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Name & Function

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Name & Function

1. **Purpose** 
   1. This SOP describes the proper segregation, storage, disposal, and transport of hazardous waste that is produced from the manufacturing laboratory.
2. **Scope/Objective**
   1. To train operators on the proper and safe procedure for disposal of laboratory waste at Plan LBC, Inc.
3. **Related Documents**
   1. Following SOPs: None.
4. **Responsibilities & Accountabilities**
   1. It is the responsibility of all technicians to read and understand this SOP. Following reading, observe described process by a qualified trainer and log training into the training binders.
5. **Safety Equipment/PPE**
   1. Standard PPE includes – hair net and beard net (if applicable), lab shoes, gloves, lab coat or overalls, and safety glasses.
   2. Additional PPE for specific process – Leather gloves, face mask, fume mask.
6. **Procedure** 
   1. Not all waste is compatible. Waste is designated by the numbering system 1 through 5. The numbers may not be mixed in order to ensure reactions do not occur.
   2. Waste Number 1 – Acids
   3. Waste Number 2 – Bases
   4. Waste Number 3 – Flammable and Combustible Liquids
      1. Waste alcohols (methanol, ethanol, isopropyl alcohol)
      2. Waste pentane
      3. C1D1 drying oven cold trap waste
   5. Waste Number 4 – Halogens
      1. Any salt solutions containing halogens
   6. Waste Number 5 – Spent Pump Oil
      1. Mineral oil
      2. General rotary vane vacuum pump oil
   7. Solid waste
      1. Spent chromatography media
      2. Spill kit disposal media (kitty litter or sand)
      3. Broken glass
      4. Contaminated waste rags
      5. Filter papers and filter aides
   8. There are designated waste satellites for flammable and combustible material. The satellite stations are designated by a red flammable material cannister inside a chemical resistant spill tray. As these satellites fill up or at the end of the day, whatever comes first, they are to be emptied into the designated waste drums in the hazardous waste storage location.
   9. Always avoid stockpiling chemical waste or chemicals, always ensure chemical waste pick up schedules are being followed and performed early if needed.
   10. Always store flammable liquids in the flammable chemical storage locker when not in use.
   11. Never store waste in direct sunlight.
   12. Always slowly open waste drums when disposing of chemicals incase excess pressure buildup has occurred due to reactions or temperature fluctuation.
   13. Hazardous waste must be stored behind a locked gate out of reach of non-designated personnel. Waste may be accessed by management, waste disposal technicians and waste management company personnel only.
7. **Emergency Protocol**
   1. Nearest emergency medical center is at 3700 E South St, Lakewood, CA 90805
   2. In case of any emergency call 911 immediately. Notify supervisors if not already notified.
   3. In case of any fire, call 911 immediately and request fire department assistance. Refer to Fire Safety SOP for fire safety instructions.
   4. In case of a large chemical spill, the chemical waste company vendor should be contacted as soon as possible.
   5. In case of a tripped explosive vapor detector, determine source of leak or vapor as quickly as possible and contain it. If the leak or vapor source is quickly containable, notify management as soon as possible to reset alarm.
   6. If a reaction is apparent, contact hazardous waste company to consult based on visual appearance of reaction and what was added to the container prior to reactions occurring. Evacuate building if necessary.
   7. In case of large acid spill, sodium bicarbonate may be used as a gentile base to neutralize the spill. Slowly add sodium bicarbonate until reaction is no longer apparent. Test pH. If pH is between 6 and 8 the spill may be mopped up. Use neutral water to mop up spill.
   8. In case of large base spill, use a dilute acid such as vinegar or citric acid solution to neutralize. Test pH. If pH is between 6 and 8 the spill may be mopped up. Use netural water to mop up spill.
   9. If an organic spill occurs, use spill kit containment bats to prevent spread of spill. Within the ring of the bats, an adsorbent such as sand or kitty litter may be used to absorb most of the solvent or spill. The adsorbent may be scooped up and disposed of in solid waste. The bats may be thrown away in the solid waste bin as well. Notify management if spill kit was completely exhausted.
8. **Planned Maintenance** 
   1. If waste drums appear to be wearing out, contact waste management company for replacements.
   2. If flammable waste satellites seals fail, they should either be decommissioned or replaced if possible.
   3. Check spill kits contents quarterly.
   4. Check Fire extinguisher pressure quarterly.
   5. Check adsorbent inventory quarterly.
9. **Distribution**
   1. This SOP is to be distributed to manufacturing and quality assurance personnel.
10. **Health, Safety and Environmental**
    1. Always wear a laboratory frock or coat, gloves, hair nets, shoe covers, safety goggles, ear plugs, face masks where applicable, face shields where applicable, and heat resistant gloves where applicable.
    2. All Chemical waste and by-products must be segregated appropriately, and by-product waste must include date of production and lot number produced from.
    3. If an emergency or injury occurs, call 911 to report immediately.
    4. Visitors may not enter manufacturing C1D1/C1D2 area without proper orientation or prior authorization.