

# TRAINING WASTE GENERATORS: THE FIRST RESPONDER IN PROPER WASTE MANAGEMENT

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## ABSTRACT

Dealing with waste effectively requires a "cradle to grave" approach to waste management. The first step in that chain of custody is the waste generator. The waste generator plays the key role in the correct identification, packaging, and disposal of waste. The Technical Resources and Training Section at the Oak Ridge National Laboratory (ORNL) has developed several short training programs for waste generators. This training presents a consistent approach to proper handling of waste within the ORNL waste management system. This training has been developed for generators of three target waste generating groups:

- Solid Low-Level Radioactive Waste
- Hazardous and Mixed Waste
- Transuranic Waste

In addition to the above, a Waste Minimization training program has been developed for use by all organizations at ORNL who generate any type of hazardous waste.

These training programs represent a combined effort of the training staff and the technical staff to assure that all ORNL staff accept their responsibility for handling all types of radioactive and hazardous wastes correctly from its generation to its disposal.

## INTRODUCTION

Dealing with waste effectively requires a "cradle to grave" approach to waste management. The first step in that chain of custody is the waste generator. The waste generator plays the key role in the correct identification, packaging, and disposal of

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waste. There are many methods that can be used to involve all those personnel that must become an integral part of the implementation program. At ORNL we have used public campaigns, incentive programs, charge-back policies, and training to address major components of this waste management approach. Several short training programs for waste generators have been developed by Technical Resources and Training Section in conjunction with the Waste Management Section of the Environmental and Health Protection Division of ORNL. Generators of three target waste generating groups (Solid Low-Level Radioactive Waste, Hazardous and Mixed Waste, and Transuranic Waste) regularly receive training at this time.

In addition to the above, a Waste Minimization training has been developed for use by all organizations at ORNL who generate any type of hazardous waste. We also plan a more formal training program on medical and infectious waste in the near future.

## **WASTE GENERATOR TRAINING PROGRAMS**

### **Solid Low-Level Radioactive Waste**

A training program for generators of solid low-level waste was initiated to emphasize the requirement to eliminate RCRA wastes from the radioactive solid waste. The training program presents administrative requirements which documents the exclusion of these wastes.

This training program is required for all generators who generate, store, package, and prepare paperwork for disposal of solid low-level radioactive waste through the Radioactive Waste Operations Group. Specific guidance is provided the generators on the regulatory requirements, classifications of solid waste, identification of materials regulated by RCRA that **should not** be included in solid low-level radioactive waste to be buried, disposal methods, guidelines for handling solid low-level wastes, and correct completion of appropriate forms. Heavy emphasis is placed on being able to properly fill out the reasonably complicated waste generation form.

### **Hazardous and Mixed Waste**

We also operate several other types of waste disposal or storage areas, some of which are permitted under RCRA. There is a central waste management function that picks up and correctly stores or disposes of hazardous and mixed waste at ORNL. Because of specific hazardous waste training regulations (40 CFR 262.34) and specific guidelines and forms to handle these wastes, the decision was made that a second waste generator course was needed that focused on these specific needs.

This training program is required for all generators who generate, store, package, and prepare paperwork for disposal of hazardous and mixed wastes through the Hazardous Waste Operations Group. Specific guidance is provided the generators on identification of materials regulated by RCRA, other materials regulated by ORNL,

requirements for the management of waste accumulation areas, and correct completion of appropriate forms. Again, the need to be able to properly fill out a complex request for disposal form drives much of the course.

## **Transuranic Waste**

ORNL also has the need for special management of transuranic radioactive wastes from its research and operations activities on-site. These wastes must be stored on-site and then transferred to the Waste Isolation Pilot Plant (WIPP) for long-term storage and possible disposal. This plant has been built but is not yet through the necessary approvals to start operations. In fact, ORNL has sufficient volume of this type of wastes that we have planned to build a special facility to re-examine and repackage our transuranic wastes for acceptance at the WIPP in New Mexico.

This training program is required for all generators who generate, store, package, and prepare paperwork for disposal of transuranic wastes that will be transferred to WIPP in New Mexico. Specific guidance is provided generators on packaging and transporting criteria for WIPP, definitions of TRU wastes, ORNL requirements for certifying TRU wastes, correct completion of appropriate forms, and nonconformance procedures. The special nature of this material requires certification procedures that go beyond the requirements imposed on the other types of wastes.

## **Waste Minimization**

Waste minimization has become increasingly important at an economic level at all facilities during the past few years; and, with increasing legislative interest and guidance, training is needed to make the Laboratory personnel aware of the need and mechanisms already available to accomplish waste minimization.

This training program will be required for all generators of any hazardous wastes at ORNL. Specific guidance is provided on waste minimization activities at ORNL, methods for waste minimization, and responsibilities for waste minimization. Training materials have been developed so that a division waste minimization coordinator can take the material, adapt it specifically to that division, and present the program him/herself; however, the training staff will also offer the program periodically.

## **SUCCESSSES/AREAS OF "OPPORTUNITY"**

Since Technical Resources and Training Section assumed the responsibility for these training programs in May 1988, we have trained over 500 ORNL waste generators. We have worked closely with the Waste Management Coordination Office and the Radioactive and Hazardous Waste Operations Groups in developing and maintaining these training programs. In fact this close relationship has been one of the reasons we have been successful. The Supervisor of the Radioactive Waste Operations Group (RWOG), who supports the training, has instructed his staff that they are **not** to pick up any waste unless the generators have been through the training program. RWOG frequently provides us with feedback when problems or questions occur that they think

can be minimized if added to the training programs. A member of the RWOG often attends the closing portions of the training program to answer questions. While the generators have an opportunity to hear information first-hand, the presence of RWOG staff lends credibility to our program -- the generators can see we are all in this together.

We have received similar support from the Hazardous Waste Operations Group staff and the TRU staff.

Some generators are required to attend all four of the training programs. Even though they are short (1 to 2 1/2 hours), we have received suggestions to combine them into a one-day training program. We are considering it; however, some generators deal only with hazardous wastes, others only with solid low-level waste. The need to deal with differing complex reporting requirements may make it difficult for generators to absorb all of the material if given in a one-time session.

All of these programs deal primarily with solid wastes; we have not yet touched on the liquid waste streams. That will be one of our projects in the future.

## **SUMMARY**

An important component in implementing the "cradle to the grave" approach to waste management is communicating the need and the mechanisms to be used to accomplish this task to all those personnel who are parties to the action. Comments from the supervisors of the solid wastes areas have indicated that training the waste generators has cut down on the improper disposal of hazardous wastes. It has also increased the communication between the generators, trainers, and the waste operations personnel; this allows one more forum for exchange of ideas between all interested parties on how to most effectively deal with complex waste streams.

## REFERENCES

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