

14. Health, Safety, and Environmental Issues in the Structural Maintenance Division

- **The Recreation and Park Department has not ensured a safe and healthy work environment in the Structural Maintenance Division. A November 8, 2005 inspection by Public Utilities Commission Health and Safety and Environmental Regulation staff found several deficiencies, including poor housekeeping in the maintenance and craft shops, blocked access to electrical panels, improper storage of hazardous materials, no documentation of emergency eye wash and shower station inspections, and other deficiencies. The Structural Maintenance Division Manager should review the November 8, 2005 inspection report and address and correct the deficiencies noted in the report.**
- **The Structural Maintenance Division has a high rate of workplace injury and illness as does the Recreation and Park Department as a whole. The Structural Maintenance Division's lost work days due to work place injury or illness over the past five fiscal years has ranged from 197 days in FY 2000-20001 to 346 days in FY 2004-2005. The Structural Maintenance Division's work place injury incidence reported to the U.S. Occupational Health and Safety Administration is 34.74 incidents per 100 employees annually, compared to an industry rate for repair and maintenance organizations of 5.8 incidents per 100 employees annually. The Structural Maintenance Division Manager should work with the Recreation and Park Department's Environment, Health and Safety Manager to implement a plan to significantly reduce the incidence of injury in the Structural Maintenance Division.**

Health, Safety, and Environmental Compliance

Health, Safety, and Environmental Inspection

At the request of the Budget Analyst, staff of the Public Utilities Commission's Health and Safety and Environmental Regulation Offices conducted a health, safety, and environmental inspection of the Structural Maintenance Division's yard on November 8, 2005. The inspection included a walk-through of the following areas: Ironworks Shop; Electrical Shop; Truck Bays; Cement Shop; Roofing Shop; Storeroom; Tire Shop; Auto Shop; Heavy Equipment Operations; Sheet Metal Shop; Plumbing Shop; Stationary Engineers Shop; Carpenter Shop; Paint Shop; and the Hazardous Waste Storage Area. In addition, the Environmental Inspector observed the Structural Maintenance Division's outdoor, auxiliary storeroom, or "bone yard," located in the Department nursery adjacent to the Structural Maintenance Division.

We have provided summaries of the inspection, below. We have also provided complete inspection reports, including detailed "Observations" and "Required Actions," to the Recreation and Park Department.

Health and Safety Issues:

The inspector made the following general observations that apply to many Structural Maintenance Division shops:

- Housekeeping was poor in most of the shops, with extensive amounts of new and old materials, supplies, and equipment, stored in a haphazard manner. However, as an exception, the Carpenter Shop was particularly clean and orderly.
- Access to electrical control panels was blocked in numerous locations throughout the yard.
- Fire extinguishers were missing in numerous locations (where there were mounting brackets and/ or signs on the wall), or were sitting on the floor.
- Emergency eyewash/showers had no documentation indicating that they had been inspected and tested for the last six months.

These common safety problems should normally be identified by routine workplace inspections by the line management.

Environmental Issues:

The inspector made the following general observations that exhibit the highest potential sources of storm water pollution:

- Housekeeping is very poor outside the Auto Shop and in the common materials and equipment storage areas. This includes poor management of soiled absorbent, accumulation of silt and sand around catch basins, and extensive amounts of new and old materials, supplies, and equipment stored haphazardly and exposed to the elements.
- Hazardous materials are inappropriately managed, including improper storage of used oil barrels, unlabeled chemical containers, lack of signage, and hazardous wastes stored outdoors. Use of secondary containment with hazardous material storage was inadequate.
- Trash receptacles throughout the yard were not covered.
- Vehicle washing requires a designated wash rack with a separation chamber to mitigate the amount of sediments, oils, organics, and metals associated with equipment usage.
- The vehicular fueling area has a catch basin located on the fueling pad, with the pavement graded to direct runoff into the catch basin. There is no protection from fuel entering the sewer system in the event of a spill. The preferred solution to mitigate this potential would be to seal the drain. However, because of the high traffic and drainage features of this area, plugging the drain may not be a viable solution. The second alternative would be to develop a contingency plan in the event of a spill that incorporates an emergency shut-off of the sump pumps that serve the drains throughout the facility.

Additional Concerns:

The health and safety inspection summary states, “housekeeping was poor in several shops.” However, the condition of the Structural Maintenance Division's yard on the day of the evaluation was much improved from the condition noted during a tour of the Structural Maintenance Division's yard made by the auditor and the Maintenance Superintendent on October 28, 2005. The Structural Maintenance Division performed a major cleanup of the Structural Maintenance division's yard between November 4, 2005, when the health, safety, and environmental evaluation was announced, and November 8, 2005, the date of the evaluation. The Structural Maintenance Division has corrected many of the deficiencies and shortcomings noted during the informal tour of October 28, 2005. However, the Maintenance Superintendent should correct the following items on a priority basis:

- Turn in the numerous pieces of unserviceable equipment – vehicles, mowers, and generators - that the Structural Maintenance Division does not cannibalize for parts. For equipment that the Structural Maintenance Division is cannibalizing, comply with Office of Contract Administration procedures covering that process.
- Comply with disposition procedures on the unserviceable and junk vehicles in the Structural Maintenance Division's yard parking lot, including the Structural Maintenance Division's 1999 Ford Ranger which was involved in an accident on March 9, 2005.
- Many, but not all, of the shops made a big housecleaning effort. Require all of the shops to clean up their areas and keep them that way. Perhaps not all of the shops can achieve the superior condition of the Carpenter Shop, but there is much room for improvement. According to the Health and Safety Inspector, cleanliness abets safety.

Extremely High Injury Experience

The recordable incidence rate and the recordable severity rate are measures of injury experience calculated such that interested parties can make meaningful trend analyses or cross-comparisons of injury experience within a given industry, trade, or project type. A recordable injury is an injury that requires other than first aid. The formula for calculating the recordable incidence rate yields the number of recordable incidents per 100 employees working 40 hours per week for 50 weeks per year. The formula for calculating the recordable severity rate yields the number of lost workdays per 100 employees working 40 hours per week for 50 weeks per year.

Table 14.1 below displays the recordable incidence rate and recordable severity rate for the Structural Maintenance Division for the fiscal years indicated. Table 14.1 shows that there were 34.74 recordable incidents per 100 employees in FY 2004-2005, the highest recordable incidence rate within the past five years. Another way of viewing the statistic is that approximately 35 percent of the Structural Maintenance Division's employees had a recordable injury in FY 2004-2005.¹

¹ Stated as a percentage of employees, the figure is an approximation because a given employee can have more than one recordable injury during the year evaluated.

Table 14.1 also shows that there were 429.26 lost workdays per 100 employees in FY 2004-2005, the second highest recordable severity rate within the last five years.

Table 14.1
Structural Maintenance Division
Recordable Incidence and Lost Workdays Rates

<u>Fiscal Year</u>	<u>Number of OSHA Recordable Injuries</u>	<u>Recordable Incidence Rate</u>	<u>Number of Lost Workdays</u>	<u>Recordable Severity Rate</u>
FY 2004-2005	28	34.74	346	429.26
FY 2003-2004	20	23.83	678	807.99
FY 2002-2003	26	26.70	197	202.33
FY 2001-2002	30	29.98	399	398.74
FY 2000-2001	<u>22</u>	<u>23.00</u>	<u>197</u>	<u>205.98</u>
FY 2000-2001 thru FY 2004-FY 2004- 2005 Total	126		1,817	2044.3
FY 2000-2001 thru FY 2004-FY 2004- 2005 Average		27.65		408.86

According to Cal-OSHA staff and other health and safety specialists whom we queried, a recordable incidence rate of 34.7 is extremely high for any type of organization. The Cal-OSHA web site includes tables showing recordable incidence rates for 2003, the most recent year that data has been collected and arrayed, for both governmental and private organizations of all types. The recordable incidence rate for all industries including State and local government is 5.9, and the recordable incidence rate for private industry is 5.4. For repair and maintenance organizations, the recordable incidence rate is 5.8, which is approximately 83.3 percent less than the Structural Maintenance Division's recordable incidence rate of 34.7.

The injury history of the Structural Maintenance Division for the past two fiscal years, as indicated in the recordable incidence rate and the recordable severity rate, has been particularly high, at averages of 29.3 and 618.6 respectively. Further, according to information provided by the Department's Office of Environment, Health and Safety, there are currently 23 open worker's compensation claims attributable to members and former members of the Structural Maintenance Division. If the Structural Maintenance Division can reduce its two-year average recordable severity rate from 618.6 to the Public Utility Commission's Hetch Hetchy Water and Power Division's two-year average recordable severity rate of 148.4, lost work due to injuries of approximately 2.7 full time equivalent positions can be prevented in addition to the obvious health and welfare benefits to the employees. Therefore, the Budget Analyst recommends that the Recreation and Park Department investigate the causes of the apparent high injury rates among members of the Structural Maintenance Division and develop an action plan to reduce significantly the incidence of injury in the Division.

The Need for an Environmentally Compliant Vehicle Wash Rack

The health, safety, and environmental inspection identified that " Vehicle washing requires a designated wash rack with a separation chamber to mitigate the amount of sediments, oils, organics, and metals associated with equipment usage." The Structural Maintenance Division's current vehicle wash area is adjacent to the storeroom in the Structural Maintenance Division's yard in a shed bay. The area is not distinguishable as a vehicle wash area because normally there are pieces of heavy equipment, such as backhoes and front loaders, parked in the area. Further, until the recent cleanup, the area was contaminated with filth and debris from the operations of the heavy equipment parked therein. During the health, safety, and environmental inspection of November 8, 2005, the inspectors could not gain access to the only drain near the vehicle wash area because it was clogged and submerged in a small pool of water.

The Structural Maintenance Division is in need of a proper vehicle wash rack, not only for environmental concerns, but also in order to properly wash the vehicles. The Structural Maintenance Division's general-purpose vehicles have access, at a cost, to the privately owned Tower Car Wash located at Mission Street and Van Ness Avenue. However, there is no adequate wash area for non-general-purpose vehicles and equipment. The City Shops Automotive Supervisor has provided the Budget Analyst with information on what appears to be an adequate vehicle wash system, and the Budget Analyst has provided that information to the Maintenance Superintendent, Structural Maintenance Division.

Conclusions

We reviewed the health, safety, and environmental condition of the Structural Maintenance Division to determine whether the Division is in compliance with applicable regulations and whether the Division's injury experience is reasonable. We found the following conditions:

- A health, safety, and environmental inspection conducted on November 8, 2005, revealed deficiencies in health, safety, and environmental compliance. General observations from the health and safety inspection are: (1) housekeeping was very poor in most of the shops, with extensive amounts of new and old materials, supplies, and equipment stored in a haphazard manner; (2) hazardous materials are inappropriately managed, including improper storage of flammable chemicals, unlabeled chemical containers, incompatible chemicals stored together, lack of signage, and hazardous wastes stored outdoors; and (3) access to electrical control panels was blocked in numerous locations throughout the facilities.
- The injury history of the Structural Maintenance Division for the past two fiscal years, as indicated in the recordable incidence rate and the recordable severity rate, has been particularly high, at averages of 29.3 and 618.6 respectively. Further, according to information provided by the Department's Office of Environment, Health and Safety, there are currently 23 open worker's compensation claims attributable to members and former members of the Structural Maintenance Division. If the Structural Maintenance Division can reduce its two-year average recordable severity rate from 618.6 to the Public Utilities Commission's Hetch Hetchy Water and Power Division's two-year average recordable

severity rate of 148.4, lost work due to injuries of approximately 2.7 full time equivalent positions can be prevented in addition to the obvious health and welfare benefits to the employees.

- The Structural Maintenance Division is in need of a proper vehicle wash rack, not only for environmental concerns, but also in order to properly wash the vehicles.

Recommendations

The Structural Maintenance Division Manager should:

- 14.1 Take necessary action to improve the physical condition of the Structural Maintenance Division's yard, including continuing the cleanup effort of the individual shops and the common areas.
- 14.2 In conjunction with the Environment, Health and Safety Manager, develop and implement a plan to reduce significantly the incidence of injuries in the Structural Maintenance Division.
- 14.3 Obtain the resources required to provide the Structural Maintenance Division with a wash rack that is environmentally responsive and accommodates the vehicle washing requirements of the Structural Maintenance Division.

Costs and Benefits

The Budget Analyst's recommendations can be accomplished with existing staff in-house. The benefits of the recommendations would include a healthier, safer, and environmentally compliant workplace, and the prevention of lost work due to injuries of approximately 2.7 full time equivalent positions, based on the recordable severity rate of 148.4 achieved by the Hetch Hetchy Water and Power Division of the Public Utilities Commission.