

**Los Angeles County
Metropolitan Transportation Authority
Office of the Inspector General**

**Review of Hazardous
Substances Training**

Metro's Hazard Communication Program complies with Federal and state regulations. However, the audit found three areas that can be improved. Many managers and supervisors have not completed the mandatory Hazardous Communication training; safety information and training provided to division employees on hazardous substances lacked uniformity; and division managers were not always aware of new hazardous products.

Report No. 09-AUD-06

August 21, 2009



Metro

**Review of Hazardous Substances Training
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Metro

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Metropolitan Transportation Authority**

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DATE: August 21, 2009

TO: Board of Directors
Chief Executive Officer

FROM: *Jack Shigetomi*
Jack Shigetomi
Deputy Inspector General for Audits

SUBJECT: Review of Hazardous Substances Training (Report No. 09-AUD-06)

Introduction

As part of our ongoing program to assist Metro in improving the economy, effectiveness, and safety of operations, we reviewed hazardous substances training performed by Corporate Safety, and the rail and bus maintenance divisions. State and Federal regulations require employers to provide employees with information and training on hazardous substances that are present in the workplace. Currently, approximately 3,000 hazardous substances are identified in Metro's Material Safety Data Sheet (MSDS) database.

Our review found that Metro employees were provided with information and training on hazardous substances. Corporate Safety has developed a Hazard Communication Program to comply with requirements in Federal and state regulations. In addition, Corporate Safety conducts training on the hazardous substances program to managers, supervisors, and new hires. Supervisors are responsible for conducting safety training to division staff who handle and use hazardous substances. However, our review found three areas where improvements were needed:

1. 57 percent (123 out of 214) of managers and supervisors who supervise employees that potentially would encounter hazardous substances in their work did not complete the mandatory Hazard Communication training for managers and supervisors,
2. supervisors at three bus divisions did not provide the same training information to all shifts, and
3. five bus and 1 rail division managers stated divisions were not always aware of new products when they are introduced.

Objectives and Scope of Review

The overall objective of this review was to determine the adequacy of controls and procedures for providing hazardous substances information and training to Metro staff. Specifically, we determined whether:

- Corporate Safety and the bus and rail divisions complied with the Federal and state regulations.
- Managers and supervisors who are responsible for training employees in their departments have completed the mandatory Hazard Communication training provided by Corporate Safety.
- Staff at bus and rail divisions who handle and use hazardous substances received required training, and the training was appropriately documented.
- The Employee Information and Training requirements of the Code of Federal Regulations and the California Code of Regulations are complied with.
- Bus and rail divisions were aware of new hazardous substance products so that they could discuss these products at safety meetings.

To accomplish the audit objectives, we:

- Interviewed Corporate Safety's Principal Industrial Hygienist to obtain an understanding of the work process, job duties and responsibilities, and internal controls.
- Reviewed the applicable Federal¹ and state² regulations.
- Reviewed Metro's written Hazard Communication Program dated September 2008.
- Reviewed the training course and training material provided by Corporate Safety.
- Sent a questionnaire to all bus and rail divisions on their hazardous substances training.

¹ Code of Federal Regulations, Title 29 – Labor, Chapter XVII – Occupational Safety and Health Administration, Department of Labor, Part 1910.1200 – Occupational Safety and Health Standards, Hazard Communication

² California Code of Regulations, Title 8 - Industrial Relations, Division 1 - Department of Industrial Relations, Chapter 4 - Division of Industrial Safety, Subchapter 7 - General Industry Safety Orders, Group 16 - Control of Hazardous Substances, Article 109 Hazardous Substances and Processes, §5194 Hazard Communication

- Reviewed the hazardous substance training in 2008 performed at one rail and three bus divisions.
- Reviewed the TransitSafe Occupational Injury/Illness Investigation Reports involving hazardous substances in 2008.

Our review was performed in accordance with Government Auditing Standards and included such tests of procedures and records, as we considered necessary.

Background

Department of Labor's Chemical Hazard Communication Manual identifies approximately 650,000 chemical products in the United States. Annually, hundreds of new chemical products are introduced into the workplace. Improper use of chemicals may pose serious safety and health hazards to employees who are not adequately informed and trained on using and handling hazardous chemicals.

The California Code of Regulations require all employers to develop, implement and maintain a written communication program that describes what information and training employees receive on hazardous substances that they may be exposed to in work areas. The California regulations conform to the Occupational Safety and Health Administration (OSHA) standards in the Code of Federal Regulations.

Section 5194 (Hazard Communication) of the California Code of Regulations requires all employers to provide information to their employees about hazardous substances, which they may be exposed to, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and training. Section 5194 requires employers to provide employees with information and training about hazardous substances in their work areas at the time of their initial assignment, and whenever new hazardous substances are introduced into their work area. The hazard information and training shall consist of at least these topics:

1. requirements of the regulation;
2. operations in the workplace where hazardous substances are present;
3. location and availability of the written hazardous communication program, including a list of hazardous substances and material safety data sheets;
4. methods and observations to detect the presence or release of a hazardous substance in the work area, such as monitoring, visual appearance or odor;

5. physical and health hazards of substances in the work area, and procedures implemented to protect employees from exposure to hazardous substances, such as appropriate work practices, emergency procedures, and personal protective equipment;
6. details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use appropriate hazard information; and
7. the right of employees, their physician, or collective bargaining agent to receive information regarding hazardous substances.

Corporate Safety

Metro's Corporate Safety Department provides program management and project oversight for Metro's industrial hygiene, employee health, and environmental safety programs. The department's two Industrial Hygienists are responsible for multiple programs. These programs include: Air Quality, Asbestos, Blood Borne Pathogens, Confined Space Safety, Hazard Communication, Personal Protective Equipment, Material Safety Data Sheets (MSDS), Safety Review Standard, CNG System Safety Manual, and Ladder Safety.

The Principal Industrial Hygienist has developed and maintained Metro's Hazard Communication Program (HCP). He is responsible for (1) reviewing and approving all chemical substances used by Metro employees; (2) maintaining the MSDS database; and (3) providing information and training on hazardous substances as required under the California Code of Regulations to managers and supervisors, and to new employees. A Senior Industrial Hygienist performs annual inventories at all bus and rail divisions, and other facilities that maintain hazardous chemicals. He completes the Hazardous Materials Business Plan for each division and facility which consists of a list and description of all materials that are in use.

Hazardous Communication Training

Occupational Development and Training (OD&T) offers a mandatory course on Hazard Communication for Metro managers and supervisors managing staff who handle and use hazardous substances. Corporate Safety developed this class and provides the instructor. Supervisors are responsible for providing training to employees on the hazards associated with chemicals that they are likely to be exposed to in the workplace. In addition, training should be provided when new hazardous substances are introduced in the workplace or when an employee is reassigned to an operation that might involve the use or handling of hazardous substances. The training provided to employees should be documented.

New Chemical Products

Corporate Safety is responsible for reviewing and approving all new chemical product purchases, and inputs the new product's Material Safety Data Sheet into the database. Supervisors are responsible for ensuring that employees have access to current MSDS for each hazardous substance used in the workplace. Employees are responsible for handling and using the product properly, and for wearing the appropriate personal protective equipment specified in the MSDS.

Results of Review

We determined that controls and procedures over providing hazardous substances training were generally adequate.

- Metro's Hazard Communication Program incorporated Federal and state requirements concerning hazardous substance information and training that must be provided to Metro employees.
- The Hazard Communication training offered by OD&T met Federal and state requirements and was made available to managers and supervisors. Corporate Safety's Principal Industrial Hygienist conducted the mandatory Hazardous Communication training class. This training class began in 2005, and was offered on nearly a monthly basis until 2007, when it was reduced to three classes that year. In 2008, OD&T conducted 3 Hazard Communication classes (on May 13, 2008, August 20, 2008, and December 16, 2008), and 55 Metro employees attended these classes.
- Corporate Safety provided information on hazardous substances as a part of Operations Central Instruction's new employee orientation for all newly hired bus mechanics and service attendants. The rail divisions established their own hazardous substances training for newly hired rail equipment maintenance employees.
- Bus and Rail maintenance divisions provided information on hazardous substances at safety meetings and training sessions for their mechanics and service attendants. Safety topics such as the proper use of personal protective equipment, material safety data sheets, and the MSDS system were covered at these meetings. The divisions adequately documented the hazardous substance training.

However, our review disclosed three areas where improvements were needed: (1) 57% of managers and supervisors whose work areas were likely to have hazardous substances had not completed the mandatory Hazard Communication training, (2) three bus divisions did not provide the same training information to all shifts, and (3) six division managers stated that their divisions were not made aware of new products when they were introduced.

1. Hazard Communication Training for Managers and Supervisors

We found that most bus maintenance supervisors had not completed the mandatory Hazard Communication training class. OD&T training records disclosed that 64% (41 of 64) of the equipment maintenance supervisors and 45% (9 of 20) of the rail equipment maintenance supervisors had not completed this training as of August 2008. Also, 57% (123 out of 214) of all managers and supervisors who manage and supervise employees who potentially work with hazardous substances have not completed this training. Since supervisors are responsible for training employees in their departments, it is important that they complete the mandatory Hazard Communication training provided by Corporate Safety.

During our review, managers from two bus divisions and one rail division informed us that they had enrolled nine of their Equipment Maintenance supervisors to the February 26, 2009, Hazard Communication training class. Corporate Safety is aware that there are managers and supervisors who need the training; however, scheduling classes to accommodate bus and rail operations is a challenging task. Each training class can accommodate 30 employees. Corporate Safety indicated that they will coordinate with OD&T to schedule additional classes. Also, they are willing to go to the divisions to train managers and supervisors.

It is important that the divisions schedule all of their managers and supervisors to complete this mandatory training since they are responsible for conducting training to division staff.

2. Division Safety Training

The three bus divisions we reviewed held safety training meetings at least monthly; the rail division we reviewed held weekly safety training meetings. We reviewed documentation on safety training conducted during 2008 at these four divisions. We found that each of the three shifts' supervisors presented various safety topics that emphasized the importance of safety in the workplace.

The rail division documented its safety training with a common training agenda used by all three shifts, sign in sheets, and training material/documents. We found that the meetings were well attended which was clearly evidenced by completed sign in sheets that were preprinted with the names of the mechanics and service attendants for each shift. We found that training topics related to hazardous substances were covered in 10 of these meetings. They primarily focused on the use of personal protective equipment and covered information on Material Safety Data Sheets. At one of the meetings, the staff was informed about the chemical properties of a new chemical cleaner, which had replaced another cleaner that was found to be chemically unsafe.

The bus divisions' 1st, 2nd, and 3rd shifts developed their own training agenda that covered different topics. We found that the safety topics that were covered by the divisions varied among the three shifts. In one division, two of the shifts did not cover any training topic related to hazardous substances. We believe training could be improved if all three shifts planned a common training agenda to the extent possible. This will ensure that the mechanics and service attendants on each shift are provided the same safety information. Generally, the topics related to hazardous substances included the uses of the MSDS and personal protective equipment.

In addition, the divisions should ensure when planning safety training topics that they cover the required information and training areas provided in the regulations and Metro's Hazard Communication Program.

3. New Hazardous Products

Our review disclosed that five bus and one rail divisions were not always aware of new hazardous products. Consequently, employees might not be informed and trained before they use a new product. Corporate Safety had not implemented a process to inform users when new chemical products were introduced in the MSDS system. It is important that divisions are informed of new products so that important safety information in the product's Material Safety Data Sheet is discussed with employees regarding handling and using the item, and wearing protective equipment. Managers at two divisions told us that their employees are trained to access the MSDS system on new products to learn about any hazards and how to handle it properly. However, if they are informed of a new product, the supervisory staff can bring it to the crew's attention at a safety meeting.

We discussed this matter with the Principal Industrial Hygienist who acknowledged that divisions might not always be aware of new products. He stated that the MSDS numbering system is designed to facilitate identifying new products entered into the MSDS database. Each chemical product is assigned a unique MSDS number that denotes the year it was added into the MSDS system. For example, a product called 'Natural Gas Engine Oil Plus' manufactured by Rosemead Oil Products, Inc. was added into the MSDS system on January 16, 2008; its MSDS number is 08-001-ROP. Although the MSDS numbering system is helpful to identify new products, all users might not be aware of a new product because (1) new products are identified only by year, and (2) users have to time sort the MSDS database for new products added that year. After we discussed this issue with the Principal Industrial Hygienist, he stated that Corporate Safety will start informing users of new products as they are introduced in the MSDS system.

Recommendations

To ensure Metro employees receive sufficient information and training on potentially hazardous substances, we recommend that management take the following actions:

1. Bus and rail maintenance divisions and other Metro departments that use hazardous substances should ensure that all supervisors and managers who have not completed the mandatory Hazard Communication training are enrolled in a future class. In addition, divisions should consider requesting Corporate Safety to provide refresher training for managers and supervisors at their divisions.
2. Bus Divisions should ensure that all three shifts cover the same or comparable information and training on hazardous substances. All three shifts' supervisors should ensure that the agenda of hazardous substances training topics are consistent for all shifts and satisfies the training requirements in Metro's Hazard Communication Program.
3. Corporate Safety should inform divisions of new products as they are introduced into the MSDS database so that the supervisors can discuss the products' Material Safety Data Sheets at a safety meeting before the new product is used. Employees should be informed of any potential hazards associated with the product, and the use of any appropriate personal protective equipment, if applicable, when handling the product.

Management Comments

Metro management concurred with the findings in the report. Metro has reduced the percentage of Managers and Supervisors who have not completed the required training from 57% to 38%, and is currently scheduling the remaining individuals to ensure that they complete the training. Metro's corrective action plan stated:

- All Managers and Supervisors will have completed the training by December 31, 2009. While there is no requirement for refresher training, a refresher training plan will be developed by August 31, 2009.
- Corporate Safety has already distributed to all managers a PowerPoint presentation that includes the topics that should be covered when training employees and can be used as an agenda. The use of this PowerPoint presentation by all managers and supervisors will ensure that the training is consistent for all shifts.
- Corporate Safety has implemented an internal procedure requiring e-mail notification to inform Division/Location Managers of new products as they are introduced into the

MSDS database. The MSDS worksheet is attached to the e-mail and includes all pertinent information regarding the new product. If the new product is also a new hazard, the e-mail will include a reminder that training must be conducted before the product is used. The e-mail will be copied to General Managers and the Chief Operating Officer.

See Attachment A for the full text of management comments.

Evaluation of Management Comments

Metro management has implemented two of the three recommendations in the report, and an adequate corrective action plan to implement the remaining recommendation. Therefore, we consider all issues related to the recommendations in the report resolved based on the corrective actions taken and planned. Staff must follow up on the open recommendation until the corrective action is completed. This requirement is set forth in Management Audit Services Audit Report Follow-up & Resolution Policy (MAS 1).

Copy of Management Comments to Draft Report



Metro

Interoffice Memo

Date	August 7, 2009
To	Karen Gorman Acting Inspector General
Through	Arthur T. Leahy  Chief Executive Officer
From	Paul C. Taylor  Deputy Chief Executive Officer
Subject	Response to OIG Draft Report on Review of Hazardous Substances Training (Report No. 09-AUD-06)

OVERVIEW

I have reviewed the results of the subject draft report, and concur with the findings in the report. I recognize that actions must be taken to correct the findings and implement the recommendations in the report. We have reduced the percentage of Managers and Supervisors who have not completed the required training from 57% to 38%, and we are currently scheduling the remaining individuals to ensure that they complete the training.

Below please find the proposed corrective actions.

RECOMMENDATIONS AND PROPOSED CORRECTIVE ACTIONS (ITALICS)

Recommendation #1: Bus and rail maintenance divisions and other Metro departments that use hazardous materials should ensure that all supervisors and managers who have not completed the mandatory Hazard Communication training are enrolled in a future class. In addition, divisions should consider requesting Corporate Safety to provide refresher training for managers and supervisors at their divisions.

All Managers and Supervisors will have completed the training by December 31, 2009. While there is no requirement for refresher training, a refresher training plan will be developed by August 31, 2009.

Recommendation #2: Bus Divisions should ensure that all three shifts cover the same or comparable information and training on hazardous substances. All three shifts' supervisors should ensure that the agenda of hazardous substances training topics are consistent for all shifts and satisfies the training requirements in the Hazard Communication Program.

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This recommendation has been implemented. Corporate Safety has already distributed to all managers a PowerPoint presentation that includes the topics that should be covered when training employees and can be used as an agenda. The use of this PowerPoint presentation by all managers and supervisors will ensure that the training is consistent for all shifts.

Recommendation # 3: Corporate Safety should inform divisions of new products as they are introduced into the Material Safety Data Sheets (MSDS) database so that the supervisors can discuss the products' Material Safety Data Sheets at a safety meeting before the new product is used. Employees should be informed of any potential hazards associated with the product, and the use of any appropriate personal protective equipment, if applicable, when handling the product.

Corporate Safety has implemented an internal procedure requiring e-mail notification to inform the Division/Location Managers of new products as they are introduced into the MSDS database. The MSDS worksheet is attached to the e-mail and includes all pertinent information regarding the new product. If the new product is also a new hazard, then the e-mail will include a reminder that training must be conducted before the product is used. The e-mail will be copied to General Managers and the Chief Operating Officer.

Should you have any questions, please feel free to call me.

Thank you.

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