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CONF-881054--13

DE89 001211

OPTIMIZING COMPLIANCE TRAINING FOR THE WASTE MANAGEMENT WORKER

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ABSTRACT

Waste management workers are required to participate in special training mandated by a variety of Federal laws and DOE Orders; these include the Resource Conservation and Recovery Act (RCRA)¹, Superfund Amendments Reauthorization Act (SARA) as implemented by OSHA in CFR 1910.120², in addition to requirements for Hazard Communication³⁻⁴, Radiation Workers⁵⁻⁸, Respiratory Protection⁸, Transportation⁹⁻¹³, and Waste Generator^{1, 10-12} training. The Technical Resources and Training Program is examining the course contents and mandated requirements to determine how to best meld these requirements into a training program that will still fulfill all requirements but eliminate the potential for duplication of some elements in successive courses. This approach may not eliminate all duplication between courses, but it should result in significant savings in man-hours demanded in a training environment which requires similar information to meet a host of regulatory requirements. The training matrix planned for Oak Ridge National Laboratory (ORNL) will be presented and discussed.

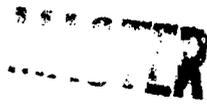
Identifying Training Requirements

There are many requirements for waste worker training contained in DOE Orders, laws, regulations, guidelines and standards for industry. At present ORNL and many others attempt to cover each of the major training requirements with a course specifically designed to the regulation. A good example of this approach is our complete SARA/OSHA program¹⁴. However, it is difficult not to overtrain on those elements in these courses that overlap

*Operated by Martin Marietta Energy Systems Inc., for the US Department of Energy under Contract DE-AC05-84OR21400

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and to risk worker inattention to repetitive classes. ORNL is developing and will implement compliance core curricula to cover all environmental safety and health (ESH) mandatory training. By clearly defining training module objectives to meet multiple training requirements, the modules can be used in an integrated matrix or in regulation-specific courses without sacrifice of any relevant training objectives. While this paper reports only that portion of the matrix applicable to our waste workers, the overall core curricula matrix will address the training needs for all of our workers. The overall matrix will be presented in November, 1988¹⁵. However, in an installation that deals with hazardous and radioactive materials and wastes, and mixed wastes, a good many of the ESH training requirements do apply to the waste workforce.

Table 1 lists several of the major DOE Orders, laws, regulations, guidelines and industry standards that constitute the compliance training requirements for ORNL waste facilities.

Identifying Trainee Population

In order to develop a credible training matrix that will assure that each waste worker receives all the training required by many DOE orders and other laws and regulations, it is necessary to develop a definitive matrix that encompasses all waste workers at ORNL. We have initiated this definition of workers and have in place a preliminary description of all job positions and some rudimentary job and task analysis. Table 2 lists the ORNL waste operations positions that require mandatory qualification training. In fact, with the exception of reactor operators, waste operating personnel are probably the most heavily regulated workers in our installation.

Preparation of Core Curriculum and Training Modules

Because we have been actively training workers in the required subject contents¹⁶⁻²⁰, we chose to conduct a careful review of our current ESH training programs²¹ to develop some comprehensive training modules to meet multiple requirements. In our initial analysis, we separated subject areas and sorted the course lesson plans accordingly. This quickly identified overlapping requirements and need for different levels of training, comprehension and comprehensiveness. Using this information we resorted the lesson plans to standardize treatment at each selected level; this has allowed us to develop and implement training by related modules rather than by regulatory classification.

Our compliance training matrix is built around five or more major curricula. Table 3 gives a brief synopsis of the waste worker core curriculum and shows that certain job categories and facilities would also require other specific training to complete their requirements. The core or generic portion of the waste worker curriculum can be site-specific to the installation and to the facilities at an overview level. For example, we use photographs and procedures from specific operations to illustrate how generic principles and instructions relate to our own workplace. However, the operational training on specific activities and procedures at each building or facility will still be carried out at the facility by a trainer dedicated to those operations. Because the ORNL waste operations are now a part of the Environmental and Health Protection Division where the ESH compliance training is also based, it will not be difficult to implement the waste worker core curriculum, once all the course elements are developed.

Strategy for Implementing

General ESH training procedures under development require that supervisors classify their employees into training categories. This will facilitate our control over the appropriate trainee population and aid our transition into an integrated training mode. New workers will be the easiest to accommodate into the system.

Our training modules will be offered in related subject-area groupings still to be determined and modified by experience. For those workers who have had some of the previous training, we will be able to credit them with any modules already earned. This will be particularly time-effective in training new employees because there will be a significant savings in staff time per worker without sacrificing content or specificity. This attempt to identify generic portions of the mandatory training will not interfere with requirements for job-performance-based training; operational training will continue to be performance-based and even the compliance training will be based on position requirements to the extent possible under the laws. Our goal is to be able to accredit an integrated ESH training program for ORNL under the new proposed DOE Training Accreditation Draft Order²² once it is fully operational.

The possible disadvantages in using this integrated training matrix are the difficulties in implementing new procedures and working through documentation so that each requalification/retraining will

occur at the proper time. Over the longer term, this should not be a significant problem .

Acknowledgements

Our staff, team developers/trainers, make this progression toward a more efficient, more standardized training function possible through their ability to deal with their subject specialties in a holistic manner; Steve Abercrombie, Edith Jones, Mike Moreland, Jean Thorpe, Allison Von Gruenigen, Allen White, Mary Wilson and Donna McConkey are acknowledged.

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Table 1. Major Compliance Requirements for Waste Workers

SOURCE	HAZARD IDENTIFICATION	HEALTH EFFECTS	PERSONNEL PROTECTION	ENVIRONMENTAL SITE CHARACTERIZATION/ PROTECTION	FACILITIES/PROCEDURES/OJT
RCRA ¹	X			X	X
SARA/OSHA ² (CERCLA workers covered)	X	X	X		
DOE Orders 5480.5, .6, and .11 ⁵⁻⁷	X	X	X	X	
Haz. Com. ³⁻⁴	X	X	X	X	
Respiratory Protection ⁸	X	X	X		
DOE Order 5480.3 ⁹	X		X	X	X
DOE Order 5920.20 ¹⁰	X			X	
DOE Order 5480.2 ¹¹	X			X	X
DOE Order 1540.2 ¹²	X				X
DOE Order 49 CFR 100-199, 390-399 ¹³	X	X	X	X	X

Table 2. Waste Worker Mandatory Qualifications

QUALIFICATION	REQUIRED BY
Waste Operator	DOE Order 5480.5, .6, .11 ⁵⁻⁷ , SARA/OSHA ² , RCRA ¹
Waste/Remedial Action Operator	SARA/OSHA ²
Waste Supervisor	DOE Order 5480.5, .6, .11 ⁵⁻⁷
Waste Manager (may overlap with Waste Supervisor)	SARA/OSHA ²
Support Staff (HP, IH, Maintenance, etc.)	DOE Order 5480.5, .6, .11 ⁵⁻⁷ , SARA/OSHA ² , RCRA ¹
Truck Drivers Transporting Haz. Waste	49 CFR 390-399 ¹³

Table 3. Waste Worker Core Curriculum

	REGULATORY OVERVIEWS	HAZARD IDENTIFICATION	HEALTH EFFECTS	PERSONNEL PROTECTION	ENVIRONMENTAL SITE CHARACTERIZATION/ PROTECTION	FACILITIES/ PROCEDURES/ OJT
CORE CURRICULUM*	Hazcom* RCRA SARA/OSHA 5480.5, .6, .11	Radiation Haz- ards - Gen.* Chemical Haz- ards - Gen.* Safety Haz- ards - Gen.* Biological Haz- ards - Gen. Chemical/ Radioactive Waste*	Radiation Toxicology Chemical Toxicology (Includes Interacting Effects)	Medical Surveillance Contamination Control Respiratory Protection Protective Clothing - Levels (Demo.) Heat/Cold Stress Confined Work Spaces Noise Stress ALARA	Project Planning Spill Response* Site Monitoring Site Control/ Characterization	Facilities- Types, Kinds Packaging/ Labeling* Marking/ Placarding* Transportation* Decontamination Emergency Response Waste Generator
ADDITIONAL OPERATOR NEEDS		Facility-Specific Hazard Identifi- cation	Facility - Specific High-Impact Hazard Effects (If present)	Facility Proce- dures/ Supplies Contamination Control/PPE/ ALARA	Facility Procedures Containment Policies	Facility Systems Operational Instruction/OJT

Table 3. Continued

REGULATORY OVERVIEWS	HAZARD IDENTIFICATION	HEALTH EFFECTS	PERSONNEL PROTECTION	ENVIRONMENTAL SITE CHARACTERIZATION/ PROTECTION	FACILITIES/ PROCEDURES/ OJT
ADDITIONAL WASTE/ REMEDIAL ACTION OPERATOR NEEDS	Facility-Specific Hazard Identifica- tion Risk Assessment	Facility- Specific High- Impact Hazard Effects (If present)	Facility Proce- dures/ Supplies Contamination Control/PPE/ ALARA SCBA (Detailed) Field Dresscut	Facility Procedures Containment Policies Site Decommissioning/ Closure Instrumentation Laboratory	Facility Systems Operational Instruction/OJT Handling Drums/ Containers RI/FS Overview Decon. Techni- ques (Detailed) and Field Exercise
ADDITIONAL SUPERVISOR NEEDS	Facility-Specific Hazard Identifi- cation	Facility- Specific High-Impact Hazard Effects (If present)	Facility Proce- dures/ Supplies Contamination Control/PPE/ ALARA	Facility Procedures Containment Policies	Facility Systems Operational Instruction/OJT
ADDITIONAL MANAGER NEEDS	MSDS Exercise		Selection of Protective Equipment	Potential Problem Analysis on Project Planning	Personal Liability How to Deal with Media OJT Instructor Skills

Table 3. Continued

REGULATORY OVERVIEWS	HAZARD IDENTIFICATION	HEALTH EFFECTS	PERSONNEL PROTECTION	ENVIRONMENTAL SITE CHARACTERIZATION/ PROTECTION	FACILITIES/ PROCEDURES/ OJT
ADDITIONAL SUPPORT STAFF NEEDS			Facility Proce- dures/ Supplies Contamination Control/PPE/ ALARA	Facility Procedures Containment Policies	Facility Systems Operational Instruction/OJT Discipline Qualifications Handling Drums/ Containers RI/FS Overview Decon. Techni- ques (Detailed) and Field Exercise
ADDITIONAL TRANSPORTA- TION: TRUCK DRIVER NEEDS*	DOT	Shipment Charac- teristics	Basic Protec- tive Equip- ment	Transportation - Specific Emergency Response	Shipping Papers/ Certifications Vehicle Prep. Container Stor. Inspection Criteria Mobile Equip Op Route & Cargo Restr./Procs.

***Core Curriculum Applicable to Truck Drivers
Only When Marked with Asterisk**