



City of Joliet

Public Utilities

1021 McKinley Ave.

Joliet, Illinois 60436

(815) 724-3675 Fax: (815) 724-3620

ngornick@jolietcity.org

ACCIDENTAL DISCHARGE AND SLUG LOAD CONTROL PLAN EVALUATION INSTRUCTIONS

The attached form is used to establish what items should be addressed and included in an Accidental Discharge and Slug Load Control Plan, normally referred to as a Spill Plan. A Spill Plan is required of all Significant Industrial Users and other users as determined by City of Joliet Code of Ordinances Section 31-412.

Note before you start your assessment that Spill Control and Slug Control are not necessarily the same. A slug load can occur as a result of a spill but slug loads can also occur as a result of production discharges that are not spills. Spill Plans traditionally protect worker health and safety and minimize material loss. The City of Joliet Accidental Discharge and Slug Control Plan also requires slug control planning to protect the Sewage Treatment Plants, sanitary collection system, and the City staff.

If a section of the evaluation for your plan is not applicable – **print or type N/A in the section** so that it is clear that the item has been evaluated. **The evaluation checklist should be submitted with the Spill Plan.** The following information contains some common-sense, good-housekeeping, and/or best management practices for spill and slug loading control. This information is not meant to be all-inclusive and you may make additions and deletions to these practices based on your experience or recommendations from management, consultants, suppliers, etc.

I. Site History:

A. Identify History of Spill Events at the site during the last two years.

Attach a copy of the spill report or summary for each event. You will need to be able to answer the following questions to effectively complete a Spill Plan for your site:

- What materials were involved?
- Where did the spill occur?
- Why did the spill occur?
- Was notification followed correctly?
- What was required to physically cleanup spill?
- Was waste hauled off-site classified as special or hazardous? Effect on cleanup costs?
- Were measures taken to prevent re-occurrence such as making site modifications or modifying operator training?
- Were the measures successful?

B. Identify History of Slug Loading Events at the site during the last two years.

Attach a copy of the spill report or summary for each event. You will need to be able to answer the following questions for the event to effectively complete a Spill Plan for your site for slug loading control:

- Was slug caused by a non-routine batch or is it an on-going problem?
- Is slug a result of highly variable production?
- Can slug be controlled through equalization?

- Did the slug cause the pretreatment system to overload?
- Did the slug interfere or upset a biological pretreatment system?
- Did the slug cause the pretreatment system to be bypassed?
- Was the slug a foreign waste that accidentally entered the pretreatment system and upset it?
- Did the slug impact the user's compliance?

II. Current Site Assessment

A. Material Storage

The spill plan requires a description of stored chemicals. Identify those chemicals that are stored in containers described in Sections II A 1-5 below. Include the name, concentration of the chemical and the CAS number if established.

No container should be used for the storage of raw or waste liquids unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature. The key evaluation for material storage after container integrity is whether there are any open floor drains in the area connected to the sanitary sewer. The next evaluation will then normally center on whether there is secondary containment for the largest tank volume plus 15% in the area. Identify and evaluate the spill potential in the following areas:

1. Drum storage in areas containing more than five 55-gallon drums
 - a. Drums used for storing small volumes of liquids (such as oil, chemicals or cleaning solvents) shall be inspected on a regular basis, and
 - b. Any storage area shall be protected from spills using items referenced in II.D. 2.
2. Totes – capacity of 300 gallons or more
 - a. Totes used for storing liquids shall be inspected on a regular basis, and
 - b. Totes with values used in everyday operations shall have a means of secondary containment that holds a minimum of the volume of the tote plus 15 %.
3. Bulk storage either inside or outside plant, i.e. tank farms.
 - a. All bulk storage installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus 15 % in all locations, plus additional freeboard to allow for precipitation if the tank is outside.
 - b. Above ground tanks should be subject to periodic integrity testing using such techniques as hydro-static testing, or a system of non-destruction shell thickness testing.
 - c. Underground storage tanks should be protected from corrosion, and pressure tested on a regular basis.
 - d. Consider the following control measures and tank check points;
 - High liquid level alarms with an audible or visual signal at a constantly manned operation or high liquid level pump cutoff device set to stop flow at a predetermined level. Liquid level sensing devices should be regularly tested to ensure proper operation,
 - Overflow equalizing lines between tanks should be considered. This makes it possible to overflow to adjacent tankage, if needed,

- There should be adequate vacuum protection to prevent tank collapse during a pipeline run, and
 - Leaks which result from tank seams, gaskets, rivet and bolts should be promptly corrected.
4. Treatment, Storage, Disposal Facility (TSDF) permitted for hazardous waste. There should be no potential for discharge from a TSDF facility.

B. Material Handling

Material transfer is a primary cause of spills and slug loadings. Determine if there are open drains in the transfer area. As a first line of defense, determine if it is possible to plug any open drains during the transfer. Minimize the material handling and you will minimize the spills. Determine if equipment can be dedicated, i.e. some sites have transfer lines that are hard plumbed in lieu of hoses that need to be washed after each change in transfer chemical. While the hose washing operation may not cause a spill, it may cause a slug loading due to excess raw materials or products being washed to the sanitary sewer. Evaluate the following locations for spill and slug load impacts from material handling:

1. Loading and Unloading at Docks.
2. Loading and Unloading at Bulk Storage.

Tank car, tank truck, and truck loading/unloading procedures should meet the minimum requirements and regulations established by the Department of Transportation.

A quick drainage system should be used for tank truck loading and unloading where area drainage does not flow into a catch basin or treatment facility designed to handle spills. The containment system should be designed to hold at least the maximum capacity of any single compartment of a tank car or truck.

3. Transfer and Pumping Operations.
 - a. Buried piping installations should have a protective wrapping and coating. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration.
 - b. When a pipeline is not in service, or in standby service, the terminal connection at the transfer point should be capped.
 - c. Vehicular traffic granted into the facility should be warned verbally or by appropriate signs to be sure that the vehicle will not endanger above ground piping.
 - d. All valves and pipelines should be subjected to regular inspections by operating personnel. Such an inspection should include: flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and periodic pressure testing.
4. Convey waste to Pretreatment System.

Identify whether the waste discharged has dedicated sewers or lines to the pretreatment system. Evaluate the handling practice and determine if there is the potential to impact the spill or slug potential.

5. Waste handling.

Identify any liquid wastes that are not discharged to the sanitary sewer or pretreatment system that are sent off-site for treatment, burned in a fuel blending program, etc. Evaluate the handling practices and determine if they have the potential to impact the spill or slug potential.

C. Batch Discharges

Include a description of batch discharges, especially non-routine discharges since those have the greatest potential to cause upset or interference to pretreatment operations, cause slug loadings or be involved in spills because the procedures are not performed as frequently. A separate form has been attached that can be used to describe each batch discharge and assess its spill/slug load potential.

D. Spill Potential

1. Identify the spill potential to the environment. Where a best management evaluation or experience indicates a reasonable potential for equipment failure (tank overflow, rupture, leakage, etc.); problem with materials transfer; or operator error; the plan should include a prediction of the potential to discharge to the sanitary system, or storm sewers that discharge to waterways. Determine the direction that the sewers flow once any sewer leaves the site so it is clear who will be impacted next if the spill is not controlled. Assess the distance involved for a spill to reach a waterway. Next, if the spill has the potential to flow over the land off the site, an assessment should be made whether there is potential to contaminate a residential, commercial or industrial area so that appropriate planning based on site use can take place to prevent such an impact.
2. Where it has been identified that a reasonable potential exists for spills or slug loads to be discharged, the plan should address means to eliminate or minimize this potential. Containment and/or diversionary structures or equipment to prevent discharges should be provided. Consider one or more of the following:
 - Dikes, berms, or retaining walls;
 - Curbing;
 - Culverts, gutters, other drainage systems;
 - Weirs, booms, or other barriers;
 - Sumps and collection systems;
 - Sorbent material; and
 - Dispersant material.

III. The Plan

A. Spill/Slug Loading Control

1. Identify pollution prevention, best management practices and procedures that have been implemented to prevent or minimize the Spills at the User site from chemical storage, material handling, production or waste handling processes.
2. Identify pollution prevention, best management practices and procedures have been implemented to limit the potential for a Slug Load to be discharged from the User site.
3. Identify physical modifications or containment practices to minimize spills and slug load discharges.

B. Diagrams Required for Submittal

1. Site layout showing storage locations. A site map is required to be submitted that shows the location of the liquid containers identified in Section II A 1-5. This provision can most easily be satisfied by modifying a fire exit diagram that shows the layout of the building. Eliminate the exit routes and add the location of the containers. Use the list you developed in Section II.A. as a starting point for a map key.
2. Site layout showing direction of flow from site. The site map should include storm and sanitary sewers, site contours or directional arrows that indicate the natural drainage direction from the site per Section II D. Indicate the direction that the storm and sanitary sewers flow.

C. Signs

A notice shall be permanently posted on the User's bulletin board or other prominent place advising employees who to call in the event of an accidental discharge or slug load. Employers shall ensure that all employees are advised of the emergency notification procedure. The notice must include the appropriate User supervisory personnel to contact, and identify the City of Joliet telephone numbers which are:

During normal business hours – East Plant:	(815) 724-3675
At night or on weekends: police non-emergency	(815) 726-2491

D. Training

Owners and operators should schedule and conduct spill/slug loading prevention meetings for their operating personnel at intervals frequent enough to assure adequate understanding of the User's Spill Plan for that facility. Such meetings should include a description of historical spill/slug loading events, typical failures or malfunctioning components, and recently developed precautionary measures. The training is required to be documented and must include a description of the meeting such as a copy of the agenda or minutes, and a log signed by the employees that were trained that includes the date of the training. At minimum, all operating employees are required to be trained annually.

E. Inspections

Inspections should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made a part of the Spill/Slug Control Prevention Program. Such records should be maintained for a minimum of three years. Examples of appropriate inspections are as follows:

- The outside of all bulk storage tanks should frequently be inspected by operating personnel for signs of deterioration, leakage or accumulation of leaked material inside the diked area, and
- Inspections of alarm systems or liquid level cut-off devices.

Include a copy of inspection documentation with your plan.

F. Notification

The Plan will identify that the notification system is in place for the following items:

1. Designated Spill Plan Manager – Each Industrial User should have a designated person who is accountable for spill/slug loading prevention and who reports to the Authorized Representative. An alternate should be assigned for the designated Spill Plan Manager to

cover absences. The Spill Plan is required to include who is designated as well as 24-hour telephone numbers for these individuals.

2. Employee Assigned to Make Notification – The designated Spill Plan Manager or another person designated by the Authorized Representative will notice Agencies as required by the criteria of the event.
3. Notification Timeliness – The User shall immediately notice by telephone the City of Joliet Wastewater Superintendent of any discharge, including but not limited to, accidental discharges, discharges of non-routine episodic nature, a non-customary batch discharge, or a slug load, that may cause potential problems for the City. The requirements of the specifics can be found on the Spill Notification Form.
4. Agencies Contacted – The Spill Plan will include a list of agencies that will be contacted in the event of an accidental discharge or slug load. Included in this list will be names and phone numbers for (but not limited to) the City of Joliet Fire Department, the City of Joliet Sewage Treatment Plant(s); USEPA; IEPA; the Will County Local Emergency Planning Committee and other entities as the user may identify as appropriate based on the spill potential of the facility and the required reportable threshold of a particular material for some agencies.

G. Follow-up

1. Written Report – Within 5 working days following such a discharge, the User shall, unless waived by the Wastewater Superintendent, submit a detailed written report describing the cause(s) of the discharge, the containment measures used to control the event and measures taken by the User to prevent similar future occurrences. The report should include the disposal method of any collected waste, including but not limited to whether the User will send waste off-site as special waste or hazardous waste, identification of the entity hauling the waste, and the location at which it is designated to remain.
2. Identify schedule events or modifications – The written report should include a schedule of remedial actions that will be made to prevent similar future occurrences. The City may identify that the User file progress reports concerning the schedule events.
3. The User shall file confirmation with the City of Joliet that the waste disposal was completed as well as file a separate report that identifies the completion of schedule events.

H. Certification

The Accidental Discharge and Slug Load Control Plan shall be signed by the Authorized Representative of the facility. The certification will contain the following statement:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, such information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”