RPP-230. At ORNL, RMMAs are: (1) contamination areas, high contamination areas, and airborne radioactivity areas; (2) radiological buffer areas established for contamination control; and (3) areas posted to prevent loss of control of activated items. At ORNL, generators are responsible for characterizing the wastes generated in their RMMAs. The WCP will not track or maintain lists of ORNL RMMAs because that status can and will change over time. Any hazardous wastes exiting an RMMA are presumed to be potentially mixed unless the generator has sufficient PK that no radioactivity has been added. The determination of NRA for RMMA wastes will require both a survey for surface contamination and documentation of the generator's PK. With the focus of the program using generator PK of the hazardous waste as the first NRA determination step, RMMA status is only a part of the PK.

NRA Certification for Hazardous Wastes

Under ORNL/TM-13189, generators are required to certify NRA for each hazardous waste item. Under the WCP, generators will make an NRA determination on the RFD forms, but will not be required to certify NRA. The Waste Certification Coordinator (WCC) will supply programmatic certification for NRA-hazardous wastes based on the combined efforts of the generator, WM (through their control points), and the WCC (through oversight of the WCP).

The WCP-based NRA certification by the WCC will be traceable to each hazardous waste item to meet the DOE Performance Objective requirement for certification of NRA. That programmatic certification will be documented before the hazardous waste is shipped off-site.

3.4 OFFSITE SHIPMENT REVIEW PROCESS

Off-site facilities receiving ORNL wastes can include other DOE facilities or commercial facilities that are approved by DOE and/or Lockheed Martin. Waste shipments to off-site facilities will be initiated by ORNL's WM but will be coordinated through the WCC, OECD, and Lockheed Martin Transportation and Packaging Management (LMTPM) to ensure WAC and regulatory compliance. WM will also be responsible for selecting the receiving facility, scheduling shipments, and verifying that appropriate licenses, permits, and/or authorizations are in place. OECD, LMTPM, and the WCC will oversee, per their respective areas of authority, the WM efforts for off-site shipments to verify that all applicable regulatory and WAC requirements are met. The oversight review process will be documented via checklists specifically designed for each waste type (SLLW, hazardous, mixed, etc.). WM will retain the required records documenting the off-site shipment review process.

Waste shipments to the East Tennessee Technology Park (ETTP) and/or the Y-12 Plant will comply with the Lockheed Martin Energy Systems Waste Certification Program requirements. For those shipments, ORNL's WM will serve as the generator and as the waste certifier for shipments to ETTP and/or Y-12. That certification will be based on their prior review and acceptance of the information regarding wastes as supplied by the initial generator. Approved WM procedures are in place for shipments to ETTP and/or Y-12.

Shipments of ORNL wastes to other DOE facilities and/or commercial facilities will meet the receiving facility's WAC. However, these facilities must also be approved for the specific waste by DOE and/or Lockheed Martin. WM and OECD will ensure that the necessary approvals are in place for these shipments. Additionally, WM and OECD will jointly ensure that commercial facilities are appropriately permitted and have the necessary licenses, including Nuclear Regulatory Commission licenses, for any receipt of mixed waste.

4. ORGANIZATIONAL RESPONSIBILITIES

Figure 4 shows the organizational responsibilities for the WCP.

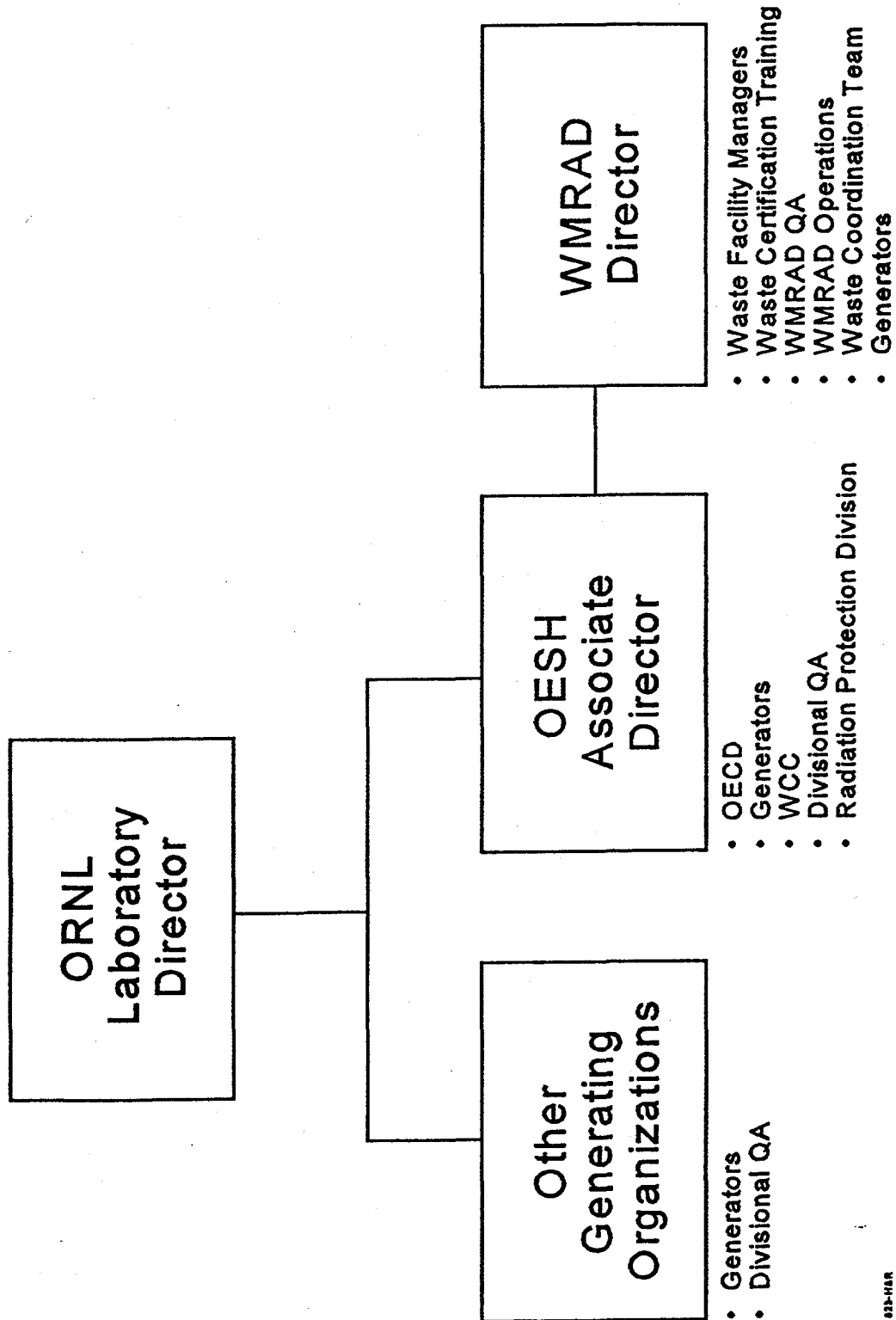


Figure 4. Organizational Chart.

4.1 ORNL WASTE CERTIFICATION COORDINATOR

The ORNL WCC is responsible for the overall coordination of the program. The Coordinator reports through the Associate Director of Operations, Environment, Safety, and Health (OESH). Specific responsibilities include the following:

- overseeing and maintaining the WCP;
- communicating program requirements and any changes through the Waste Certification Home Page (http://www.ornl.gov/OQPI/wcp/wc_prog.htm);
- coordinating and participating in the certification program audits;
- establishing waste certification training requirements;
- validating compliance with program procedures and documents;
- overseeing review of analytical protocols for demonstrated equivalency;
- overseeing case-by-case evaluation of naturally occurring radioactive material for NRA determination;
- coordinating the surveillance program;
- conducting surveillances;
- verifying implementation of corrective actions for identified issues;
- reviewing changes made to WACs and implementing procedures;
- conducting oversight of off-site shipment to ensure compliance with off-site WAC; and
- certifying waste for off-site shipments.

4.2 WASTE MANAGEMENT ORGANIZATION

The Waste Management Organization is responsible for the following:

- preparing and maintaining WACs and implementing procedures;
- communicating WAC changes to WCC;
- collecting waste from generators;
- verifying compliance with WAC requirements;
- approving variance requests to the WACs;
- operating on-site TSDFs and maintaining required records for TSDF activities;
- ensuring that off-site WAC requirements are met and that appropriate licenses/permits are in place;
- conducting divisional self-assessments;
- coordinating and contracting with off-site TSDFs;
- participating in annual waste certification audits;
- implementing WCP training program;
- overseeing the generator interface function; and
- appointing WCT personnel.

Specific responsibilities for the WCT are established on a case-by-case basis through the use of a Memorandum of Understanding between the generator and WM. The primary

responsibility of the WCT will be to assist the waste generators in meeting their certification responsibilities (Sec. 4.3). This includes notifying generators of changes to WAC requirements. In addition, WCT personnel may be asked to provide the following services:

- completing waste disposal forms;
- coordinating waste removal;
- forecasting waste generation;
- assisting managing waste accumulation areas;
- performing routine inspections/walkthroughs;
- providing assistance in pollution prevention and waste minimization; and
- providing assistance in program audits.

4.3 WASTE GENERATORS

Within the WCP, waste generators are responsible for the safe management of waste until it is transferred to WM. Generating organizations may assign a divisional generator interface person to provide support similar to that available from the WCT. These generator interface personnel support generators in meeting their certification responsibilities. As part of the certification program, generators have the following responsibilities:

- attending waste certification and waste characterization training as appropriate to their operation;¹
- properly characterizing, segregating, handling, categorizing, labeling, and packaging the waste per implementing procedure requirements;
- providing complete, accurate information on RFD forms;
- meeting all WAC requirements for transfer of waste or requesting variance;
- participating in waste certification audits as scheduled;
- maintaining records of how waste was generated and categorized/classified until waste is accepted by WM;
- participating in divisional self-assessments; and
- complying with site requirements for RMMA identification per RPP 230.

4.4 OFFICE OF ENVIRONMENTAL COMPLIANCE AND DOCUMENTATION

The OECD is responsible for the following:

- reviewing WACs and implementing procedures;
- participating in an annual certification program audit;
- reviewing proposed shipments/manifests for RCRA/PCB compliance;
- providing guidance on permitting and regulatory compliance issues; and
- reviewing and approving compliance-oriented variances to WAC requirements.

¹ Refer to Section 5 and the WCP Training Program (<http://oecdwsrv.oecd.org/landERIN/trngplan/Trngplan.htm>)

4.5 QUALITY ASSURANCE

Divisional Quality Assurance (QA) personnel are responsible for the following:

- scheduling and completing periodic surveillances in their area of responsibility;
- coordinating divisional surveillances through the Waste Certification Coordinator;
- providing surveillance results to the Waste Certification Coordinator and division management for review, evaluation, and distribution; and
- assisting divisional management prepare lessons-learned reports and action plans for correction of deficiencies as necessary following existing ORNL procedures.

4.6 OFFICE OF RADIATION PROTECTION

The Office of Radiation Protection is responsible for:

- setting standards for the maintenance of RMMAs.

4.7 LOCKHEED MARTIN TRANSPORTATION AND PACKAGING MANAGEMENT

LMTPM is responsible for oversight of DOE compliance including:

- reviewing and approving manifests/shipping documents for off-site shipment of ORNL wastes.

5. TRAINING

All waste generators are required to complete the Phase I WCP training. Phase I is a general awareness training available on the Web (<http://train01.wmd.ornl.gov/wmrad/wastcert/wstctwel.htm>) or in a self-study packet. The training includes an overview of the WCP, review of generator responsibilities, and instructions on how to access WCP documents.

Generator interface personnel (including WCT personnel and divisional generator interface personnel) are required to complete Phase II WCP training. Phase II training includes an overview of the WCP, including NRA determination and in-depth study of applicable program documents. This training will include class attendance and successful completion of exams. Additional specialized training such as Rad Worker I, RCRA waste characterization, satellite/90 day area, U.S. Department of Transportation may be required. Generator interface personnel will also complete site-specific access training as appropriate for their assigned work areas.

6. PROGRAM ASSESSMENTS

The WCP will be validated through an audit of the entire program. This audit will be conducted annually for the four WACs included in this program plan. Additional assessments will be completed by the divisional self-assessment program and divisional QA personnel. If program deficiencies are indicated, additional assessment focus will be provided to ensure that those areas demonstrate the expected quality improvement. The audit team will include representatives from OECD, WM, the generating organization(s), QA, and other organizations as deemed necessary by the ORNL WCC.

7. CORRECTIVE ACTIONS

Corrective actions will be developed for all deficiencies identified during WCP audits or assessments. A corrective action report will be prepared to document actions taken. These corrective actions will be reviewed and concurred by the WCC. All activities associated with corrective actions will be conducted in accordance with existing ORNL corrective action procedures (ORNL Corrective Action Program, QA-16.1). Program deficiencies will be corrected without interruption of the ongoing program.

8. RECORDS MANAGEMENT

Program documents, which provide evidence of compliance, will be maintained. The primary repository for these documents will be the WMRAD Procedure and Data Services Group. These records will be held a minimum of five years or as directed by applicable regulations or DOE requirements. At a minimum, records will include the following:

- waste description forms and supporting information;
- final assessment reports;
- final corrective action reports;
- completed surveillance reports;
- WAC variance or exemption approvals;
- WEAf inspection reports;
- procurement waste packaging specifications;
- off-site shipment records; and
- WCP training records.

9. DOCUMENT CONTROL

Program documents will be controlled as specified in the ORNL Standard Practice Procedure X-AD-9, *ORNL Document Control*.

When existing procedures require revision, and as new program procedures are needed, requests for these additions or revisions will be presented to the ORNL procedure review committee for concurrence and permission to proceed. At least once every five years, all related plans, WACs, and procedures will be reviewed for relevancy and revised as necessary.

10. PILOT PROGRAM SCHEDULE

A pilot of the WCP began April 14, 1997. The pilot is expected to last 12 months. During that period, four program assessments will be conducted. Improvements will be made to the WCP as they are identified in the program assessment. The auditable WCP is scheduled to begin in April 1998.

11. REFERENCES

1. Guidance for Characterization of Hazardous, PCB, and Low-Level Mixed Waste (<http://oecd.wsrv.oecd.ornl.gov/landerin/hazchar/charact.htm>).
2. Oak Ridge National Laboratory Program Plan for Certification of Nonradioactive Hazardous Waste, ORNL/TM-13189.
3. ORNL Compliance with Hazardous/Low-Level Mixed Waste Acceptance Criteria, ORNL-WM-005 (<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm005a.htm>).
4. ORNL Compliance with Solid Low-Level Mixed Waste Acceptance Criteria, ORNL-WM-006 (<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm006a.htm>).
5. ORNL Compliance with Transuranic and Alpha-Contaminated Waste Acceptance Criteria, ORNL-WM-007 (<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm007a.htm>).
6. Performance Objective for Certification of Non-Radioactive Hazardous Waste, U.S. Department of Energy, February 1995.

7. Procedure for Discharging Waste to the ORNL Liquid Low-Level Radioactive Waste, Process Waste, and Nonradiological Wastewater Treatment Facilities, ORNL-WM-008 (<http://www-internal.ornl.gov/ORNL/directives/data/WM/wm008a.htm>).
8. Radiological Characterization Plan for Solid Low-Level Waste (<http://oecd.wsrp.oecd.ornl.gov/landerin/radchar/radchar.htm>)
9. Waste Acceptance Criteria for Hazardous and Mixed Waste Treatment and Storage Facilities at the Oak Ridge National Laboratory, WM-SWO-404 (<http://www-internal.ornl.gov/ORNL/directives/data/WM/wmswo404.htm>).
10. Waste Acceptance Criteria for Solid Low-Level Waste Treatment, Storage, and Disposal Facilities at the Oak Ridge National Laboratory, WM-SWO-505 (<http://www-internal.ornl.gov/ORNL/directives/data/sllwwacl.htm>).
11. Waste Acceptance Criteria for Transuranic and Alpha-Contaminated Waste Storage Facilities at the Oak Ridge National Laboratory, WM-SWO-506 (<http://www-internal.ornl.gov/ORNL/directives/data/WM/truwac.htm>).
12. Waste Acceptance Criteria for the Liquid Low-Level Waste System, Process Waste Treatment Plant, and Nonradiological Wastewater Treatment Plant at Oak Ridge National Laboratory, WMRA-WPCPP-201 (<http://www-internal.ornl.gov/ORNL/directives/data/WM/wpcpp201.htm>).

INTERNAL DISTRIBUTION

1. J.F. Allred
2. B.R. Appleton
3. P.T. Barton
4. F.E. Bertrand
5. B.A. Bervan
6. L.C. Cain
7. D.F. Craig
- 8-12. N.S. Dailey
13. D.D. Drake
14. L.B. Dunlap
15. K.G. Edgemon, Jr.
16. R.G. Gilliland
17. H.A. Glovier
18. D.C. Gregory
19. J.L. Hammontree
20. F.C. Hartman
21. J.N. Herndon
22. J.R. Hickey
23. S.G. Hildebrand
24. P.B. Hoke
25. E.C. Jones
26. S.B. Kennedy
27. M.W. Kohring
28. F.C. Kornegay
29. E.H. Krieg, Jr.
30. M.A. Kuliasha
31. R.C. Mason
- 32-37. B.C. McClelland
38. D.W. McDonald
39. L.E. McNeese
40. T. Myrick
41. J.M. Norman
42. C.E. Oliver
- 43-50. R.C. Orrin
51. D. Parzyck
52. J.E. Phillips
53. M.L. Poutsma
54. D.E. Reichle

- 55. J.B. Roberto
- 56. B.M. Ross
- 57. M.J. Saltmarsh
- 58. R.B. Shelton
- 59. A.M. Shirley
- 60. C.S. Sims
- 61. R.F. Sincovec
- 62. D.R. Stallions
- 63. J.O. Stiegler
- 64. J.H. Swanks
- 65. K.B. Thomas
- 66. A.W. Trivelpiece
- 67. R.I. Van Hook
- 68. D.S. Zill
- 69. OECD Document Management Center
- 70. WMRAD Document Management Center
- 71-72. Central Research Library
- 73. Document Reference Section
- 74-75. Laboratory Records Department
- 76. Laboratory Records Department—RC
- 77. ORNL Patent Office

EXTERNAL DISTRIBUTION

- 78-80. S.L. Good, Waste Management and Technology Division, Department of Energy, Oak Ridge Operations Office, P.O. Box 2001, Oak Ridge, Tennessee 37831-8620
- 81. Office of Assistant Manager for Energy Research and Development, Department of Energy, Oak Ridge Operations, Oak Ridge, Tennessee 37831
- 82. L.A. Hofman, H&R Technical Associates, Inc., P.O. Box 4159, Oak Ridge, Tennessee 37831-4159
- 83-92. Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, Tennessee 37831 (10-NTIS)