APPENDIX L
Safety

Driving Safety & Reporting Vehicle Accidents

During beach sample collection, 4-wheel drive mode should be used on the sand. It is best to use 4-lo when driving on the sand in 4-wheel drive (4WD). Tire pressure should equal 20-25 psi for the small beach truck, and 35 psi for the large truck. If there is some problem driving on the sand (i.e., stuck or barely moving) the tire pressure is decreased to 15 psi then when off the sand re-inflated to 20 psi. When the sampler arrives back at the lab, the tire pressure is increased back up to 25 psi. The sampler needs to exit 4WD when leaving the sand for street driving. When driving with tires at minimum activation pressure range (as recommended by the National Highway Traffic Safety Administration), one should not exceed 65 MPH on the freeway and drive for no longer than 60 minutes at high speed. Safety issues related to tires and tire pressure may be found at this website: http://www.nhtsa.dot.gov/cars/rules/rulings/TirePresFinal.

The Life Guard speed limit on the sand is 15 MPH, dependent upon conditions. At no time is driving faster than 15 MPH allowable. Observe the beach speed limit and anticipate the possibility of people covered in sand or otherwise obscured from view. Be extremely cautious when children are present.

The following are additional precautions for City of L.A.'s EMD and participating laboratories' personnel to use as guidelines while driving a 4WD vehicle to collect beach samples:

1. Drivers of city vehicles must have a valid operating license.
2. If persons in vehicle observe a potential unsafe condition with the vehicle, discontinue operation, return the vehicle, and report the problem to management and Fleet Services.
3. Vehicle occupants must wear safety belts and ensure the vehicle contains an accident-reporting envelope.
4. Cargo items should not be stacked above seat level; if they are, a safety screen should be installed.
5. Employee responsibility:
6. It is the responsibility of every City employee who drives, is in control of, or is responsible for any City-owned, rented or mileage vehicle which is involved in an accident (no matter how slight) to notify the proper authorities and to fill out the proper forms in case of a vehicle accident.
7. Detailed instructions on what to do are contained in the packet (form Gen. 84) which is kept in the glove compartment of every City-owned or mileage vehicle. If the vehicle you are using does not contain a packet, you may obtain one by calling any Fleet Services facility where City vehicles are maintained. Included

in the packet is form Gen. 88, which is the automobile accident report. This form has five copies, which are to be distributed to the locations printed on the top of the form. This written report must be filed with the City Attorney within 24 hours of the accident.

8. If a vehicle accident occurs, the driver must report the accident to the police by notifying the Police Complaint Board at 213-485-2683 or 213-623-3311. For emergencies, dial 911. Additionally, if any injury or death has occurred, you must report the accident by phone to the City Attorney, Automobile Liability Division, at 213-485-3634. If no one answers, have the City Hall Chief Operator, at 213-485-5500, relay your call. If an EMD employee is injured, contact the Workers' Compensation Division at 213-847-9405 to report the injury. All City/EMD vehicles involved in accidents must be brought to Fleet Services (213-485-4985) for inspection within five working days.

    a. All accidents must be reported including:
        - When an accident occurs in a County or incorporated area,
        - When a driver is accused of being in an accident but has no knowledge of same,
        - When an animal is seriously injured or killed. Search for the owner and report the incident.
        - When two City vehicles are involved in an accident,
        - When the accident occurs on a freeway.

        The Occupational Safety Office must be notified if there is death or serious injury caused by the vehicular accident. The City of Los Angeles' Occupational Safety Office telephone number is 213-485-4691. Call The City Hall Chief Operator at 213-485-5500 and ask for a safety engineer if the accident occurs after working hours.

        The driver must remain on the scene of the accident and obtain information from other persons involved. The driver should also have witnesses fill out the witness cards located in the packet of information and forms in the glove compartment.

    b. Supervisor's Responsibility:
        - Ensure that the driver has made all the required notifications and has properly filled out all the forms.
        - Investigate the accident and attempt to determine what may have lead to the incident.
        - Discuss your finding of the investigation with the driver and co-workers so that these types of incidents can be avoided in the futures.

    c. Vehicle Accident Reporting Procedure
    The EMD employee involved in the accident must:
        - First:

    - Stop immediately and provide needed first aid.
    - Call for an ambulance if necessary
    - Avoid obstructing traffic.
    - Place emergency flags or flares if available.
    - Notify the Police Complaint Board.
    - If a death or serious injury has occurred, call the Occupational Safety Office.
- Second:
    - Follow "Accident Reporting Instructions" in the form Gen. 88 packet.
    - Be courteous; avoid arguments.
    - Ask witnesses to sign witness cards.
    - Sign no statements.
    - Admit no negligence or fault.
    - Assume no liability for yourself or the City.
- Third:
    - Notify your supervisor that you have been involved in an accident.
    - Completely fill out form Gen. 88. The carbon copies of the form must not contain information on the back portion of the original or City Attorney's copy. The form must be signed, dated, and turned in to the employee's supervisor.
    - If a death or serious injury has occurred, call the City Attorney.
    - Contact Worker's Compensation if a City employee has been injured

Field Sampling

For employees who have been assigned the duty of sample collection, there must be an awareness of the potential hazards involved at both the site and in the sampling subject. The following are general precautions to be observed during beach and storm drain sample collection.

a. Use proper equipment for the job. This includes personal protective gear such as eye protection, gloves, boots, or hardhat, when necessary; and equipment required to aid in sampling such as poles and holders for the bottles. While moving around Hyperion Treatment Plant, hardhats must be worn at all times.
b. No Laboratory Technician should sample alone along the beach prior to proper training; if possible bring someone along to assist.
c. Be sure samples are secure in the vehicle or mode of transport to avoid the risk of contamination and the possibility of spillage resulting in exposure.
d. Never deliberately touch the water or waste being sampled. Remember that these substances could pose a risk to your health.
e. Disinfect hands and exposed body parts after sampling, and be sure to clean off utensils, gloves, and boots to protect others.

During shoreline sampling, safety of the sampler is of prime importance. If a sample location is inaccessible or deemed to be unsafe, no sample is required to be collected and comments noted on the beach observation sheet. During wet weather, safety consideration may preclude collection of a wave-wash sample. Samples at historical sites may be collected, if deemed safe.

Laboratory Safety

The collection and analysis of environmental samples involves contact with samples that may contain agents that pose a microbiological hazard. The primary means of exposure to these microbiological hazards involve body contact during sample collection and hand-mouth or nose contact while handling the samples. Personal protective measures are mandatory while working in the field and laboratory. Following are some key steps to be followed by all laboratory analysts:

1. Assure that appropriate eye protection is worn by all persons, when toxic materials (chemicals or biochemicals) are handled. Contact lenses should not be worn when working with chemicals.
2. Wear appropriate gloves when the potential for contact with toxic materials exists; inspect gloves before each use, wash them before removal, and replace them periodically.
3. Persons doing sampling must wear boots. The boots must be cleaned before entering the building. Boots cannot be worn in the lunchroom, under any circumstances. Steel-toed chemical resistant boots should be worn for the harshest environments, where there is also risk of injury to the foot and toes.
4. Use any other protective and emergency apparel and equipment as appropriate.
5. Remove laboratory coats immediately on significant contamination.

In addition, persons who work in biological laboratories are often at risk of exposing themselves to a number of infectious agents, especially those known to be indigenous to wastewater. Most persons trained in biological and especially microbiological fields usually are aware of the risks involved, and even if precautions are taken, most of the work-related infections are due to certain practices conducted in the laboratory resulting in the generation of aerosols or through cutaneous pathways. The following guidelines are designed to prevent any exposure of personnel to infectious agents.

1. General chemical hygiene practices apply as well to the biological laboratories.
2. All work areas must be disinfected before and after all laboratory operations.
3. Hazardous areas and receptacles of contaminated items are to be marked with a biohazard sign.
4. No eating or drinking in the laboratory. No food or drink may be stored in laboratory refrigerators, incubators or on bench tops.

5. Store personal effects outside the microbiology laboratory area to prevent contamination. Manager and supervisors are responsible for enforcing this rule.

1. It is policy to wear a lab coat while working in the microbiology lab. Lab coats and street clothes should be stored separately. Lab coats are prohibited in the lunchroom.
2. Latex or plastic gloves are to be provided and used by employees.
3. Always wash your hands thoroughly after handling sewage, sludge, or receiving water samples of any source before handling food or leaving the lab. "All" samples should be treated as potentially hazardous. Germicidal soap is to be available to all employees, and should be kept in stock.
4. Laboratory workers should not touch their hands to their face, especially the eyes, nose, and mouth when working with wastewater and sludge samples.
5. For workers who handle wastewater and its byproducts, it is recommended that they have been vaccinated for polio and tetanus. Persons in poor health and at risk of infection should inform their supervisor, and arrange for an improvement in their personal protection.
6. Handle all microorganisms as if they are pathogenic. The principle of sterile technique should be understood and applied during the handling of cultures and their related equipments.
7. Never pipette by mouth. Use bulbs or other mechanical means to draw up the liquid. Discard all used pipettes into a jar containing disinfectant solution for decontamination before washing them.
8. Avoid generation of aerosols during operations such as inoculation, pipetting, mixing, or centrifuging.
9. Equipment:
10. Microscopes, colony counters, etc. are to be kept in the work area and be dust free; they are to be cleaned after use.
11. Water baths should be kept free of growth deposits.
12. Autoclaves, hot air sterilizing ovens, and water distilling equipment and centrifuges should be cleaned regularly to ensure safe operating.
13. Employees are to be trained in autoclave operation and operating instructions posted near each instrument.
14. Performance checks of autoclaves and hot air sterilizers should be conducted with the use of spore strips, spore ampoules, indicators, etc.
15. Safety cabinets of the appropriate type and class are to be supplied, maintained, and used.
16. Personnel are to be trained in the proper procedures for handling lyophilized (freeze-dried) cultures when used.

17. Employees should use the provided bottle carriers when moving reagents, acids, and solvents through the building.
18. Laboratory personnel must follow labeling protocols in the laboratory to prevent mix-ups of reagents, and when possible use the pre-labeled or permanently labeled bottles. Secondary containers are to be labeled as well.
19. In the event of a spill, all possible contaminated surfaces and tools are to be disinfected and the absorbent material placed in a biohazard bag for disposal.
20. All contaminated plates and Quanti-trays are to be autoclaved in biohazard bags at the end of the analysis and then disposed of in the labeled bags as regular trash.
21. Sterilize biological waste materials and contaminated equipment (cultures, glassware, etc.) before washing, storage, or disposal by autoclaving or decontaminating.
22. Eliminate flies and other insects to prevent contamination vectors of sterile equipment, media, samples, cultures, and infection of personnel (i.e., provide screens on windows and doors to outside if there is no air conditioning).