

Logan Aluminum, Inc.

Spill and Leakage Management Plan

6920 Lewisburg Rd, Russellville, Ky 42276

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Purpose & Scope

Logan Aluminum, Inc. is required by law to implement a Spill Prevention, Control, and Countermeasure Plan due to an aggregate aboveground storage capacity over 1,320 gallons of oil. This plan encompasses all mapping, assessment, procedures, and design considerations which protect Logan and our surrounding communities from worst-case spills. This plan considers spills in a hierarchy, where the first priority is to prevent spills, while also including preparedness and response if a spill were to occur.

Logan Aluminum is also committed to alliance with the Aluminium Stewardship Initiative (ASI), and as such is committed to specific goals surrounding Assessment and Management of Spills and Leakages, including transparency (Section 6.3 & 6.4 of ASI Performance standard). This plan is an abridged version of the SPCC, which redacts any proprietary information about plant operations. The full plan is held in the internal Logan Aluminum Document Control system.

Background

Logan is located at 6920 Lewisburg Road in Russellville, Logan County, Kentucky. The property consists of an area of approximately 1,100 acres. The area occupied by the plant building and support operations is relatively flat.

The Logan facility manufactures aluminum ingot and rolled aluminum sheet for a variety of end uses. The facility began operations in 1983 and currently consists of approximately 57.3 acres under roof and has approximately 1,500 employees.

Logan is an aluminum casting and rolling operation, utilizing oils and related materials for lubricating, cooling, and other general purposes. The first aluminum coil produced at Logan was packaged on December 31, 1983.

Logan is regulated under Part 112 due to operations that require storage of oil in above ground storage containers (ASTs, totes, and drums) with a total capacity greater than 1,320 gallons which could reasonably be expected to discharge into navigable waters.

The objective of the SPCC Plan and the regulations is to prevent the discharge of oil in harmful quantities into the environment. The accomplishment of this objective requires an assessment of the facility for the possibility of any such discharge. Where such potential exists, the following steps will be taken:

- Employees will be trained to reduce to the extent practicable the number of human errors that may cause spills
- Inspection and preventive maintenance procedures will be implemented
- Secondary containment will be provided to contain substances that may be spilled
- Procedures will be developed which will be utilized in the event of a spill.

Discharges from the Facility

Stormwater Discharges

Stormwater from Logan's facility ultimately flows into Austin Creek. Austin Creek is classified as a warm water aquatic habitat with primary / secondary recreation. In the event of a major spill at Logan, oil and / or other materials could reach Austin Creek. Spills leaving Logan's property would enter Austin Creek at approximate geographic coordinates of 36° 57' 15" N latitude and 86° 55' 45" W longitude (NAD83). The SPCC plan has been developed to reduce the risk of discharges from Logan to Austin Creek.

Roadway access to Logan is via US Highway 431 North in Logan County, Kentucky. The exact location can be found at the aforementioned coordinates on the United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map for Lewisburg, KY. The plant site is drained on its west side by a series of storm drains that flow into a retention basin located at the northwest corner of the plant. This basin is equipped with below surface drainage and manual valves that are closed in the event of a spill. With discharge valves closed, the basin acts as a holding impoundment to contain spilled liquids and to facilitate clean up.

The plant is drained along the south end and west side by a storm drainage system that leads to a retention basin located in the northwest area of the plant, discharge location Outfall 003. The east side of the plant is drained by a storm drainage system that leads to the northeast retention basin, Outfall 001. As noted, this basin is equipped with below surface drainage and manual valves that are closed in the event of a spill. With discharge valves closed, the basin acts as a holding impoundment to contain spilled liquids and to facilitate clean up.

The plant is drained at its north end by a storm drainage system that leads to a retention basin located at the north end of the plant, Outfall 002. This basin is equipped with below surface drainage and manual valves that are closed in the event of a spill. With discharge valves closed, the basin acts as a holding impoundment to contain spilled liquids and to facilitate clean up.

The DC4 expansion on the east side of Logan's facility is drained by a storm drainage system that leads to two retention basins located on the west and north side of the expansion. The west basin is equipped with a sediment trap to remove solids as well as manual valves before discharging to Outfall 007. The north basin is equipped with manual valves that are closed in the event of a spill. This discharge is Outfall 008.

Surface/stormwater drainage from the CM4 expansion, located east from the approximate center of the main plant is controlled by a forebay structure that serves to mitigate storm flow surges and to provide primary sediment removal. The forebay discharges into a retention basin immediately north-northeast of CM4 with discharge identified as internal Outfall 001. Outfall 001 receives drainage from the Front Pond (immediately southwest of the Main Plant Building) and the east side of the plant, serving as a retention basin. This basin is equipped with below surface drainage and manual valves that are closed in the event of a spill. With discharge valves closed, the basin acts as a holding impoundment to contain spilled liquids and to facilitate clean up. This outfall discharges to the Logan's storm system, eventually to Austin Creek.

Sanitary Wastewater Discharges

Sanitary wastewater from the facility is segregated and treated in an on-site package plant. Treated effluent from the package plant is reused. If reuse is interrupted or discontinued, the sanitary plant effluent is discharged through the wetlands system to 004 Outfall.

Process Wastewater Discharges

Process wastewater is discharged to the various process related treatment facilities. Following treatment and in accordance with the facility's KPDES discharge permit No, KY0072630, process related wastewaters are discharged through the constructed wetlands to Austin Creek.

Plan Updates

This abridged plan will be updated alongside the SPCC, if any changes created impact the content of this version. The full SPCC plan will be updated under the following conditions:

- At minimum, revision must be completed every 5 years. Reviews will occur annually.
- Amendments will be completed "when there is a change in facility design, construction, operation, or maintenance that materially affects its potential for discharge."
- Amendments may be required based upon recommendation by the EPA Regional Administrator based on review of the information listed if either of the following occurs:
 - The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event; or
 - The facility discharges more than 42 gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in each of 2 spill events within any 12-month period.

Prevention Procedures

Spill Containment

Logan's oil storage and handling operations have been reviewed to assess potential spills from the plant. These include areas inside and outside the manufacturing buildings where oil is stored in containers (ASTs, mobile/portable containers (totes and drums), and in oil filled equipment. Loading and unloading facilities for bulk quantities of raw materials, intermediates, produced goods, and by-products have also been considered.

Spill Containment Within Manufacturing Areas

Spill containment occurring within Logan's manufacturing buildings is accomplished using a number of concrete and/or lined structures (e.g., sloped/curbed flooring, trenches, dikes, etc.) that divert liquids to internal sumps. Liquids are conveyed from process area sumps to the industrial sump. Some areas have in-floor drains that convey liquids by gravity to a collection sump which feeds a flow-through process tank discharging to wastewater treatment. Spills in other areas of the plant may be directed to sumps adjacent to equipment or may be contained on the building floor with supplemental use of booms or other containment methods before transfer to wastewater treatment. Manufacturing area sumps that may receive oil are transferred to Utilities via gravity and/or by pumping.

Exterior Spill Containment

Exterior oil bulk storage containers (ASTs, totes, and drums) that may be exposed to precipitation are positioned within specific sized secondary containment structures designed to hold the entire volume of the largest container within the structure, minus displacements from other containers or equipment, plus sufficient freeboard to contain the rainfall depth from a 25-year, 24-hour storm event (According to NOAA Atlas 14, Volume 2, Version 3, (available on the internet at Precipitation Frequency Data Server (noaa.gov), accessed July 26,2021) the 25-year, 24-hour storm event precipitation depth for Logan is 5.76 inches.

All dike areas capable of capturing storm water are equipped with manual drains and/or manually activated pumps. All valves are normally closed, and all pumps are in the "off" position until the captured storm water can be inspected for the presence of oil and discharged after verification that no oil or sheen is present. Each dike stormwater discharge event is documented and recorded by the responsible Unit.

Spill Containment in Oil Transfer Areas

Areas where transfer of oil occurs (i.e., loading and unloading facilities for bulk quantities of raw materials, intermediates, produced goods, and by-products have also been considered. At a minimum these areas have general secondary containment providing protection from the most likely quantity of oil discharged from the typical failure mode. The most common secondary containment addresses transfers from bulk oil tanker trucks into or out of storage vessels. In this case, noting that Logan's procedure is to have both the driver of the truck and a trained Logan employee to fully attend the entire transfer, Logan has identified the typical failure mode to be a ruptured hose or leaking hose fitting, flowing at a maximum rate of 150 gpm. Making a conservative assumption that the driver would require no more than 20 seconds to shut off the transfer pump, a release of 50 gallons would result. All oil transfer stations at Logan used for loading/unloading bulk materials are equipped with concrete containment pads. Oil transfer is prohibited unless the tanker is fully situated within these containment areas. Logan's transfer stations are outfitted with curbing on either side of the containment pad and the driveway slopes into a grate covered sump with capacity to hold at least 50 gallons of liquid.

Inspection and Record Keeping

Logan performs various inspections as a component of this SPCC. Periodic (Monthly) Inspections are performed on containers and containment structures monthly as outlined below. More comprehensive inspections are done on an annual basis. The Steel Tank Institute Standard for Inspection of Aboveground Tanks, STISP001 (6th Edition), has been used to develop Logan's inspection procedures as noted in the following subsections. Note that all oil storage vessels used by Logan are designated STI-SP001 Class I (i.e., have Continuous Release Detection Method and Secondary Containment System) aboveground containers. The four categories of aboveground oil containers used by Logan and their inspection requirements are described below.

- **Periodic AST Inspection** - A visual, documented inspection conducted by an owner's inspector to assess the AST's general condition without suspending AST operations or removing the AST from service. **(STI-SP001 (6th Edition))**

Mobile/Portable Containers

Mobile/portable containers used by Logan include totes with shell capacities between 225 gallons and 600 gallons (aka, Intermediate Bulk Containers, or IBCs) and 55-gallon drums. There are typically over 100 totes and over 200 drums in use at Logan.

Mobile/portable containers are required to have Monthly and Annual Periodic Inspection as defined in STI-SP001 (6th Edition).

Small Shop-Fabricated ASTs

Small Shop-Fabricated ASTs are those with shell capacities up to 5,000 gallons. Logan utilizes over 110 small ASTs in its operations.

Small Shop-Fabricated ASTs are required to have Monthly and Annual Periodic Inspections as defined in STI-SP001 (6th Edition).

Large Shop-Fabricated ASTs

Large Shop-fabricated ASTs in use at Logan have shell capacities ranging from 5,001 gallons up to 75,000 gallons.

Large Shop-Fabricated ASTs are required to have Monthly and Annual Periodic Inspections and Formal External Inspections at a frequency of every 20 years, as defined in STI-SP001 (6th Edition).

Field-Erected ASTs

Field-Erected ASTs in use at Logan have shell capacities ranging in volume from 14,750 gallons to 350,000 gallons.

Field-Erected ASTs are required to have Monthly and Annual Periodic Inspections plus Formal External Inspections at a frequency of every five years and Formal Internal Inspections at a frequency of every ten years, as defined in STI-SP001 (6th Edition). These inspection types and frequencies are also consistent with API Standard 653 – Tank Inspection Repair, Alteration, and Reconstruction.

Additional Inspection/ Testing

Logan has adopted an ongoing preventive maintenance and enhanced inspection program for critical equipment and infrastructure. This program includes documented visual and mechanical review of valves, piping, tank integrity, pipe racks/supports, sumps, and pumps. These monthly inspections are carried out by operating unit personnel per the direction of Logan's Environmental staff for all potential spill areas. Each month, storage areas for each operating unit at Logan will be inspected for integrity by a competent member of Logan's staff.

In addition, Fluids Personnel in each coolant room as well as General Technicians assigned to hydraulic systems are performing routine inspections in their respective areas. These inspections are designed in part to detect leaks in the systems. These inspections are performed and documented on at least a monthly basis with corresponding records maintained for a minimum of three years.

Annual inspections will be scheduled, completed, and documented through Logan's online Preventive Maintenance system. Records of completed PM's will be maintained for a minimum of three years.

Personnel Training

Personnel at the Logan facility that handle either oil and/or hazardous chemicals are required to complete a spill prevention training module, which includes a review of the applicable sections of the Logan SPCC Plan. Records of the spill prevention and response training provided to employees are maintained in the Logan Cornerstone Training Database. The Management Team is accountable to ensure that all employees receive annual SPCC Plan awareness training. The Logan Volunteer Fire Unit receives additional training for response to spills, specifically HAZMAT response. Awareness training for new employees will be performed as part of New Hire Orientation.

- Training will be provided as required in 40 CFR Part 112.7(f) and 40 CFR Part 262.34(a)(5). The official training records will be maintained in the Training Database, which is the system used to maintain all official training records.
- Contractors working on plant property are trained on pertinent sections of the facility SPCC Plan. SPCC provisions have been incorporated into the Contractor EHS Pamphlet. All contract employees are required to be trained by the Contractor

All Logan Operating Technicians and General Technicians will receive SPCC Plan training annually. Training for all employees at Logan involves proper oil handling and is provided by the employee's Operating Unit regarding the practices involved in daily operational tasks. The need for this training is emphasized in the annual SPCC training that is provided via on-line modules. This on-line training covers discharge procedure protocols; applicable pollution control laws, rules, regulations, general facility operations, and the content of the facility SPCC Plan.

Spill Control and Response

In the case where a spill does occur at the Logan facility, procedures exist to ensure that actions are taken to minimize environmental impact. A spill hierarchy is followed to engage employees on response actions when considering volumes, location, and material hazards. Logan follows all applicable reporting requirements relating to spills including state and federal regulations (ie. KRS 224.1-400, 40 CFR 110.3, CERLCA, EPCRA).

Inside the Building

After identifying, notifying, and stopping the spill, containment of the spill is required to prevent environmental damage. The plant's extensive diking and sump system provides containment for any release in a manufacturing building. In this case, all bulk or loose material should be routed to the nearest sump and clean up should be initiated by the affected Unit team.

Outside the Building

Measures to prevent release occurring outside of a manufacturing building in an undiked area from reaching the storm drainage system is an urgent priority. This can be done using absorbents, booms, or soil. All spill-related equipment, including personal protective equipment,

is located at the facility. In addition, an emergency response trailer is located at the Gatehouse. If absorbent or soil is used, a dike of material should be constructed around the spill to contain it in as small an area as possible. In an Environmental Response, it is appropriate to use skilled and trained support personnel (backhoe operators, dozer operators, crane operators, etc.) to temporarily perform immediate emergency support work as long as they have received an initial briefing which includes instructions in wearing personal protective equipment, the hazards of the material involved, and what duties are to be performed.

If a storm drainage system catch basin is nearby, it must be plugged or covered with plastic and / or dirt to prevent infiltration of the spilled material into the drainage system.

If any quantity of the spilled material should reach the storm drainage system, it will be necessary to track the flow and attempt to contain the spill as near to the plant as possible. There are five (5) storm drainage channels from the plant. Logan has installed gates on each that can be used to stop the flow of material off-site. Team members will contact Utilities to shut the gates. Once the direction of the spill in the storm drainage system has been determined booms can be deployed to assist in containing the material. Within diked areas provide appropriate containment to allow for temporary storage of discharged material until clean-up can be initiated.

Hazardous Materials

For spills where the material poses a potential or actual hazard to human health or safety, Logan Security will be notified. Logan's Emergency Response Team, on-site Fire Unit, and the ESS department will be notified by security. This spill will then be handled by an assigned incident commander, and Emergency Response procedures will be engaged.

Remedial Action

Remedial action is required to prevent any future occurrence of the same situation. Within 24 hours after the incident, a meeting will be held with the Environmental staff, and representatives of the affected business units to discuss the cause of the incident and remedial action needed to prevent reoccurrence. At this time, sufficient manpower, equipment, and financial resources will be committed to facilitate prompt, permanent countermeasures.

Assurance will be made that all waste produced via spill response will be handled properly in alliance with applicable regulations and requirements per the waste management/ disposal facility.