WASTEWATER SLUG CONTROL PROGRAM

NEW MEXICO STATE UNIVERSITY

Las Cruces, New Mexico

ENVIRONMENTAL, HEALTH & SAFETY

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NMSU WASTEWATER SLUG CONTROL PROGRAM

Pursuant to CFR 403.8(f)(2)(v) the City of Las Cruces (the City) has required New Mexico State University (NMSU or the University), to develop the following wastewater slug control plan. This plan and attached training documents on wastewater slug control and emergency notification will be included in the NMSU Chemical Hygiene Plan and kept at campus facilities where toxic or hazardous material are used.

Wastewater slugs discharges are defined as any discharge to the sewer system of a non-routine, episodic nature, including but not limited to an accidental spill or non-customary batch discharge. The results of such activities shall be available to the City Wastewater Authority upon request. As required by the above regulations, this wastewater slug control plan shall contain information on the discharge practices, chemical storage, notification procedures and procedures to prevent adverse impact from accidental spills:

(A) DESCRIPTION OF DISCHARGE PRACTICES, INCLUDING BATCH DISCHARGES

1. General Wastewater System

The NMSU wastewater system collects wastewater from sinks, toilets, floor drains as well as direct discharge lines from the campus academic, research and farm buildings, the residential halls, apartments and housing units, and the special events and athletic facilities as well as from various maintenance, utility systems, and warehouse units on the NMSU campus (see map). Generally the wastewater in the system sewer flows in a westerly direction (down grade) to campus collector lines along Knox Street and northward from there. A general intercept sump is located on the main collector near the intersection of Knox Street with College Avenue. This intercept sump is used to sample effluent prior to general discharge to the City Wastewater lines at the intersection of Knox Street and University Drive. The Chemistry Building has a separate discharge line via a neutralization tank to the City wastewater system beneath University Avenue. Several small campus building located west of Union Avenue discharge to septic tanks.

2. General Wastewater Discharge and Chemical Disposal

OFS Engineering oversees the NMSU wastewater discharge permit and is responsible for the proper disposal of certain industrial and regulated waste from campus utility systems. EH&S is responsible for ensuring disposal of all hazardous and other regulated waste and unused chemicals from laboratories, shop and campus farm areas in compliance with Federal and State regulations.

All campus disposal of chemicals, infectious materials and hazardous or industrial waste is to be performed or arranged under the authority and control of NMSU Environmental Health & Safety (EH&S) and/or NMSU Office of Facilities and Services (OFS). NMSU prohibits the general discharge or disposal of any chemicals, infectious materials, and industrial waste to the sanitary sewers without review. In addition, discharge to sanitary sewer from campus construction projects and sites are subject to review and are generally prohibited. Upon request by campus departments, EH&S and/or OFS Engineering will review and allow sink/drain discharge of incidental wastewater so long as they do not exceed the wastewater discharge permit parameters or are authorized by the authorities at the City Wastewater Treatment Plant.

NMSU staff, faculty, and student employees are trained at hire and periodically on the importance of chemical safety, environmental compliance and the University's disposal policy. Attached to this plan are training documents on the Slug Control Plan and Emergency Notification

which will be instituted with this plan to help prevent chemical from entering the sanitary sewers. The plan and training document include components of the Best Management Practices recommended by EPA for preventing contamination/pollution by toxic and hazardous materials.

3. Academic and Research Facilities -

Laboratories - The NMSU campus has over 30 academic and research buildings with laboratories. Chemicals in these area are used and stored in small amounts which are to segregated by compatibility. All lab users are required to attend training that covers chemical safety and handling, emergency response and disposal requirements. The chemicals in these area have the potential to be accidentally discharged to floor drains or bench sinks. Such discharges are rare and are generally limited by the nature of the instruction or research activity to be small quantities (less than a gallon of liquid) due to accidental spillage.

Custodial Closets - Nearly every campus academic, research, farm, residential, special event, athletic and maintenance building contains at least one custodial closet with a floor drain for general discharge of used wash and mop water. Any blood waste is collected and sent for disposal as medical waste. Unused chemicals and cleanup waste from any spills are turned over to EH&S for disposal. Only minor amounts of cleaning, polishes, and disinfectant are kept in each closet. All solvent and stripper material are kept at the main Custodial storage at the Physical Plant. Some custodial supplies may be stored at the Physical Plant in drums of 15 to 30 gallons.

4. Farm Units

Neal Hall Slaughter House - A small slaughter facility is located in Neal Hall along Espina Street which is used semiannually for butchering farm animals. The blood from animal bleed out is drained to a sump which is pumped out on an as needed basis. Incidental wash water from other butcher operations is sent directly to the sanitary sewers via the floor drains and sinks.

5. Cooling/Heating Systems

Central Utility Plant - The cooling towers at the Campus Central Plant on Sweet Street have continuous blow down controls which automatically discharge treated cooling water to the sanitary sewer. The treated water is monitored periodically to ensure that it is within wastewater discharge limits. The cool pool a component of the University chilled water system was drained last year for the first time in 10 years and the chiller water was discharged to the campus stormwater containment pond. Drums of water additive are segregated from the sanitary drains by secondary containment within the facility and in outside storage. Supplies held periodically at the loading docks have no access to sanitary drains.

6. Cafeteria/Kitchens grease disposal

Corbett Center - The grease from the kitchens in the cafeteria and snack areas in Corbett Center are discharged to a grease sump tank at the south side of the building. This sump is pumped out on a monthly basis under contract to a vendor for disposal.

7. Pool Maintenance

Natatorium - The natatorium uses and stores chlorine tablets and hydrochloric acid for the pool. Sanitary floor drains are separated from chemical storage by a 3 ft containment wall.

8. Vehicle Maintenance

Physical Plant. The motor pool and heavy equipment maintenance at the Physical Plant provide regular vehicle maintenance. All waste oil and antifreeze is collected and accumulated in

55 gallon drums within secondary containment at the Physical Plant. EH&S disposes of the antifreeze as waste and the waste oil is removed under contract by an oil recycler. Both area have wash bays which discharge to settling sumps. The sumps are pumped out on as needed basis (typically semi-annually) by a vendor contracted for disposal.

Anderson Hall and Housing Warehouse – The Physical Science Lab and the Housing Department provide minor vehicle maintenance at interior bays in the Andersen Hall shops and the Housing Warehouse respectively. Used antifreeze is sent for waste disposal while the waste oil is recycled. At Andersen Hall, secondary containment is provided so the wastes do not have access to the sanitary drains.

Farm Shop – the College of Agriculture has a small shop located on Steward Street which services farm equipment. All waste oil and antifreeze are collected for disposal. The products and waste do not have access to the sanitary sewer system.

DABCC Vehicle & Trades Shop/Class Areas - DABCC has several shop/class areas which include vehicle repair and HVAC training area. Chemical for instruction are kept in small quantities in individual containers. All waste oil, antifreeze, and other chemicals are collected and accumulated in drums within secondary containment outside the DABCC building for recycling or disposal. Any miscellaneous spillage in the vehicle bays is washed during cleanup into a French drain which discharges into a holding sump. The holding sump is pumped out on an as needed basis (typically yearly) by a vendor for disposal. The solvents in a 5 gallon part washer is maintained by a solvent recycler.

9. Paint Shop and Booth Operation

Physical Plant - OFS operates a paint shop and booth at the Physical Plant. The paint booth filters and all oil/solvent-base paint wastes are collected for disposal as hazardous waste. The equipment and brushes from water based paint are typically washed to a sump located on the east side of the shop. As noted previously with the City Wastewater System, incidental washout water may be discharged to sanitary drains for onsite painting at campus buildings.

10. Grounds (Landscaping) Chemical Storage

Physical Plant - OFS Ground department maintains several storage units at the Physical Plant containing chemicals for landscape and tree application around the campus. Neither the self-contained storage unit nor the general mixing area has access to sanitary sewers. All unused chemicals and wastes are collected for disposal via EH&S.

11. Warehouse Storage

Physical Plant – OFS keeps individual containers of solvents, flammables and lead/acid batteries as well as provides a loading area for temporary storage of research chemicals in the Physical Plant Warehouse. Most solvent and flammable are kept in approved flammable cabinets. There are no floor drains in the area, hence spilled or leaking materials have no access to the sanitary sewers.

12. Medical Facilities

Student and Employee Health Centers are located respectively on Steward Avenue and Research Drive. Any blood or related waste from these units is collected and disposed of as medical waste. Photo waste from an x-ray unit at Student Health is recycled via a outside vender.

13. NMDA Facility

Weights and Standards – This bureau at the NMDA building receives waste water contaminated with oil. This water is drained to a sump which will be pumped out by an outside vender for disposal on an as needed basis.

State Chemist, Petroleum Standards, and Seed Labs – Chemicals in these labs are used and stored in small amounts. Lab users are required to attend training that covers chemical safety and handling, emergency response and disposal requirements. The wastes are sent to EH&S for disposal.. Like the research labs there is the potential to discharge chemicals by accident to floor drains or bench sinks. Such discharges are rare and are generally limited by the nature of the lab activity to small quantities.

(B) DESCRIPTION OF STORED CHEMICALS

Currently the University has chemical storage in over 700 separate locations, e.g. labs, shops or storage rooms with over 30,000 chemical entries in the chemical inventory database. Chemical storage in the academic campus buildings is primarily within the teaching and research labs, chemical stock rooms, and custodial closets while the chemicals used by NMSU maintenance and trades are primarily in the warehouse, motor pool, central plant, shops, and other building at the Physical Plant and Housing department.

The chemicals in the research labs and shops are not static and change in type and quantity through the year and from semester to semester. With the exception of the warehouse, motor pool and central plant areas, the chemicals are generally stored in small containers of five gallons or less. Depending on the quantities within an area, the flammable and corrosive containers are typically stored within self-contained flammable or corrosive cabinets.

The following is a listing of the location and amount of the hazardous chemical reported under annual EPCRA Tier 2 Report to the New Mexico Environment Department. This report lists extremely hazardous substances and large quantities of any hazardous materials stored on campus.

1. Chlorine:
   Liquid storage, OFS Warehouse, max daily amount 1,700 pounds (10% in water)
   Solid tablet storage, Natatorium, max. daily amount of 800 pounds (35% in solid).
2. Diesel Fuel:
   Underground storage at the OFS Motor Pool, max daily amount 80,000 pounds.
3. Gasoline:
   Underground storage, OFS Motor Pool, max daily amount of 80,000 pounds,
   Underground storage, Anderson Hall, PSL Motor Pool, max amount 24,000 pounds

The full inventory list of chemicals present on campus is part of a NMSU wide HazCom chemical inventory that is kept as part of the University HazCom Plan and Chemical Hygiene Plan. This inventory is to be kept current on the web-based database by the chemical users. General information on the current chemicals, quantities, hazards, and contacts by storage location (building and room) is kept for compliance purposes and is available through NMSU EH&S.

(C) PROCEDURES FOR NOTIFYING THE POTW OF A SLUG DISCHARGE

In the event of a release of hazardous chemicals to the sanitary wastewater system at or to a floor or sink drain, the chemical users are instructed to treat the incident as an emergency and to immediately notify the NMSU Campus Police at 911 or 646-3311. NMSU Police will then notify NMSU Fire and EH&S. Upon response to the location EH&S will notify OFS Engineering. The

NMSU Radiation Safety Officer (RSO) will be notified and will respond if the release is radioactive.

If a slug discharge is deemed likely to upset the operation of the City Wastewater Treatment Plant, the plant contacts will be notified by phone immediately. OFS Engineering oversees the NMSU wastewater discharge permit and is designated as the main contact with the City Wastewater Treatment Plant. If the OFS Engineering representatives are unavailable, EH&S or other OFS authorities may provide information on the release to the City Treatment Plant representatives. The notification numbers for the City Treatment Facility are included below.

Wastewater Treatment Plant Contacts

Daytime (7 am to 5 pm) numbers	Nighttime hours (5pm to 7 am) numbers
Eric Lopez - (505) 528-3599	Night Operators (505) 528-3606
Des Stuart - (505) 528-3601	City Dispatch (505) 526-0500

Regulatory & Environmental Resources - IPP

Daytime (7 am to 5 pm) numbers
Dan Santantonio - (505) 528-3548
Jesus Sanchez - (505) 528-3639

EH&S keeps a Reportable Quantities Notification Guide in the main EH&S office at Academic Research Center, Unit C. The guide includes forms for documenting chemical spill information, e.g. the location, chemical, quantities, response and other parameters related to a chemical release. As appropriate this information will be collected as documentation. NMSU will notify the City Treatment Plant in writing of the reported slug discharge within 5 calendar days of the event.

(D) PROCEDURES TO PREVENT ADVERSE IMPACT FROM ACCIDENTAL SPILLS

The following includes Best Management Practices (procedures, measures, and/or requirements) which have been either recommended or are a requirement in order to prevent accidental chemical spills to the sanitary sewers. Training on these items will be implement as part of the Lab Standard and HazCom Training. These procedures are included in the attached training document on the Slug Control Plan and Emergency Notification.

1. Measures for containing toxic pollutants (Best Management Practices):
   a. Source control and reduction
      i. All chemicals at NMSU are to be reported via the NMSU HazCom inventory database system (details are provided on the NMSU safety website (www.nmsu.edu/safety)
      ii. Prior approval is required for any experiment or procedure involve highly toxic or unusual use of hazardous material. Additional details are provide in the NMSU HazCom Plan and the Chemical Hygiene Plan.
      iii. Minimize storage quantities of chemicals by ordering only what is needed
      iv. Dispose of unwanted chemicals and all hazardous waste through EH&S.
      v. Eliminate (or minimize) the use of mercury and mercury containing devices. All mercury quantities must be reported via the HazCom inventory system. Any and all mercury spill are to be reported to EH&S for cleanup. Details are provided previously by memo and University policy (e.g. Mercury Mandate on NMSU safety website).

   b. Use, storage, and housekeeping measures

i. Avoid open container use of hazardous chemicals near sinks and floor drains.
ii. When open container use of chemicals near sinks and floor drains is unavoidable, cap or plug sinks and drains during chemical use.
iii. Store chemicals in tubs, cabinets, bermed or diked areas, or in other secondary containment.
iv. Use proper containers and restraints.
v. Secure storage cabinets and shelves to prevent tipping or falling.
vi. Maintain spill containment and clean-up materials nearby. Some spill equipment and information on spill clean up is available from EH&S and/or the department.
vii. Follow good housekeeping practices. Never store hazardous chemicals in sinks.

2. Inspection and maintenance of storage areas:

All chemical use and storage areas are to be regularly inspected for proper application of the above BMPs. In chemical storerooms where floor drains go to the sanitary sewer, the floor drains should be plugged, except when they are in use (for example, when floors are mopped). Chemical storerooms should use removable drain plugs in such cases.

3. Material handling and transfer:

Chemicals transferred within buildings or between buildings should be placed in secondary containers that can contain more than 100% of the chemical, in case the primary container breaks. Please contact your Chemical Hygiene Officer or EH&S if you need help on this matter.

4. Worker training

All personnel in operations that could cause a Slug Discharge are to be trained on the contents of the slug control plan and the spill emergency notification (see attached). For laboratory staff, the training will be part of the Lab Standard Training and included in the annual CHP review. For all other hazardous chemical users, training is to be documented and on file at EH&S.

5. Containment structures

As appropriate containment structure are installed for storage of large quantities hazardous materials near floor drains. In certain areas, the floor drains have been covered or plugged.

6. Measures and equipment for emergency response

The NMSU Fire Department is the hazardous materials response team for the University. The Fire Department operates on 24 hour basis and consists of 20 staff and student fire fighters. EH&S provides on-call assistance to the NMSU Fire department for technical assistance and hazardous waste services. The Fire Department keeps a fully equipped emergency response trailer with spill containment devices and spill clean up equipment. Similarly the OFS and EH&S maintain supplies of spill containment and clean up equipment.

In addition each lab and department using large amounts of chemicals are expected to maintain spill containment and clean-up materials. EH&S provides spill response instruction to users and some spill equipment for labs and departments.

New Mexico State University
INTERSTATE 25
N
PAC
ED
Corbett Center
CC
AC
Physical Plant
Genesis Cir
Agric. Research
Central Plant
Anderson Hall
PSL
DABCC
GT
SKH
UNIVERSITY AVE
UNION AVE / EL PASEO RD
KEY
approx. location of acid neutralizaiton tank