

(m) *Accidental discharge/slug (spill) control plans.* The general manager shall evaluate whether each significant industrial user needs an accidental discharge/slug control plan or other action to control slug discharges. For industrial users identified as significant prior to March 3, 2014, this evaluation shall have been conducted by February 1, 2015. Additional significant industrial users shall be evaluated within 1 year of being designated as significant industrial users. The general manager may require any user to develop, submit for approval, and implement ~~such a plan~~ **the slug discharge control plan approved by the city on (date)**. Alternatively, the general manager may develop such a plan for any user. An accidental discharge/slug control plan shall address, at a minimum, the following:

- (1) Description of discharge practices, including non-routine batch discharges;
  - (2) Description of stored chemicals;
  - (3) Procedures for immediately notifying the general manager of any accidental or slug discharge, as required by this division; and
  - (4) Procedures to prevent adverse impact from any accidental or slug discharge. Such procedures include but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, and/or measures and equipment for emergency response.
- (5)The slug discharge control plan must use the following approved format:

#### **INDUSTRIAL USER (IU) SPILL/SLUG CONTROL PLAN**

- **GENERAL INFORMATION:** Name and Address, Contact Person, Discharge Practices, facility layout, Security Provisions and Employee Training (SECTION 1)
- **MATERIAL INVENTORY:** Types, volumes, containers, etc. (SECTION 2)
- **SPILL/SLUG REPORTING:** Description of procedures for notifying POTW (SECTION 3)
- **SPILL AND LEAK PREVENTION:** Procedures to prevent spills, maintain chemical storage, transfer materials, site run-off and training. (SECTION 4)
- **EMERGENCY RESPONSE EQUIPMENT AND PROCEDURES:** Inventory and location of equipment; and procedures (SECTION 5)
- **DAMAGE CONTROL:** Limiting damage to the environment and the wastewater treatment plant. (SECTION 6)
- **TRAINING:** Providing employee training. (SECTION 7)
- **CERTIFICATION:** A certification that the Plan is being implemented to prevent and control slugs and spills. (SECTION 8)

#### **SECTION 1: GENERAL INFORMATION**

A. Slug/Spill Control Plans must include enough information to allow the Utility to:

- 1) categorize and restrict the industry's potential for a slug discharge; and
- 2) respond promptly and efficiently in an emergency.

a) Name  
Address

Industry description

Contact person

Location of Slug/spill plan

- b) Previous spills and actions taken
- c) General layout of the facility indicating location of chemicals, chemical storage, drains, loading and unloading areas, and pretreatment facilities.

- d) Discharge practices, continuous, occasional, no-discharge, drains with plugs

**SECTION 2: MATERIALS INVENTORY**

- A. The facility should provide data on all materials of concern used and stored on site. This may include those materials for which the Utility has established local limits. This information is useful in determining the origin of a slug or spill, potential hazards and appropriate response procedures. A chart format works well:

Chemical	Location	Volume present in facility	Type of container	Transfer areas and practices	Remarks

- 1) Materials - Both chemical and trade names should be listed (OSHA SDSs may be used).
- 2) Location – This will assist personnel in locating areas affected by a spill.
- 3) Container Volume - Useful in determining the potential impact of a slug/spill.
- 4) Container Description - The type of container (e.g. steel drum, fiberglass tank, etc.) and the presence of any valves, pumps, transfer pipes, etc.
- 5) Transfer/Transport Areas – To assess spill potential, possible effects on the treatment plant.
- 6) Additional Remarks - Information on the physical, chemical, and toxicological effects of each material, and special precautions to prevent contact between incompatible materials.
- B. Each facility must demonstrate that the following aspects have been considered:
  - 1) construction of the container;
  - 2) other materials in the immediate vicinity; and
  - 3) surrounding environment

**SECTION 3: SPILL REPORTING**

- A. Reporting and documenting spills and slug discharges should be described.
  - 1) Time, date, and cause of the incident;
  - 2) impact of the spill on the treatment plant and the environment;
  - 3) extent of injury and/or damage; and
  - 4) how future incidents can be avoided.
  - 5) A description of clean-up and disposal procedures must be included where applicable. Reports should address the following questions regarding plan adequacy:
    - a) Was the safety of personnel and the surrounding community ensured throughout the incident?
    - b) Were personnel working near the spill provided with access to protective equipment?
    - c) Was the spill confined quickly?
    - d) Was fire extinguishing equipment adequate and readily available?
    - e) Did secondary containment structures remain intact? Were they properly sized?
    - f) Were appropriate authorities immediately notified of the incident?
- B. Recommendations for improvement in spill response should be included. The investigation report should be available to the Utility, fire, and insurance firms (if applicable) to assist these agencies in their investigations. Copies of forms used for reporting and a list of appropriate response agencies and phone numbers should be included in the Plan.

**SECTION 4: SPILL AND LEAK PREVENTION**

This subsection is divided into a discussion of equipment and procedures. Information that a Slug Control Plan could contain are listed here.

- A. Existing and Proposed Spill Prevention and Containment Equipment

- 1) This section should identify all existing equipment and systems that are in place.
  - 2) If equipment needs to be purchased, the expected purchase dates should be provided.
- B. Equipment to Prevent or Detect Spills
- 1) Chemical storage, process tanks, holding tanks, use compatible materials in construction; underground seepage protection; cathodic protection; level sensing devices; overflow, temperature, pressure alarms; heating coils; collision protection; secondary containment; diversionary structures.
  - 2) Drums: drum construction; storage areas; secondary containment; diversionary structures; collision protection; drum handling equipment; drip pans
  - 3) Pipes, Valves, Fittings, Pumps, Electrical and Mechanical Equipment: seals; valve stem packing; gaskets; cathodic protection; vehicular traffic warning signs
  - 4) Loading Stations: fill safeguards; curbs and drains; warning signs/improper disconnect protection; secondary containment
  - 5) Alarm Systems: to detect unauthorized discharge flows, pH excursions, etc.
- C. Equipment to Contain Spills
- 1) Booms, barriers, sweeps, and fenders; surface collecting agents; absorbent materials; skimmers, oil/water separators; sumps; sewer plugs.
  - 2) Address secondary containment system. A facility which has spill potential should provide secondary containment systems wherever possible.
    - a) Diking is the most effective secondary containment for bulk chemical storage. Dikes can be constructed from concrete, cinder blocks, or earth. They should contain 110% of the largest tank capacity, or water from a maximum 24 hour/ten year rainfall event, whichever is greater. Design of the dike should include the containment of a spraying leak from the side of the tank or baffles could be installed on top of the dike to deflect spray and cause it to drop into the containment area.
    - b) Diversion of flow of spilled material away from its naturally expected path can also be an effective means of secondary containment. Diversionary structures consist of curbs, sumps or gutters which divert spilled material to the collection tank.
- D. Procedures
- 1) Many operation and maintenance procedures are common-sense and should be included in the Plan. Good housekeeping includes chemical storage and prompt spill cleanup to prevent reaching the sewage system. Preventive maintenance includes periodic inspections and equipment testing, adjustment, repair, or parts replacement. A security system to prevent facility site entry would reduce the risk of illegal activities that could cause a slug or spill.
  - 2) Examples of operating and maintenance procedures are listed below:
    - a) Inspect chemical storage vessels, and process vessels and fittings (pumps, valves, piping): Appropriate materials of construction are to be used that are compatible with chemicals being processed. Inspections and monitoring frequencies should be listed.
    - b) Inspect foundations and supports of large tanks, vessels, and piping:
    - c) Above-ground vessels should be protected with truck guards. Underground vessels and pipes should be protected from physical and corrosion damage.
    - d) Liquid level control devices placed on open tanks, use grounding apparatus (where necessary): Overflow, temperature and pressure alarms should be installed.
    - e) Use proper drum handling equipment: No scooping drums with forks of a fork truck. Use pallets. Oil dispensing racks should be provided with drip pans.
    - f) Secure loading/unloading pump station controls: Warning signs or crossing gates should be used to prevent trucks from driving away while the loading hose is connected.
    - g) Eliminate all unnecessary cross connections: Unnecessary floor drains should be plugged, especially in high-risk areas.
    - h) Utilize automatic storm water and/or sewer sampling systems to monitor for

spills: Systems can have automatic shut-off devices to prohibit discharge.

## SECTION 5: EMERGENCY RESPONSE EQUIPMENT AND PROCEDURES

Information in this section of the Plan includes an inventory of available emergency response equipment and a description of emergency response procedures.

- A. Equipment
- 1) Communication equipment and alarms: Phone, intercom, radio, alarm, etc.
  - 2) Spill containment and control equipment and tools: Absorbent materials and dry chemicals.
  - 3) Spilled material storage containers: Spills must be contained and removed as soon as possible to prevent spreading into other areas.
  - 4) Protective clothing and respirators (if needed):
    - flameproof protective clothing
    - rubber gloves
    - apron
    - goggles/face mask
    - hard hat
    - self-contained breathing apparatus
  - 5) First aid kits: Immediately available for use if necessary. State the location of first aid kits.
  - 6) Ventilation equipment: Tests should be made for explosive atmosphere, toxic gases and oxygen deficiency. Ventilate area if needed.
  - 7) Decontamination equipment: Appropriate protective clothing and monitoring equipment should be used for radioactive material.
  - 8) Fire extinguishing systems: Locations should be posted throughout the plant.
- B. Procedures: Spill plans should contain a spill response description. Procedures should minimize danger to human health and to assist in containment and cleanup of a spill.
- 1) Notification of proper facility personnel: The proper qualified person should respond to a spill. This person(s) should be familiar with the Plan and have the authority to initiate emergency response procedures. Signs indicating this contact and their phone number should be posted.
  - 2) Evacuation procedures: An evacuation plan should be posted. The plan should contain: (1) a map of evacuation routes, (2) a map of alternative evacuation routes, and (3) a description of signals used to begin and conduct an evacuation.
  - 3) Notification of response agencies and contractors: A list of spill response agencies and phone numbers should be posted. In the event of a spill, the appropriate response agency should be notified immediately.
  - 4) Spill assessment and response procedures: Those designated to carry out spill response procedures should assess the spill. The origin of the spill and the impact should be assessed. Spill response procedures that should be included in the plan:
    - a) Notification of facility personnel by activating the communication and/or alarm system
    - b) Begin evacuation procedures if necessary
    - c) Notification of appropriate local, state, and federal agencies
    - d) Stop the flow by shutting off pumps or closing valves
    - e) Prevent contact between incompatible materials
    - f) Commence clean-up activities
    - g) Submit necessary reports
  - 5) Procedures for clean-up, treatment, and/or disposal of spilled materials: Spilled material should be treated or disposed of to eliminate health and safety hazards. Information pertaining to treatment and disposal methods used by the facility should be included in the Plan. If outside contractors and/or consultants are utilized in clean-up, treatment, or disposal, the plan should include the company name, contact person and phone number.

These procedures should be consistent with the ones established in the facility's OSHA Emergency Action Plan, as required by 29 CFR §1910.38

**SECTION 6: DAMAGE CONTROL**

Information in this section of the plan should describe how the facility plan will limit damage to the environment and the wastewater treatment plant.

**SECTION 7: TRAINING PROGRAM**

- A. The Plan should contain an outline of the training program given to employees.  
Specialized training should also be provided to each employee or group of employees that handle potentially dangerous chemicals.
  
- B. Periodic training sessions should be conducted to assure understanding of the Plan.
  - 1) New employees should be trained immediately upon employment.
  - 2) Employees should also be notified and retrained with any Plan changes.
  - 3) Training records should be maintained and kept three years from the date the employee last worked at the facility.
  - 4) Periodic drills should be set up. The purpose and frequency of drills should be indicated in the Plan.

**SECTION 8: CERTIFICATION**

BASED ON MY INQUIRY OF THE PERSON OR PERSONS DIRECTLY RESPONSIBLE FOR MANAGING COMPLIANCE WITH THE SLUG/SPILL CONTROL MEASURES IN THE SLUG/SPILL PLAN, I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS FACILITY IS IMPLEMENTING THE SLUG CONTROL PLAN SUBMITTED TO THE RACINE WASTEWATER UTILITY.

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NAME

\_\_\_\_\_

DATE

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TITLE OF AUTHORIZED REPRESENTATIVE