
CSI NEWS

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Wastewater Disposal

A number of auto dealers in Orange County, California are involved in a lawsuit over improper disposal of wastewater to storm drains. A company that previously was involved in cleaning the shop floors at some of these dealerships has filed the lawsuit. While the legal theories being used in the lawsuit are complex, the objective of this article is to reinforce proper wastewater disposal procedures for the dealerships.

In general, dealerships in urban areas are equipped with two types of sewer systems. One for storm water disposal and the other for wastewater. Storm drains, as the name implies, are for the disposal of storm water and storm water alone. The storm drains are typically located on the street and drain directly to the ocean, river, or other receiving water bodies without any treatment. Because the water is discharged without treatment, regulatory agencies prohibit putting any contaminant or contaminated water into the storm drain. Wastewater laden with contaminants such as oil and grease should be discharged to the sanitary sewer located at the facility. Any discharge of oil and grease into the storm sewers may bring about an enforcement action.

The sanitary sewers, on the other hand, send the wastewater to a treatment plant where various processes reduce the contaminants to a federally acceptable level before the water is discharged to a river or ocean. Since the sewage treatment plant has a finite capacity on the volume of wastewater it can treat and treatability limits on the concentration of contaminants, the sanitation districts must

impose limits on what commercial establishments can drain into the sanitary sewers. Storm water routed into the sanitary sewer may exceed the capacity of the sewage treatment plant and cause the discharge of contaminated water into the river or ocean. Most sanitation districts prohibit directing storm water runoff into the sanitary sewer system.

Sewage treatment plants are very efficient at removing dilute contaminants, but have limited ability to remove concentrated contaminants. Therefore, local agencies limit the level of contaminants that can be discharged into the sewer lines.

Wastewater from steam cleaning activities is considered high in oil and grease and must be treated at the automobile dealership before sending to the sanitary sewer. Similarly, wastewater from shop floor cleaning activities must be treated before being discharged into the sanitary sewer. Treatment typically consists of a clarifier that separates oil, grease, and solids before clear water flows into the sanitary sewer system. The oil, grease and settled solids such as sand and clay must periodically be removed and discarded as hazardous waste.

Many of the local sanitary sewer districts limit the total oil and grease to 100 mg/L for water discharged into the sewer. While a relatively clean clarifier will maintain the discharge of oil and grease to less than 100 mg/L, a clarifier full of oil and grease may not be able to meet the discharge limits. Clarifiers need to be cleaned periodically. The size of the clarifier may also be an issue. When the clarifier was installed, its size was based on the expected wastewater flow. If the volume of the wastewater to the clarifier has increased significantly, the clarifier may have to be enlarged.

Cleaning of clarifiers is a job best done by an independent, licensed, hazardous waste hauler. The clarifier waste may contain other contaminants, rendering the oil, grease, and sludge a hazardous waste. In the absence of lab tests, it is best to dispose of the clarifier waste as hazardous waste. The dealership must ensure that the clarifier waste is

transported to a facility that is licensed to treat such wastes.

Already we are seeing increased enforcement activities from the regulatory agencies in the Southern California districts as a result of the litigation. It would be prudent for the dealership to reassess the wastewater discharge and to ensure continued compliance. The basic issues are summarized as follows.

Wastewater Disposal Compliance

- Ensure storm water runoff consists of rainwater alone. Lot cleaning of cars should be limited to purified water and no detail chemicals should be used.
- All automobile washing involving soap or detail chemicals should be limited to the wash rack where wastewater is discharged to the clarifier connected to the sanitary sewer.
- Clean clarifiers regularly to ensure efficient removal of oil and grease from wastewater.
- If your facility does not have a sanitary sewer connection, but water is being discharged to a septic tank or injection well, cease discharge of all contaminated wastewater to the septic tank or injection wells.

Water Based Cleaners

In southern California, local air quality districts have limited the volatile organic compounds in solutions used in parts washing equipment to 50 mg/L. Consequently, a variety of different water based solutions with a variety of different equipment have entered the marketplace. Some of these cleaning solutions have caused employees to complain of headaches, rashes and foul odors.

The equipment must be of comfortable height and the tank size should be big enough to accommodate parts typically cleaned by such machines. The parts washing machine should have UL or FM certification or equivalent to ensure the electrical and mechanical hazards has been properly addressed. Look for safety features such as ground fault circuit interrupter (GFCI) and high temperature cutoff switch. Do not overlook reliability and maintainability. The design should accommodate easy servicing and maintenance.

The solution provided by the vendor must comply with EPA and AQMD requirements. The dealership must obtain a material safety data sheet and read it to identify personal protective equipment requirements and other health hazards. The information on the MSDS must be communicated to the employees and the required personal protective equipment provided. Most water-based cleaners will require the use of gloves, goggles and aprons. Employees must be trained in the proper use and maintenance of the PPE.

Some solutions may require local exhaust ventilation, which must be considered when pricing the equipment. Some users have complained about rashes and other skin ailments when these solutions get on the skin. Using the proper gloves when handling the cleaning solution or wet

parts may eliminate exposure to the skin. Some solutions require heavy duty neoprene gloves that may cost up to \$15.00 a pair. The employees must be made aware that the solvent is harmful and that glove use is not considered optional. Strong solvents, such as some of the chlorinated solvents, may injure the skin on even the briefest of contact. Some of the water-based cleaners use protein-digesting enzymes that may harm the protein of the skin. In summary, the skin impact of the solutions should be taken seriously.

The water-based cleaners must not only clean the oil and grease off the parts, but should also contain a rust inhibitor to protect metal parts.

The disposal of these solutions can be somewhat cumbersome. While some vendors have licensed haulers and permitted facilities for disposal of the spent solution, others have no disposal strategy. Some even recommend disposal of the used parts cleaning solution to the sanitary sewer system. Whatever disposal procedures are used, they must not violate environmental regulations. Violation of environmental regulations can be very expensive. When in doubt, contact your CSI representative. Do not guess!

Contaminants can be added to cleaning solutions through such practices as using spray cans over the wash tank. Hazardous substances contained in the sprayed material or on the sprayed part can fall into the water-based cleaning solution and may cause it to become a hazardous waste when it is time to change it. When discharged to the clarifier, the hazardous chemicals may float in the clarifier making the clarifier cleaning more expensive and more frequent. Haulers charge for waste disposal based upon the amount and type of contaminants in the sludge. If the contaminants are prohibited from discharging to the sewer and find their way through the clarifier, the local sanitation district may bring enforcement action, which may include monetary fines or loss of discharge privileges. In summary, solvent tank wastes should be stored separately and disposed of by a licensed hauler to a permitted facility. Clarifier disposal of solvent waste should be prohibited.

Respiratory Protection Program

The federal OSHA and later Cal-OSHA have amended the regulations pertaining to Respiratory Protection Program. The new regulations are in effect as of April 1999. In an automobile dealership, respirator use is mandatory for a paint shop, while it may be optional in the service department. When respiratory protection is mandatory, a written respiratory protection program is needed, as well as employee training on the program is required.

The written Respiratory Protection Program must include the following provisions:

- Procedures for selecting respirators for use in the workplace
- Medical evaluation of employees required to use respirators
- Fit testing procedures for tight-fitting respirators
- Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations
- Procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators
- Training of employees in the respiratory hazards to which they are potentially exposed during routine and emergency situations
- Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance
- Procedures for regularly evaluating the effectiveness of the program.

The optional use of respirators is now detailed in the regulations. Optional use is defined as employees wearing respirators where contaminants are below the threshold levels. For example, where employees are protecting themselves against dust in an automobile service shop setting or sanding in a body shop, a respirator is not required and considered optional. This is because the employees health is not adversely affected in such atmospheres. A letter to the employee regarding the optional use of the respirator should be circulated nevertheless.

Other changes to the Respiratory Protection Program include a mandatory initial medical evaluation of the employee wearing the respirator. A follow up medical evaluation is required whenever the type of respirator is changed, there is a change in the health status of the employee, or whenever the level or type of hazard the employee is exposed to changes. The new requirements specify an annual review of the Respiratory Protection Program.

For all CSI clients who use the CSI Respiratory Protection Program service, a written program compliant with the new additions is being sent.

Air Quality Recordkeeping

In February 1999, the SCAQMD Chairman created a new recordkeeping streamlining task force. The fact that recordkeeping requirements of SCAQMD are excessive, time consuming and an unnecessary burden that do little to reduce air pollution is agreed upon by both the regulated businesses and the AQMD staff. While the Chairman wanted ways to reduce the recordkeeping requirements, the businesses in the SCAQMD jurisdiction have received a sudden flurry of inspections by SCAQMD staff. The inspectors, depending upon the business, typically inspected for items as follows:

- Permits on equipment such as gas dispensing and paint booths properly posted.

- Usage logs for freon machine, paints and solvents (rules 1411, 1151 and 1171).
- Proper HVLP guns.
- Reduced VOC paint usage (limits on VOCs were reduced as of December 1998).
- Employee training and certification for freon 12 recycling machines.

As complete compliance is a lengthy undertaking, CSI has merely summarized the major issues. For further details with SCAQMD compliance, please call your CSI engineer.

Forklift Operator Training

For more than 40 years, the California occupational safety program has required forklift operators to be trained in the safe operation. This training is required to be refreshed annually and has been since 1975. In December 1998, OSHA revised the standard to require classroom instruction combined with behind-the-wheel training and skills evaluation. The employer must ensure that each forklift operator is competent and has successfully completed the training and evaluation program. Refresher training and skills evaluation must be conducted on an as-needed basis, but not less than every 3 years.

Leaking Compressed Gas Cylinders

OSHA regulations no longer permit a fuel gas cylinder, including LPG, propane, acetylene, or MAPP, to remain in the work area with a cylinder valve leak. Even if the leak can be stopped by attaching a regulator, the cylinder must be taken outdoors to a safe, isolated area. The supplier must be notified promptly. Do not take chances with a leaking cylinder, but get it out of the shop before trouble occurs.

Guarding Abrasive Grinders

Bench mounted and pedestal mounted abrasive grinders must have the work rest adjusted to within 1/8 inch of the wheel and the tongue guard, sometimes called a "spark deflector," adjusted to within 1/4 inch of the wheel. This requirement applies only to abrasive wheels that are manufactured by cementing abrasive particles together with an inorganic or organic binder. It does not apply to metal, wood, cloth, paper wheels, discs, or to wheels made of natural (quarried) sandstone.

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