Spill Prevention Control and Countermeasures Plan

Cane Run Generating Facility
Louisville Gas & Electric
A Subsidiary of LG&E and KU, a PPL Company
Louisville, Jefferson County, Kentucky

February 2025 5-Year Review and Update

SYNOPSIS

The facility has a capacity to store more than 1,320 gallons of oil in storage/containers/equipment and is required by 40 CFR 112 to maintain a SPCC plan to prevent oil discharges to navigable waters including the Ohio River and Mill Creek Cutoff adjacent the plant. A Facility Response Plan is not required for the facility. The site documents periodic visual inspections of the facilities, storage tanks, containment, rainwater accumulations runoff and certified integrity inspections of tanks in accordance with the STI SP001 inspection standard. Oil spill prevention employee training sessions are conducted annually; new oil-handling employees also receive similar training and the site SPCC plan is reviewed.

Basic facility information:

Cane Run Generating Facility
5252 Cane Run Road
Louisville, Kentucky 40216 Jefferson County
Phone: 502-449-8800
Longitude: -85.41563
Latitude: 38.58582
Ohio River Milepoint 617

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1.0 Introduction

1.1 Plan Purpose

This Spill Prevention, Control and Countermeasures (SPCC) Plan describes measures implemented to prevent oil discharges from occurring, and if a response were ever required, to prepare LG&E responders to be safe, effective, and timely to mitigate the impacts of a discharge. Specifically, the SPCC Plan is written to help prevent the occurrence of oil spills in harmful quantities from the facility into the environment which may:

- Violate applicable water quality standards, or cause a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines, or
- Cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines

This plan has been prepared in accordance with good engineering practices to meet the requirements of Title 40, Code of Federal Regulations, Part 112 (40 CFR Part 112) and supersedes any previous plan. Additionally, this SPCC Plan is:

- used as a reference for oil storage information and testing records;
- a tool to communicate practices on preventing and responding to discharges with employees;
- a guide to inspections;
- a resource during emergency responses.

The facility must maintain and implement this SPCC Plan in order to comply with the SPCC rule; this plan provides guidance to:

- Complete monthly site inspections as outlined in the Inspections, Tests and Records section of this Plan.
- Perform preventive maintenance upon equipment, secondary containment systems, and discharge prevention systems described in this Plan as needed to keep them in proper operating condition.
- Conduct annual employee training as outlined in the Personnel, Training and Discharge Prevention Procedures section of this Plan and incorporate that documentation into the facility's personnel training file.
- If either of the following occur, submit the SPCC Plan to the EPA Region 4 Regional Administrator (RA) and the Kentucky Department of Environmental Protection (KDEP), within 60 days, along with other information detailed in the Plan:
    - The facility discharges more than 1,000-gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event; or

  - The facility discharges oil to navigable waters in quantity greater than 42-gallons in each of two spill events within any 12-month period.

- Amend the SPCC Plan within six (6) months whenever there is a change in facility design, construction, operation or maintenance that materially affects the facility's spill potential. The revised Plan must be recertified by a Professional Engineer (PE).
- Review the Plan on an annual basis. Update the Plan to reflect any "administrative changes" that are applicable, such as names, contact information, name of spill response or cleanup contractors.
- Review the SPCC Plan at least once every five (5) years and evaluate new or more effective prevention and control technology. The facility ***is not*** considered a Qualified Facility. Plan amendments, other than administrative changes, must be recertified by a PE referenced in **Section 3** of this Plan.
- Identify spill prevention, control or countermeasures that are not fully operational at the time of the certification of this plan. Section 3.9 of this Plan identifies such elements and also specifies an implementation schedule for these required compliance measures.

LG&E has determined that this facility does not pose a risk of substantial harm under 40 CFR part 112, as recorded in the "Substantial Harm Determination" included in **Appendix A** of this Plan.

1.2 Regulatory Background

The SPCC Plan regulations, Part 112 of 40 CFR, were first published in the Federal Register (FR) on December 11, 1973. On July 17, 2002, the United States Environmental Protection Agency (USEPA) published a final rule that amended the SPCC regulations (67 FR 47042), which became effective on August 16, 2002. The final rule included compliance dates in §112.3 for preparing, amending and implementing SPCC Plans.

The EPA Administrator signed additional amendments and/or compliance deadline extensions to the SPCC rule in January 2003, April 2003, August 2004, April 2006, May 2007, November 2008, June 2009 and July 2010.

1.3 Definitions and Acronyms

In December 2013, EPA published updates to the "*SPCC Guidance for Regional Inspectors*." This document provides discussion, interpretation and examples for implementing SPCC requirements at several different type facilities. This guidance document has been used to provide insight into compliance with the provisions of the SPCC rule. The following SPCC Plan was prepared based on the following acronyms and definitions:

Aboveground Storage Tank (AST) - A tank that is wholly aboveground or with any portion of the tank visible at the surface. Partially buried, bunkered, or mounded tanks are all considered to be aboveground tanks as are tanks in subterranean vaults.

Active Measures of Secondary Containment – Those measures that require deployment or other specific action by the owner or operator. The measures may be deployed either before an activity involving the handling of oil starts, or in reaction to a discharge so long as the active measure is designed to prevent an oil spill from reaching navigable water. The use of a spill kit is an example of an active measure of secondary containment. *Also see Passive Measures of Secondary Containment.*

American Petroleum Institute (API) – A trade association that established generally accepted practices for the inspection of various types of products. For example, API Standard 653 provides guidance on "Tank Inspection, Repair, Alteration and Reconstruction."

Authorized Representative – A person with fiduciary responsibilities that has the authority to commit the necessary resources to implement the Plan.

Berm - Dirt, concrete, or other constructed embankment that is commonly employed for secondary containment or drainage diversion at oil storage or related operations.

Brittle Fracture - Brittle fracture is a type of structural failure in larger field-constructed aboveground steel tanks characterized by rapid crack formation that can cause sudden tank failure. This, along with catastrophic failures such as those resulting from lightning strikes, seismic activity, or other such events, can cause the entire contents of a container to be discharged to the environment. A review of past failures due to brittle fracture shows that they typically occur (1) during an initial hydrotest, (2) on the first filling in cold weather, (3) after a change to lower temperature service, or (4) after a repair/modification. Storage tanks with a maximum shell thickness of one-half inch or less are not generally considered at risk for brittle fracture.

Bulk Storage Tank(s) / Container(s) – means any container used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container. ***Note:*** *SPCC Plans include containers with a capacity equal to or greater than 55-gallons, such as 55-gallon drums, tote or inter modal containers, and other forms of bulk storage tanks. Bulk storage tank(s) / container(s) require specifically sized secondary containment.*

Category 1 Tank – A bulk storage tank has specifically sized secondary containment incorporating a continuous release detection method.

Containment of Diversionary Structure - Structure or equipment that prevents oil discharges from reaching navigable water. Containment of diversionary structures include dikes, berms, retaining walls, curbing, culverting, weirs, booms, spill diversion ponds, retention ponds, sorbent materials and sumps.

Continuous Release Detection Method – is a means of detecting a release of liquid through inherent design. CRDM is passive because it does not require sensors or power to operate. Liquid releases are visually detected by facility operators. The system shall be designed in accordance with good engineering practice. Several acceptable and commonly used CRDM systems are as follows: 1) A release prevention barrier that is sufficiently impervious to the liquid being stored and is installed under the bulk storage container and will divert leaks toward the containment perimeter where they can be visually detected; and/or 2) double-walled tanks, double-bottom tanks; and/or 3) elevated bulk storage tanks within a specifically sized containment area.

Designated Person Accountable for Oil Spill Prevention – this person is responsible for ensuring that staff has received initial and on-going training in spill prevention. This person is also responsible for maintaining records regarding staff training, tank inspection and release reports.

Discharge - Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Environmental Affairs (EA) – LG&E corporate staff that provide support to facility personnel.

Environmental Equivalence (EE) – A deviation from the specific requirements of the SPCC rule that incorporates the use of “alternative measures,” so long as those performance-based alternative measures provide equivalent environmental protection.

Emergency Response Coordinator – The designated person that employees would contact in the event of a spill or release. This person has at least the minimum required training to implement the SPCC Plan. Implementation of the Plan may include internal response or contacting an external response company to address the release.

Facility –Any asset (building, equipment, etc.) under the general operational authority of a single entity.

General Secondary Containment – Containment and/or a diversionary structure or equipment to prevent a discharge from entering navigable water. General secondary containment is required by paragraph 112.7(c) and can include, but is not limited to: dikes, berms, curbing, gutters, weirs, booms, spill diversion ponds, retention ponds and sorbent materials.

Impracticability Determination – A determination that extenuating circumstance (e.g., building/fire code, not possible to implement, etc.) prevents you from following specific

requirements of the regulations. Making an impracticability determination triggers additional requirements within the SPCC regulations, such as: making a statement of impracticability, implementing an integrity and leak testing program for a bulk storage containers and above or underground piping, preparation of a 109 Contingency Plan, and providing a written commitment of manpower and equipment for spill response.

Inspection – Pursuant to Steel Tank Institute (STI) SP-001, the use of the word inspection in this Plan implies the recording of observations related to an inspected item. Inspection should not be confused with the terminology “testing”.

Level Gauges and Alarms - Any engineering control that indicates the level of liquid inside the tank and that is installed on tanks to prevent overfilling of the tank.

Loading Area – Any area of a facility where oil is transferred between bulk storage containers and tank trucks or railcars. Such as where a pipe stand connects to a tank car or tank truck via a flexible hose. These areas are subject to the general secondary containment requirements in 112.7(c).

Loading/unloading Rack – Fixed structure (such as a platform or gangway) necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of 40 CFR Part 112. A loading/unloading rack includes a loading or unloading arm and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personal safety devices.

Management Approval – Approval by a person in a supervisory role who has the ability to commit manpower and resources to implement the SPCC Plan.

Mobile/Portable Container – A drum, skid tank or tote that can be moved (i.e., not permanently fixed at one location).

Mobile Refueler – A vehicle, self-propelled or towed, which contains a bulk storage container that is designed or used solely to store and transport fuel for transfer into or from an aircraft, motor vehicle, locomotive, vessel, ground surface equipment, or other oil storage container. The 2008 regulation exempts non-transportation related tank trucks from sized secondary containment requirements. In the final SPCC rules, these vehicles are required to comply with the general (not specifically sized) containment requirements.

Navigable Waters - The term navigable waters of the United States or adjoining shorelines stems from the Clean Water Act and is cited in the 40 CFR 112.1 SPCC applicability description but has been heavily politicized and litigated. The definition of navigable waters was revised in the “Revised Definition of “Waters of the United States”” conforming rule published September 8, 2023 (88 FR 61964). Refer to 40 CFR 120.2 and related court findings for current interpretations.

Oil - means oil of any kind or in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or

kernels; and, other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil (e.g. settled solids from oil-water separator are not considered oil).

Oil Filled Electrical Equipment – is a subset of Oil Filled Operational Equipment. Oil Filled Electrical Equipment requires *general* secondary containment for all non-qualified facilities. For a Qualified Facility, the owner or operator has the alternative of preparing an oil spill contingency plan and a written commitment of manpower, equipment and materials to expeditiously control and remove any harmful oil discharge without having to make a statement of impracticability. Oil Filled Electrical Equipment includes, but is not limited to: transformers, circuit breakers, and switches.

Oil Filled Operational Equipment – means equipment that includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device. Oil-filled operational equipment is not considered a bulk storage container and does not include oil filled manufacturing equipment (flow through process). Examples of oil-filled operational equipment include, but are not limited to, hydraulic systems, lubricating systems (e.g., those for pumps, compressors and other rotating equipment, including pumpjack lubrication systems), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil solely to enable the operation of the device. **Note:** *Oil-filled operational equipment requires general secondary containment for all non-qualified facilities.*

Passive Measures of Secondary Containment – Permanent installations that do not require deployment or action by the owner or operator. Containment dikes, berms, diversion ponds, etc. are examples of passive measures of secondary containment. *Also see Active Measures of Secondary Containment.*

Piping (buried and aboveground) – Requires *general* secondary containment. For aboveground piping, this can be provided by any of the methods discussed in *general* secondary containment by managing the release on the ground surface. The key to this is the ability for the facility staff to; 1) note that a release is or has occurred, and 2) to be able to respond within time to prevent a discharge to navigable water. For buried piping, it is difficult to comply with the *general* secondary containment requirements without some form of release notification (e.g., leak detection on buried piping or monitoring of interstitial space between primary and secondary piping.

Qualified Facility – is a facility which has 10,000-gallons or less in aggregate aboveground oil storage capacity, and for three years prior to the Plan certification, the facility has not had a single discharge of oil to navigable waters exceeding 1,000-gallons or two discharges of oil to navigable waters each exceeding 42-gallons, within any 12 month period. Qualified Facilities are divided into two divisions, Tier I and Tier II Qualified Facilities.

Qualified Oil Filled Equipment – This is Oil Filled Operational Equipment that has not had a release of 1,000-gallons or two releases of 40-gallons within 12 consecutive months in the previous 3 years.

Reservoir – is part of an apparatus where liquids (e.g., oil) are held. Many reservoirs appear to be bulk storage tanks but, because their contents are an integral part of the apparatus (e.g., lubricating oil), they are exempt from the more stringent bulk storage tank requirements. In accordance with the proposed SPCC amendments, reservoirs require *general* secondary containment.

Sheen - An iridescent appearance on the surface of water.

***Specifically Sized* Secondary Containment** – Provides sufficiently impervious containment for the entire capacity of the largest single container with sufficient freeboard to contain precipitation. *Specifically Sized* secondary containment refers to the specific volume required to protect bulk storage tanks, which includes 55-gallon drums, by paragraph 112.8(c) and *can* include, but is not limited to: dikes, berms, pits, oil/water separators, diversionary structures and holding ponds.

SPCC Regulated Facility – a facility that has a capacity to store more than 1,320-gallons of oil in containers equal to or greater than 55-gallons. Regulated containers include bulk storage tanks (e.g., 55-gallon drums, intermodal tanks, aboveground storage tanks) and operational equipment (e.g., transformers, oil filled equipment, etc.).

Steel Tank Institute (STI) – A trade association that established generally accepted practices for the inspection of various types of products. STI Standard Procedure (SP)-001, referenced in this plan, provides guidance on "Standard for the Inspection of Aboveground Storage Tanks."

Testing – Pursuant to STI SP-001, the use of the word testing implies the performance of a destructive or non-destructive test on the shell of a tank, a leak test, or a test of the operation of some piece of equipment.

2.0 Facility Information

2.1 Facility Name and Location

Cane Run Generating Facility

5252 Cane Run Road

Louisville, Jefferson County, Kentucky 40216

Longitude: -85.879444

Latitude: 38.175833

2.2 Facility Owner Name and Address

Louisville Gas & Electric Utility Company

220 West Main Street

Louisville, Jefferson County, Kentucky 40202

2.3 Site Oil Storage Capacity

The facility has a total storage capacity of ~134,000 gallons including operating equipment and in-use container sizes greater than 55-gallons. The types of oil include storage and equipment-use of: fuel oil/diesel, gasoline, turbine oil, machine oils, dielectric mineral oil, motor oils, hydraulic oils, etc. Per 40 CFR 112.8, the facility bulk oil storage capacity is ~15,500 gallons.

2.4 SPCC General Applicability [112.1(d) and 112.3] and Facility Response Plan Applicability [40 CFR 112.20(f)]

The facility has an aggregate aboveground oil storage capacity greater than 1,320 gallons and is a non-transportation-related facility that uses/consumes oil or oil-products, which due to its location could reasonably be expected to discharge oil into or upon navigable waters of the United States. Therefore, a SPCC plan must be prepared to meet the requirements of Title 40, Code of Federal Regulations, Part 112 (40 CFR Part 112.1(d)).

LG&E has determined that this facility does not pose a risk of substantial harm under 40 CFR part 112 (40 CFR Part 112.20(f)), as recorded in the “Substantial Harm Determination” included in **Appendix A** of this Plan.

2.5 Facility Description

The Cane Run Generating Facility, operated by the Louisville Gas & Electric Company, is located at 5252 Cane Run Road (State Highway 1849) about 8 miles southwest of Louisville,

Kentucky. The facility is located in primarily a mixed use – residential/industrial area. The site is comprised of approximately 524 acres and is bordered by the Ohio River to the North and Cane Run Road to the South. The plant is located at Ohio River mile point 617.

The North American Industrial Classification System (NAICS) code for the facility is 221112 (Fossil Fuel Electrical Power Generation).

A 640 MW Natural Gas Combined Cycle (NGCC) unit was constructed on-site and commercial operation of the NGCC unit began in the summer of 2015. This Unit is referred to as Cane Run 7 (CR7).

This SPCC Plan addresses oil containers owned, operated and maintained by the facility. Other companies may also own and/or operate oil containers at the facility, but those oil containers are not included in this SPCC facility. Oil-filled equipment managed by the Transmission Division in the substation are covered by a separate SPCC Plan. Contractor's tank(s), when regularly operating LG&E-owned station-related equipment, have been included in this SPCC plan for reference. Ultimately, integrity testing requirements and compliance inspections related to contractors' tanks are the responsibility of each contractor. These tanks have been included so that the station can perform periodic compliance assessments of the companies working within the facility and to better account for what is owned and operated by LG&E versus what is owned and operated by various contractors working within the fence line. It is anticipated, as through the normal course of business, that these, or other, contractors may remove or bring additional regulated bulk storage tanks onto the property. When and if these tanks are removed or retained for more than six months on the property, the bulk storage tanks listing may be modified.

In summary, regulatory, compliance and response requirements for contractor tanks and equipment remain with the contractor. LG&E demands that its contractors adhere strictly to regulatory and compliance requirements and maintain adequate response capabilities for their oil storage and handling operations. LG&E reviews contractor plans and requires documentation of inspections, testing, training, and other SPCC compliance elements to be submitted for review on a routine basis. LG&E may, at its own discretion, provide assistance to mitigate a release from a contractor's tank from entering navigable water.

Oil Storage and Handling Activities

The facility uses a variety of petroleum products. The facility stores diesel fuel for maintenance equipment and emergency generators. Mineral Oil Dielectric Fluid is used in transformers located on the site. Diesel fuel, gasoline, kerosene and lubricating oil are stored in several shop-built tanks; other petroleum products are stored either in portable tanks, totes, 55-gallon drums or consumer sized packages. The capacities of oil containers present at this facility are provided in **Appendix F.**

The facility's primary uses of oil are for fueling miscellaneous auxiliary/mobile equipment and for lubrication/hydraulic/electrical control of the generating units and auxiliary/mobile equipment.

Examples of fuels storage for on-site equipment include:

- Mobile equipment (dozers, excavators, etc.);
- Emergency diesel-powered generators;
- Landfill /Contractors' maintenance vehicles.

Examples of Oil-in-Use for lubrication/hydraulics/electrical control of on-site equipment include:

- Turbine lubrication/hydraulics systems;
- Lubrication/hydraulics of pumps, compressors, etc.
- Lubrication/hydraulics of mobile equipment onsite (dozers, excavators, etc.)
- Electrical Transformers mineral oil-dielectric (internal insulation, cooling, etc.)

The facility receives products by common carrier via tanker truck and smaller quantities of material (e.g., 55-gallon drums) by box truck. The largest compartment on the bulk tanker delivery truck is typically less than 3,000-gallons.

The Site Plan and Facility Diagram are included in the **Figures Tab** of this Plan and show the location and layout of the facility. The Facility Diagram shows the location of oil containers, buildings, loading/unloading and transfer areas, likely spill flow paths and critical spill control structures.

2.6 Distance to Navigable Waters and Adjoining Shorelines and Flow Paths

The purpose of this SPCC Plan is to prevent and mitigate a release of oil from reaching navigable water (e.g., the Ohio River to the northwest, Mill Creek Cutoff ditch to the north, and other tributaries to the Ohio River) immediately adjacent to the facility.

The facility is located on relatively level terrain. Drainage generally flows westward in the direction of the Ohio River. Structures and operations associated with CR7 are located approximately 0.4 miles east of the Ohio River.

All drainage inside CR7 goes through an oil / water separator to a wastewater tank and then to the site stormwater runoff pond that discharges to Outfall #104 before ultimate discharge to the Ohio River at Outfall #102 near the screen house. Outside drainage around CR7 goes to a ditch to the North of the site (Outfall #12), which flows to Mill Creek and then to the Ohio River.

A stormwater management system (e.g., swales, ditches, catch basins, etc.) is present across much of the site. Surface water is directed through several ponds depending on where the surface water enters the management system. On the southwestern side of the facility, surface water may enter the runoff pond that discharges through Outfall #104 then #102 to the Ohio River.

Most site buildings, particularly those with oil storage tanks or containers/equipment, have floor drains that flow through a conveyance structure and ultimately through a stormwater basin that discharges through Outfall #104 then #102 to Ohio River.

These ponds and building drainage features act as spill diversionary structures, where a release can be contained and mitigated before ultimate discharge into the Ohio River.

Spill pathways are indicated on the facility diagram in the material inventory in **Appendix F** and the **Figures Tab**. In most cases, the spill trajectory will follow the indicated “overland flow” or where surface water enters a stormwater management system (e.g., ditch), the direction and discharge point associated with that system. Detailed drainage information is included for oil containers in **Appendix F, Appendix O,** and associated stormwater drawings.

2.7 Oil Discharge History

A discussion of the facility’s SPCC reportable oil discharge history, if any, for the SPCC planning period is provided in **Appendix B**.

3.0 Certifications, Amendments, Reviews and Approvals

3.1 P.E. Certification [112.3(d)]

The Professional Engineer certification statement is provided in **Appendix C**.

3.2 Location of SPCC Plan [40 CFR 112.3(e)]

In accordance with 40 CFR 112.3(e), a complete copy of this SPCC Plan is maintained in the administrative building at the facility. The front office is attended during normal business hours, Monday through Friday. The Control Room is attended whenever the facility is operating (i.e., 24-hours per day, 365 day per year) and on-site personnel are able to assist with access to the Plan, if necessary, after normal business.

3.3 Spill Reporting Requirements Written Discharge Notification [40 CFR 112.4]

40 CFR 112.4 requires that information be submitted to the USEPA Regional Administrator and to the Kentucky Department of Environmental Protection in charge of oil pollution control activities whenever the facility discharges:

- A release of more than 1,000-gallons to navigable water in a single event, or
- Two releases greater than 42-gallons to navigable water within a rolling 12 months.

LG&E's Environmental Affairs (EA) will coordinate to make sure the submission requirements are met and that the reports are submitted in a timely manner.

Note – For reportable releases, other than SPCC regulated releases to navigable water described here, the EA staff will coordinate and/or provide assistance in making the required notification to the applicable regulatory agencies.

3.4 Amendments [40 CFR 112.5(a and c)]

In accordance with 40 CFR 112.5(a), the facility periodically reviews and evaluates this SPCC Plan for any changes in the design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including but not limited to:

- Commissioning of containers;
- Reconstruction, replacement or installation of piping systems;
- Construction or demolition that might alter secondary containment structures; or

- Changes of product service, revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures.

Amendments to the Plan made to address changes of this nature are referred to as technical amendments and must be certified by a PE. Non-technical amendments can be performed (and must be documented in this section) by the owner and/or operator. Non-technical amendments include the following:

- Change in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan; or

- Change in the name or contact information of spill response or cleanup contractors.

The facility and EA must make the needed revisions to the SPCC Plan as soon as practicable, but no later than six months after the change occurs. The Plan must be implemented as soon as possible following any technical amendment, but no later than six months from the date of the amendment. The manager is responsible for initiating and coordinating revisions to the SPCC Plan.

Technical and non-technical changes are to be documented in **Appendix D**.

3.5 Five-Year Plan Review [112.5(b)]

In accordance with 40 CFR 112.5(b), the facility reviews this SPCC Plan at least once every five years. Revisions to the Plan, if needed, are made within six months of the five-year review. A registered Professional Engineer certifies any technical amendment to the Plan, as described in **Section 3.4.**

3.6 Qualified Facilities [112.6]

At the time that this Plan was developed, this facility 1) stores more than 10,000-gallons of oil, 2) has not had a single discharge of oil to navigable waters exceeding 1,000 U.S.-gallons or 3) two discharges of oil to navigable waters each exceeding 42 U.S.-gallons within any twelve-month period, in the three years prior to the SPCC Plan certification date, or since becoming subject to 40 CFR part 112 if operating less than three years. Since the facility has more than 10,000-gallons of oil (bulk storage and oil in use), it ***is not*** considered a Qualified Facility.

3.7 Management Approval [112.7]

LG&E is committed to the prevention of discharges of oil to navigable waters and maintains oil spill prevention, control and countermeasures through reviews, updates and implementation of this SPCC Plan. This SPCC Plan has the full approval of LG&E and the facility's management. LG&E and the facility management have committed the necessary resources to implement the measures described in the Plan.

The person identified as having the authority to commit the necessary resources to implement this Plan is identified, and has signed this SPCC Plan, in **Appendix E**.

3.8 Plan Provisions Sequence Cross-Reference with SPCC Provisions [40 CFR 112.7]

This SPCC Plan follows the chronology presented in 40 CFR Part 112 and, therefore, a cross-reference table is not required.

3.9 Facilities, Procedures, Methods, or Equipment Not Yet Fully Operational [40 CFR 112.7]

At the time of issuance of this SPCC Plan, procedures, methods, or equipment required for the Plan are operational with the following exceptions:

- Complete the permanent closure in place of T-20 the failed integral genset fuel tank including signage;
- Complete installation of T-21 the genset auxiliary tank in accordance with industry standards.

Complete work within six months of plan certification.

3.10 Plan Deviation and Environmental Equivalence [112.7(a)(2)]

3.10.1 Specifically Sized Secondary Containment

The facility is providing equivalent secondary containment protection for tanks which are double-walled aboveground bulk storage tanks. Double walled tanks are equipped with interstitial space leak detection floats to monitor the integrity of the primary shell or have drain plugs which are to be checked monthly. The tank double-walled construction provides intrinsic secondary containment for the tanks capacity (note: EPA's Letter on Double-walled Tanks explains that double-walled tanks provide the environmental equivalence of secondary containment).

4.0 Discharge Prevention – General SPCC Provisions

The following measures are implemented to prevent oil discharges during the handling, use, or transfer of oil products at the facility. Oil-handling employees have received training in the proper implementation of these measures.

4.1 Facility Layout Diagram [112.7(a)(3)]

The Cane Run Generating Facility, operated by the Louisville Gas & Electric Company, is located at 5252 Cane Run Road (State Highway 1849) about 8 miles southwest of Louisville, Kentucky. The facility is located in primarily a mixed use – residential/industrial area. The site is comprised of approximately 524 acres and is bordered by the Ohio River to the North and Cane Run Road to the South. The plant is located at Ohio River mile point 617.

The facility property perimeter is fully fenced along all land-accessible routes, signs to deter trespassing are posted at regular intervals and security guards regularly patrol the entire property. The only unfenced area of the site is along the Ohio River at the Screen House. The river itself serves as an obstacle to site access in this area; however, personnel monitor this area accordingly and are trained to contact the security guard if an unauthorized person is observed on plant property,

The layout diagram is located in the **Figure Tab** which includes figures that provide information on:

- a U.S. Geological Survey topographical map with the KPDES outfalls identified;
- facility layout drawings with location of ASTs, oil filled equipment, transfer stations and above ground piping; and predicted spill pathways; and
- drainage sub areas and outfalls.

4.1.1 Type of Oil in Each Container and Storage Capacity [112.7(a)(3)(i)]

The type of oil stored at the facility and the storage capacity of the bulk storage containers and oil-filled operating equipment reservoirs/containers are provided in **Appendix F**. The site figure references the appendix for oil type and volume.

4.1.2 Specific Discharge Prevention Practices [112.7(a)(3)(ii)]

LG&E's corporate policy is to operate its facilities in an environmentally sound manner, maintain safety standards and use established procedures to protect employees, the general public, property and the environment. It is recognized that there are many pieces of equipment which utilize oil where a release has the potential to reach surface water. In order to minimize the possibility of such releases, the following general procedures are discussed to prevent or absorb oil released.

In order to minimize the release of oil during maintenance activities, the following procedures are considered before the activities begins:

1. Supervisor/employee job briefings are performed prior to performing the work. The job briefings emphasize individual responsibilities to:

    a) Anticipate spills prior to commencing work and make sure potential spill pathways (e.g., drains, catch basins, containment valves, etc.) are sealed when practicable.

    b) Use appropriate containers when work requires oil to be drained from equipment.

    c) Use a spill pan under and/or around potential couplings or ports that may leak or drip.

    d) Make absorbent material readily available in areas where releases are most likely to occur.

2. Obtain and use the appropriate containers according to chemical compatibility and temperature.

3. During tanker truck transfers, an individual will always be present and be capable of implementing fuel loading emergency procedures, as necessary.

Improper disposal of oil is strictly prohibited.

LG&E follows specific practices for the loading and unloading of bulk storage tanks. These practices are described in more detail in subsequent sections of this plan.

4.1.3 Discharge and Drainage Control [112.7(a)(3)(iii)]

The facility utilizes a combination of structures (e.g., lined berm, concrete containment dikes, building structures, oil-water separators, etc.), drainage systems, and land based spill response (e.g., sorbents) to mitigate oil from reaching navigable water and adjoining shorelines.

These controls are discussed in greater detail in Sections 5.0 and 14.0 of this Plan. The controls and general flows lines are identified on drawings/figures in the **Figures Tab** and **Appendix O**.

4.1.4 Discharge Discovery [112.7(a)(3)(iv)]

The facility is manned 24-hours per day, 7 days per week. Areas where potential spills could occur are checked on a regular basis with discrepancies reported to the on-duty Supervisor. Any spill or leak constituting a hazard or reportable incident will, upon recognition, be immediately stopped and contained (if possible).

Oil storage and oil-in-use areas are identified on the facility drawings. The drawing legend includes specific symbols which include, but is not limited to: bulk oil storage, oil in use (reservoirs), oil in use (transformers), and the location of dedicated portable storage areas.

4.1.5 Discharge Response [112.7(a)(3)(iv)]

LG&E has developed a corporate-wide procedure for responding to discharge discovery, response and clean up. These procedures are included in **Emergency Tab**. LG&E staff will only attempt to stop or contain a release, if reasonably safe and practical actions can be taken.

In general, the following steps should be taken during either release:

- Eliminate potential spark sources;
- If possible and safe to do so, identify and shut down the sources of the discharge to stop the flow;
- Contain the discharge with sorbents, berms, fences, trenches, sandbags, or other material (**Emergency Tab** contains additional information regarding Spill Mitigation Techniques);
- Contact the General Manager or designee; and
- Follow the procedures on LG&E-KU's GENERAL SPILL/RELEASE RESPONSE STEPS (in **Emergency Tab**).

A "minor" discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than the reportable quantity for oil, see RQ table in **Emergency Tab)**;
- Discharged material is easily stopped and controlled at the time of the discharge;
- Discharge is localized near the source;
- Discharge material is not likely to reach water;
- There is little risk to human health or safety; and
- There is little risk of fire or explosion.

Minor discharges can usually be cleaned up by the facility personnel. The following guidelines apply:

- Stop leaks when discovered, where safely possible;
- Close valve, as applicable;
- Stop pump, as applicable;
- Immediately notify supervisor, designated site contact, or any Manager; and

- Under the direction of local management, stop or contain the leak or spill with discharge response materials and equipment. Place discharge debris in properly labeled material management containers.

The General Manager or designee will complete the General SPILL/RELEASE Reporting Form (provided in **Emergency Tab)** and will forward to the corporate EA Department or will complete the online version.

A minor spill is basically addressed in the first two steps of LG&E-KU's GENERAL SPILL/RELEASE RESPONSE STEPS (in **Emergency Tab**).

A "major" discharge is defined as one that cannot be safely controlled or cleaned up by facility personnel, such as when:

- The discharge is large enough to spread beyond the immediate discharge area;
- The discharge material enters water;
- The discharge requires special equipment and training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a chance of fire or explosion.

In the event of a major discharge, the following guidelines apply:

- Workers in the immediate vicinity should be notified of the release and evacuated, as deemed necessary. Personnel should be directed to the designated staging area at a safe distance from the discharge.
- If the General Manager is not present, the senior on-site person notifies the General Manager of the discharge and has authority to initiate notification and response. If necessary, call the appropriate Trouble-Dispatch Centers identified on the spill response card (copy provided in **Emergency Tab**) and request assistance.
- Follow the procedures outlined on LG&E-KU's GENERAL SPILL/RELEASE RESPONSE STEPS.
- The General Manager (or senior on-site person) must call for medical assistance if workers are injured.
- The General Manager (or senior on-site person) must notify the Fire Department or Police Department.
- The General Manager (or senior on-site person) must call the spill response and cleanup contractors listed in the Emergency Contacts list in **Emergency Tab**.
- The General Manager (or senior on-site person) must record the call on LG&E-KU's General SPILL/RELEASE Reporting Form.
- A list of approved Emergency Response Contractors is provided in **Emergency Tab**.

4.1.6 Method for Disposal of Recovered Material [112.7(a)(3)(v)]

The following is a general procedure that, at a minimum, should be followed for release material management. LG&E-KU's corporate environmental staff is available to assist with specific material management, as needed.

4.1.6.1 Liquids

Recovered/collected material from a minor release will be managed using absorbents and containerized in impervious bags, drums or buckets. The General Manager or designee will characterize this material for proper disposal. Upon characterization, material disposal will be expeditiously managed and spill response materials replenished. If allowable, recovered liquids would be shipped off site for recycling. NON-PCB solid material will be properly characterized and managed for recycling and/or disposal as described in the following section.

4.1.6.2 Solids

Solid oily debris will be placed in 55-gallon drums or dumpsters. The General Manager or designee will ensure that the material is properly characterized for proper disposal. For material streams that have been previously characterized and the current material is consistent with the previously tested materials, this may satisfy the disposal facility's requirements.

Upon characterization, material disposal will be expeditiously managed and spill response materials replenished. Material resulting from a major discharge response may be removed and disposed of by a cleanup contractor.

4.1.7 Discharge Reporting Format and Contact List and Phone Numbers [112.7(a)(3)(vi)]

Any spill of ***twenty-five-gallons or more*** or any spill into or upon the navigable waters of the United States or adjoining shorelines shall be immediately reported to the **Response Coordinator** or his designated alternate. The facility's Emergency Contact List and other Emergency Phone Numbers are provided in the **Emergency Tab** and **Appendix E**.

It will be the General Manager's (or designee) responsibility to ensure that prompt notification is made to the appropriate regulatory agency, if necessary, and/or to personnel responsible for environmental compliance within LG&E. In the absence of either the General Manager or designee, the report shall be made by any Supervisor. For all spills, regardless of whether the release volume exceeds the reportable quantity, a *Spill / Release Reporting Form* (included in **Emergency Tab**) shall be submitted to EA. Reportable Quantities for Oil are included in **Emergency Tab.** The following information shall be provided to notified regulatory agencies or the LG&E environmental compliance contact:

1. Company name;
2. Name, address, and telephone number of person making the notification;
3. Date and time of the release;

4. Exact location of the release;
5. Estimated quantity and name of material spilled;
6. Source of spill;
7. Cause of spill;
8. Name of body of water involved; and
9. Action taken for containment and cleanup and whether containment was achieved.

5.0 Potential Spill Predictions, Volumes, Rates, and Control [112.7(b)]

The potential spill predictions, volume, rates and controls are discussed in various locations of this plan including:

- Facility Diagram(s) in the **Figures Tab** show spill prediction direction arrows for storage tanks and containers;
- The Plant Material Inventory in **Appendix F** provides general information regarding predicted spill volumes and drainage sub areas;
- The bulk storage Tank Information Sheets in **Appendix G** provide specific spill predictions-controls information;

Various plan sections addressing general/specific containment for: different equipment and plant areas; oil unloading and transfer areas; environmental equivalences discussions; etc.

6.0 Containment and Diversionary Structures [112.7(c)]

6.1 Bulk Storage Tanks (e.g., above ground storage tanks, 55-gallon drums, etc.)

Bulk storage tank(s)/container(s) require *specifically sized* secondary containment. Containment structures for bulk storage tank(s)/container(s) are discussed in detail in **Section 14** and **Appendix F**.

6.2 Oil Filled Operational Equipment (e.g., Turbines, Compressors, etc.)

Oil-filled operational equipment requires either: a) general containment to mitigate an oil release from reaching a navigable water or b) alternate requirements whereby a facility with qualified oil-filled operational equipment, which meets specific qualification criteria, may use an inspection and monitoring program and preparation of a 109 Contingency Plan. This facility has chosen to provide general containment for oil-filled equipment. The volume and locations of the various oil reservoirs associated with the oil filled operation equipment is provided in **Appendix F**. The oil filled operational equipment mainly consists of reservoirs that lubricate the combustion turbines, lube oil reservoirs for fans, gear boxes and pumps. Many of the reservoirs recirculate the oil through a cooling unit and therefore have piping associated with their operation.

Oil filled operational equipment is located mainly within the CT enclosures, heat recovery steam generator (HRSG) boiler feed pump building, the steam turbine building, and the Diesel Generator Building.

6.2.1 Outside Equipment Areas

CR7 NGCC includes an outdoor emergency diesel generator adjacent/South of the steam turbine building. The diesel fuel tank associated with this generator is a double-walled tank and has a bermed refueling area that drains to the oil/water separator. This approach satisfies containment requirements.

6.2.2 Cane Run 7 (NGCC) Plant

The Cane Run 7 NGCC plant includes oil reservoirs and ancillary support equipment. Miscellaneous machine and lubricating oils are also stored in drums in the CR7 Oil Storage Building. Drums are stored on secondary containment pallets. These outside areas drains to the main stormwater drainage ditch (to Mill Creek to Ohio River).

6.2.3 Steam Plant

The Steam Plant includes oil reservoirs and ancillary support equipment. With retirement of the steam units, the reservoirs and equipment are being drained of oil and many are permanently closed. All of these reservoirs are located within the building structure. In the event of a release

from a reservoir, initially the oil will pool in the immediate vicinity. The first response will be to try and contain the oil with absorbents and prevent it from leaving the building structure.

The building structure provides one layer of containment to mitigate a release from entering the Ohio River. In the event that a release from a reservoir were to occur, it would enter the floor drains and flow into building sumps. The building sumps are equipped with pumps that transfer their contents to the landfill stormwater pond.

The stormwater pond provides sufficient general secondary containment to allow for the capture and removal of oil prior to a discharge into navigable water and satisfies the general containment requirement.

6.2.4 Diesel Generator Building

The generators have associated fuel tanks and reservoirs located within the Diesel Generator Building. These reservoirs are located on a concrete floor with sump (concrete basin) between oil storage and drains. The area inside the building drains to the oil/water separator. Outside the building area outside stormwater would flow to the main drainage ditch (to Mill Creek to Ohio River).Transfers into tanks are via double walled piping with automatic pump shutoffs.

6.3 Oil Filled Electrical Equipment (e.g., transformers, etc.)

Oil Filled Process Equipment requires either a) *general* secondary containment or b) a Qualified Facility, which may employ, an inspection and monitoring plan with a 109 Contingency Plan. General secondary containment is less stringent than specifically sized secondary containment (e.g., does not require 100% containment for the oil stored).

Multiple transformers are owned, operated and maintained by the facility. The transformers contain NON-PCB mineral oil dielectric fluid. The oil inventory for these plant transformers is included in **Appendix F.** There is other miscellaneous oil in use equipment located on the site; however, the substation located on the property is covered by a separate SPCC Plan prepared for the Transmission Division.

The type of containment provided for individual transformers is indicated in **Appendix F**. The following are examples of the types of containment in use.

6.3.1 Dedicated Concrete Containment Systems

6.3.1.1 Containment Dikes

Most of the large transformers located at the facility are located within dedicated concrete containment dikes, equipped with valved stormwater drains. This satisfies the general containment requirements.

6.3.1.2 Foundation Containment Vaults

Transformers and electrical equipment at the Combustion Turbine site area are located upon grating-covered foundation containment vaults. These sub grade vaults are equipped with valved stormwater drains that are discharged to the CT area oil-water separator.

This satisfies the general containment requirements.

6.3.2 Diversion System

Surface water drainage systems generally flow into the runoff ponds which provide temporary storage in the event of a transformer release. This satisfies the general containment requirements.

6.3.3 Land Based Response Capabilities

Land Based Response Capabilities include absorbents, as well as, heavy equipment that can be deployed to build a temporary dike to mitigate a large release from migrating toward navigable water. Even when a release is contained by a containment structure, absorbents are often used as the vehicle to transfer the material from a liquid to a more manageable semisolid/solid form. One type of material that can be used is CIAgent. CIAgent, a reactive polymer) is available in several different forms (e.g., granular, pellets, booms, etc.) that can be used to immobilize an oil release. Absorbents are available in several different forms (e.g., granular, pellets, booms, etc.) that can be used to immobilize an oil release. If an oil release is present in a containment dike, floating on water in a diversion system, etc., the material can be applied over the release and almost immediately after contact, binds the oil up into a solid rubber-like material.

Spill cleanup kits containing absorbent material, booms, and other portable barriers are located at the site. The spill kits contain containment booms to mitigate the flow of an oil release to navigable water. In addition, the spill kits contain materials capable of absorbing minor releases. In the event of a larger release, the spill kit and tools can be utilized to create a retention barrier (e.g., dirt berm, boom barrier, etc.) until external responders arrive at the scene. The spill kit inventory is checked monthly as part of the preventative maintenance program, and new materials are ordered promptly after consumption.

6.4 Oil-Water Separator

There is one oil-water separator located at the facility. The oil/water separator is of API-gravity design with an accumulation chamber integral to the separator structure. This chamber is checked for oil accumulations monthly by maintenance personnel and observations are noted on the Monthly Site Inspection Checklist (sample provided in Appendix J).

6.5 Transfer Areas

There are a few fuel transfer areas at the facility. These consist of:

- Bulk tank truck into smaller ASTs at the Cane Run 7 NGCC plant emergency generator and fuel tanks.

There are a number of transfer locations (e.g., stand pipe fill points for a tank, transfer into the top of a tank with a hand-held fuel dispenser, etc.) that utilize the bulk tank truck internal transfer pump across the facility. These transfer areas mainly consist of the transfers of small quantities of oil from a bulk tanker truck into shop built tanks. The transfer rate for this type of operation is generally low, similar to the fueling of an automobile (i.e., < 20 gal./min). The bulk truck is required by Department of Transportation regulations to carry a spill kit to address small releases. The bulk trucks also carry drip pans to deploy beneath hose and coupling connections. In addition to these materials, LG&E has spill kits strategically located around the facility.

Appendix H Fuel Loading Procedures contains a checklist for 1) tank to tank, and 2) truck to tank, loading transfers. These procedures meet the requirement of 40 CFR 112.8(c)(8)(iii).

6.6 Demonstration of Impracticability [112.7(d)]

Secondary containment is practicable at this facility.

7.0 Inspections, Tests and Records [40 CFR 112.7(e)]

This section discusses the inspection, tests and records required to be performed and maintained at the facility. SPCC regulations require inspections of:

- Bulk oil storage equipment;
- Oil-filled operating and electrical equipment;
- Oil-handling/loading equipment and piping;
- Oil-transport vehicles (i.e., for leaks);
- The site property and facility discharges for conditions which might affect or indicate containment of potential spills.

SPCC regulations try to minimize future leak risks from oil storage tanks by requiring the combination of:

- **VISUAL INSPECTIONS** for leaks and (current) physical condition of **ALL** storage-operating equipment containers and secondary containment provisions;
- With **INTEGRITY TESTING** of bulk storage tanks, in order to monitor their useful service life and avoid potential leaks in the future.

INDUSTRY INSPECTION AND TESTING STANDARDS

SPCC regulations also require that inspections and testing be performed according to industry standards appropriate for the type of equipment. At Cane Run, such industry standards primarily apply to bulk storage tanks and piping. As further described below (and later in this SPCC plan **Section 15)**, LG&E has chosen the following industry inspection standards:

For both ***Visual*** Inspections of ALL (Shop-built & Field-Fabricated) Tanks:
- the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001

For ***Integrity*** Testing-Inspections of Shop-Built Tanks:
- the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001

For ***Integrity*** Testing-Inspections of Field-Fabricated Tanks:
- the American Petroleum Institute (API) API 653, *Tank Inspection, Repair,*
- *Alteration, and Reconstruction Standard*

There are no widely-accepted visual inspection standards for oil-filled operational/electrical equipment. However, SPCC regulations allow such inspections can be accomplished by other methods. Specifically, LG&E complies with the SPCC rule by implementing a preventative maintenance program and by performing facility wide and bulk storage tank inspection in accordance with the schedule provided in **Appendix I**. The schedule includes one table that is

associated with facility related required inspection (e.g., inspection frequency of oil-water separators, site security, etc.) and the second table focuses on the inspection of bulk storage tanks [the inspection frequency (e.g., monthly, annually) and whether the tank requires inspection by a certified inspector and the general inspection frequency (e.g., external inspection every 5 years).
Generally, the table below summarizes the inspections performed on-site site (separately described later in this section):

	Inspection	*Inspection Personnel*
1	General Facility Security, Site Conditions & Plant Effluent Discharges - Monthly Site - Visual	*Plant Staff, Contract Site-Security Rounds & Equipment Sensors*
2	Bulk Storage Tank Inspections, Secondary Containment & Accumulated Stormwater Effluent Discharges	TANKS
	a. Monthly AST- Visual *Includes* Stormwater (& *additional drain events*)	***a.*** *Plant Staff & Plant (stormwater drainage for transformers only)*
	b. Annual AST-Visual	*b. Plant Staff (Maximo work orders)*
	c. AST-Periodic Integrity Testing	*c. Certified Contractors (if needed)*
3	Underground Storage Tanks (USTs)	*No USTs located at this site*
4	Oil-Filled Operational Equipment and Secondary Containment	Monthly Site Visual *Plant Staff*
5	Oil-Filled Electrical Equipment and Secondary Containment	Monthly Site Visual *Plant Staff*
6	Diversionary Structures and Oil-Water Separators	Monthly Site Visual *Plant Staff*
7	Oil Transfer-Unloading Areas *a.* Emergency Generators Tank Fill Ports	Monthly Site Visual *Plant Staff*
8	Oil Pipelines & Secured Connections	Monthly Site Visual *Plant Staff*
9	Oil Spill Response Equipment	Monthly Site Visual Plant Staff
10	Tank Trucks Drain Valves-Outlets	Upon Entry/Departure *Plant Staff*

7.1 General Facility Security and Site Conditions Inspections

Site-security, access and area conditions are controlled and monitored using a combination of electronic surveillance sensors and contracted security personnel. The plant main guard gate call box is connected to the central corporate security center 24 hours/day, 7 days/week and the entire site is regularly patrolled twice/day.

Plant staff observe site security and plant effluent discharge conditions when performing the monthly site inspection. A copy of an example *Monthly Site Inspection Checklist*, used to

document site inspections, is included in **Appendix J.** The facility may choose to use another checklist or electronic version, but the equivalent information (as on example checklist) must be obtained.

Plant staff and the contracted site security staff patrol duties (as discussed in Plan **Section 9**) inspect for:

- Fencing breaches;
- Signs of vandalism;
- Lighting is adequately maintained in areas requiring detection of these security issues and for the discovery of potential oil leaks/discharges from storage tanks or equipment;
- Security of oil storage tanks master flow and drain valves;
- Unauthorized access to oil pumps starter controls and solenoid valves (*also secured by the plant DCS control and access restrictions*).

The contracted site security personnel document completion of their security patrols.

7.2 Bulk Storage Tank Inspections, Associated Secondary Containment and Accumulated Stormwater Discharges Inspections

The plant uses the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001 for visually inspecting all bulk storage tanks and their associated secondary containment. Generally, as LG&E applies this industry inspection standard, it requires:

1. Tank Information Sheets – (tank age, construction details, info-updates, etc.);
2. Monthly visual inspections (‘informal’) of bulk storage tanks;
3. Annual visual inspections (‘informal’) of bulk storage tanks;
4. Integrity testing of shop-fabricated tanks by ‘formal’ inspections (SP-001 certified inspectors) including material repairs;
5. Integrity testing of Field-Fabricated tanks ‘formal’ inspections (API-653 certified inspectors) including material repairs;
6. Stormwater accumulations drained from secondary containments must be documented.

Periodic integrity testing should not be confused with monthly tank inspections. All tanks require monthly inspection by LG&E employees to spot and identify concerns before they result in a potential release into the environment.

7.2.1 Tank Information Sheets

Tank Information Sheets (TIS) are located in **Appendix G**; these provide the background information upon which the (STI) SP-001 inspection decisions are based - particularly for

integrity testing-inspections (e.g., type, frequencies, scheduling, etc.). These TISs also serve as quick-info sheets for tank age, and details, etc. The TISs also serve as a logical place to document material repairs and any associated 'repair-confirmation' tests (e.g., hydrostatic testing, leak checks, etc.) performed on the tanks. SPCC regulations require that:

> *'Records of inspections and tests (and following material repairs) kept under usual and customary business practices satisfy (the) recordkeeping requirements'.*

Relatively small double-wall shop-built tanks which, under the STI SP-001 tank inspection standard protocol, are exempt from certified inspections.

7.2.2 Monthly Visual Inspections of All Tanks and Associated Secondary Containment Structures

The (STI) SP-001 inspection protocol requires monthly visual inspections for:

- Oil leaks or signs of deterioration of tank physical condition;
- Tank containment deterioration;
- Accumulated rainwater within tank containment – inspection and drainage

These inspections are conducted by plant staff to observe if oil is leaking from bolts, gaskets, rivets, seams, or any other part of a tank and its piping system. Packing glands on valves are inspected and tightened at regular intervals. Any visible oil leaks are recorded on the inspection form and reported to the person in charge of spill prevention. Any spills or leaks will promptly repaired. Any leak which presents a hazard or is a reportable quantity will be immediately upon recognition stopped and contained (if safely possible) and appropriate parties notified. Records of inspections (operating logs) are on file at the facility. Written inspection records are maintained by the facility for a period of not less than six years.

The monthly inspections also include the secondary containment for these tanks and addresses containment physical conditions such as cracks, corrosion, structural stability, obstructive debris, or other conditions which could defeat or otherwise cause problems for the containment function.

Stormwater accumulations in tank containment must be inspected for the presence of oil, cleaned of oil if present, drained and documented. According to SPCC regulations, inspectors may use stormwater drainage records as a demonstration that the tank secondary containment integrity is maintained. During high rainfall months additional stormwater accumulation drainage events may be required and when performed, must be documented and filed with plant environmental SPCC records.

Some tank designs are enclosed double-wall containment type; therefore, no secondary stormwater accumulation occurs in the containment. However, the interstitial containment space is checked monthly for leaks.

A copy of the *Monthly Tank Inspection Example Checklist*, used to document site inspections, are included in **Appendix J.** The plant utilizes an electronic recordkeeping system which automates the performing, certifying and documentation of the inspection.

Such a substitute checklist can be used in lieu of the example provided, **however**, the substituted check must cover the criteria identified in the referenced Standard.

7.2.3 Annual Visual Inspections of Tanks and Associated Secondary Containment Structures

The annual visual inspections required by (STI) SP-001 inspection protocol are more extensive and time-consuming to perform than the monthly inspections. This inspection addresses items that pose less short-term imminent risk than those of the monthly inspection, but includes more focus on long-term risk items that threaten reliable future service life such as:

- Tank/containment infrastructure conditions;
- Foundation & drainage issues;
- Corrosion-protection;
- Tank structural components & vents condition;
- Instrumentation & electrical systems.

Unless otherwise stated, this inspection can be performed by a non-certified plant employee using the checklist provided in the referenced Standard. An example of the requirements for that checklist is provided in **Appendix J**.

Written annual inspection records are signed and maintained at the facility for a period of six years.

7.2.4 Integrity Testing-Inspections of Shop-Built Bulk Storage Tanks Including Material Repairs

In addition to the above monthly and annual inspections by facility personnel, tanks may be periodically evaluated by an outside certified tank inspector following the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001 (*latest version*).

The oil storage tanks onsite are considered shop-built tanks. Shop-built tanks are tanks that have been constructed at a manufacturing facility, tested before shipment and then tested again as part of the tank installation. These tanks will generally carry the UL142 designation on the tank name plate. While some tanks at Cane Run do not have name plates, it is assumed, based

on their tank category (Category #1), that the STI SP-001 can be used for tank inspection (API 653, a more thorough assessment, can be used as a substitute to STI SP-001; however, if API 653 is specified, STI SP-001 cannot be used as a substitute for API 653),

As discussed in **Appendix I**, a Category 1 Shop Built Tank less than 5,001 gallons does **not** require a formal inspection by a certified tank inspector. Category 1 Shop Built Tanks 5,001 gallons and larger do require inspection based on the schedule developed by the P.E. in **Appendix I**. The tank inspection schedule may change as dictated by the results of any inspections performed on the tank.

Material repairs include any maintenance activities such as cutting, welding or modifying a storage tank and attached piping where such activities may change the integrity of the storage tank/system. For example, if replacement of a piping flange attached to a tank is required, the tank/piping should be hydrostatically/pressure-tested to confirm the repair and tank integrity. Such integrity tests can be performed by plant maintenance staff (adequately skilled to perform such repairs) and test records kept with all other tank integrity testing documentation.

7.2.5 Integrity Testing-Inspections of Field-Fabricated Bulk Storage Tanks Including Material Repairs

The bulk storage tanks located at the facility are considered shop built tanks.

7.2.6 Stormwater Accumulations Drained from Secondary Containments Must Be Documented

It is important that inspections address drainage of accumulated stormwater in tank containment. During high rainfall months additional stormwater accumulation drainage events may be required by plant maintenance staff. Refer to **Appendix L** for procedures.

7.3 Underground Storage Tanks (UST)

There are no underground oil storage tanks located at this site.

7.4 Oil-Filled *Operational* Equipment and Secondary Containment Inspection

Monthly inspections include visual observations of oil-filled **operating** equipment reservoirs and piping systems located at the facility, with particular focus on outside equipment (i.e., not located within containment buildings). The SPCC inspector should walk around each of the equipment/systems and note any oil releases. Reservoir tanks should have a thorough inspection performed once every calendar year and/or when maintenance is performed on the equipment.

These inspections can be performed by a non-certified plant employee using the checklist provided in the referenced Standard. A copy of an example *Monthly Site Inspection Example Checklist*, used to document site inspections, is included in **Appendix J.** A substitute checklist can be used in lieu of the example provided.

Written annual inspection records are signed and maintained at the facility for a period of six years.

7.5 Oil-Filled *Electrical* Equipment and Secondary Containment Inspection

Monthly inspections also include visual observations of oil-filled **electrical** equipment located at the facility, where nearly all transformers and oil-filled circuit-breakers are located outside. Similar to the operational equipment inspections, the SPCC inspector should walk around the transformers/electrical equipment and note any oil releases.

Due to the function of the oil in the transformer (heat dissipation), any release of oil is generally detected by maintenance staff either directly (through inspection; transformers are regularly inspected by maintenance staff) or indirectly through the loss of performance or reported elevated temperature readings. Reservoir tanks should have a thorough inspection performed once every calendar year and/or when maintenance is performed on the equipment.

These inspections can be performed by a non-certified plant employee using the checklist provided in the referenced Standard. An example of the requirements for that checklist is provided in **Appendix J**.

Written annual inspection records are signed and maintained at the facility for a period of six years.

Where oil-filled electrical equipment is located in restricted-access transmission substations, such equipment will be inspected by transmission personnel pursuant to SPCC plans specifically prepared for those areas.

7.6 Diversionary Structures and Oil-Water Separators

The facility operates an oil/water separator. The chamber is checked for oil accumulations during the monthly site inspection and observations are noted on the example Monthly Site Inspection Checklist provided in **Appendix J** (or equivalent checklist).

7.7 Oil Transfer-Unloading Areas

The facility has oil-transfer activities associated with filling storage tanks and miscellaneous turbine/lube oil tanks. These unloading areas involve parking trucks upon relatively flat areas where runoff does not readily drain off-site or to surface waters. Spill response materials are readily available.

These unloading areas are inspected during the monthly site inspection and observations are noted on the example Monthly Site Inspection Checklist provided in **Appendix J** (or equivalent checklist).

7.7.1 Bulk Truck to Small ASTs and Emergency Generators / Fire Pumps Tanks

These transfer areas are inspected monthly along with the monthly Bulk Storage Tanks Inspections and/or are also included in the Monthly Site Inspections performed by plant environmental staff (see example checklist in **Appendix J**).

7.8 Oil Pipelines & Secured Connections

Cane Run oil pipelines are all above ground. Fill lines are generally at the top or into the top of tanks. Aboveground piping and valves are examined monthly to assess their condition. Inspection includes aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies, catch pans, piping supports, locking of valves, and metal surfaces.

7.9 Oil Spill Response Equipment

Monthly Site inspections conducted by plant environmental staff also include checks that area spill kits are adequately stocked for potential spill response scenarios. The various spill kits located across the site are separately listed on the Monthly Site Inspection example checklist in **Appendix J**.

7.10 Oil Tank Trucks Drain Valves-Outlets Upon Entry/Departure

Plant operators attending oil tanker truck unloading operations inspect tanker truck for leaks upon entry and departure from the property. SPCC regulations specifically require that:

> *'Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.'*

Generally, tanker trucks deliver small quantities of oil to the plant site and therefore probably depart partially-full. Consequently, plant operators are required to visually check that oil delivery trucks enter/depart without leaks and, if such leaks occur, they respond as necessary to stop and mitigate the oil leaks/spills.

8.0 Personnel, Training, and Discharge Prevention Procedures [112.7(f)]

8.1 Discharge Prevention Training [112.7(f)(1)]

Personnel involved in the handling of oil are trained in the proper operation and maintenance of oil storage tanks or containers; oil filled operating equipment and oil-filled electrical equipment. Training may include:

- Proper maintenance to prevent oil discharges;
- Discharge procedure protocols (Spill Card);
- Applicable pollution control laws, rules, and regulations (e.g. 40 CFR Part 112, 40 CFR 302, KRS 224-400, etc.);
- General facility operations; and
- The contents of the SPCC Plan.

New hires, for positions that require oil use or involve oil operations, are required to have spill prevention training, which includes a review of the SPCC Plan.

8.2 Designated Person [112.7(f)(2)]

The Designated Person will be the person accountable for discharge prevention. This individual will also be responsible for conducting required inspections, arranging testing, annual training, documentation and record maintenance. The designated person's contact information is provided in **Appendix E**.

8.3 Discharge Prevention Briefings [112.7(f)(3)]

LG&E staff conduct Spill Prevention Training annually to ensure adequate understanding and effective implementation of the SPCC Plan. These briefings highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

The scheduled annual training includes a review of LG&E's policies and procedures related to spill prevention, control, cleanup, and reporting; procedures for routine handling of products (e.g., loading, unloading, transfers); SPCC inspections and spill prevention procedures; spill reporting procedures, spill response; and spill recovery, disposal and treatment of spill materials.

9.0 Security [112.7(g)]

9.1 Fencing

The facility is fenced along all land accessible routes with a guard stationed at the site access gate located on the main access road. In addition to fencing, other methods of site access control are utilized at the facility. In some cases, discrete oil storage areas are fenced or housed within secure buildings. The facility is staffed on a 24-hour per day 7-day per week basis, and personnel routinely inspect areas where oil storage occurs

The only unfenced area of potential access to the site is along the Ohio River at the Screen House. The river itself serves as an obstacle to site access; however, it is possible that someone could enter the site via this route. Personnel are aware of this potential and monitor this area accordingly. In the event that an unauthorized person is observed on plant property, facility personnel will contact the security guard for assistance.

9.2 Master Flow and Drain Valves

Master flow and drain valves are valves installed on a tank to allow for: the draining of a tank, removal of water, collection of fluid samples, etc. These valves poise a risk in that, if opened by accident or through vandalism, they can drain the contents of the tank. In order to minimize the chance of an accidental or vandal related release, these valves should be secured when not in use.

During the assessment of each tank, it was noted whether the tank was equipped with a master flow and drain valve and whether that valve was secured. There are several ways that a valve can be secure, to include, but not limited to placing a lock on the valve, inserting a threaded plug in the valve opening, blind flanging the valve opening, etc.

This is also the case with oil in use reservoirs and electrical equipment. While the location of a reservoir inside a building provides a level of security, these valves should continue to be inspected and secured, as practical. The same holds true for electrical transformer equipment.

9.3 Starter Controls

Starter Controls refer to the controls that operate a pump associated with a bulk storage tank. The concern associated with the security of starter controls is that a pump could be accidentally engaged through an act of vandalism and result in the undesired transfer of oil. In some instances, activation of a starter control could result in the contents of the tank being discharged into the environment. Therefore, starter control security is a prevention requirement.

The vast majority of the remaining starter controls are associated with service station type pumps. Starter controls require a form of security to prevent unauthorized fuel transfers. Security can be achieved through several methods, including but not limited to:

- Locating pump controls in a secure location (inside a locked building),
- Installation of a lock on the control mechanism to prevent unauthorized use,
- Use of an activation device (e.g., card reader) to control operation, or
- Activation/deactivation of electricity to transfer pump (breaker box located in secure building or locked).

Similar to master flow valves, these pumps are constantly in use and their security status can change depending on the operator. It is imperative that LG&E vigilantly instruct employee on the security requirements for starter controls and inspect this item on a monthly basis.

9.4 Pipeline Connections

The SPCC requirement for pipeline connections to be secured is to prevent the accidental or unauthorized release of oil to the environment. Pipeline connections pose the greatest risks at bulk terminals, where large volumes of oil are delivered to a facility via inter or intrastate pipeline. They also present an elevated risk at bulk terminals where there are a number of transfer pipes used in the blending and distribution of product to various bulk tanks.

For the facility, there are very few non-dedicated pipelines that could result in a release of oil into the environment. Tank fill connections are secured with a camlock end cap when not in use.

9.5 Facility Lighting

The facility is a large complex that runs continuously, day and night. Facility lighting is designed, installed, and operated to facilitate these operations with lighting in most of the areas. The purpose of including lighting in the SPCC regulations is as a means to ensure that, in the event of an oil release, the release would be observed during periods of darkness. Therefore, lighting at the facility is adequate for observation of a release (or conditions that indicate threat of release) by operators or inspectors during nighttime operations. Routine inspections conducted during nighttime hours are also aided by use of portable lighting as well to aid in observation of actual or threatened releases.

The general visual assessment of the areas with oil containing vessels will be stressed to all employees, contractors and security personnel as part of the SPCC Briefings and Training.

10.0 Facility Tank Car and Tank Truck Loading/Unloading Rack [112.7(h)]

A loading/unloading rack, by definition, is not present at the facility.

11.0 Field-Constructed Aboveground Containers [112.7(i)]

There are no field-constructed tanks at the facility.

12.0 Conformance with Other Applicable Rules [112.7(j)]

This SPCC Plan was written to conform with 40 CFR part 112 requirements. The facility thereby conforms to the general requirements for oil pollution facilities in Kentucky. Discharge notifications are made in compliance with local, state and federal requirements.

In accordance with 401 KAR 5:037, a Groundwater Protection Plan (GPP) has been prepared for this site. The GPP is intended to develop plans and procedures to mitigate and/or respond to a release of hazardous materials to groundwater.

In addition, the facility has developed and implemented Best Management Practices (BMP) to protect surface water drainage in accordance with KPDES Permit KY0041971. The BMP Plan employs structural and non-structural controls to protect receiving bodies of water from degradation that could be caused by surface water drainage. Treated stormwater runoff is discharged to the Ohio River through KPDES permitted outfalls.

13.0 Qualified Oil-filled Operational Equipment [112.7(k)]

The owner or operator of a facility with oil-filled operational equipment (e.g., hydraulic systems, lubricating systems, transformers, etc.) that have not had a release from this equipment:

- Exceeding 1,000-gallons or
- No two discharged, each exceeding 42-gallons within any twelve-month period
- In the preceding 3 years prior to the SPCC Plan certification

can chose to use an alternative requirement to implementing general secondary containment. This alternative must include:

- Establishing and document the facility procedure for inspections or a monitoring program to detect equipment failure and/or a discharge;
- Preparation of a 109 Oil Spill Contingency Plan, including a written commitment of manpower, equipment and materials required to expeditiously respond and control an oil release.

This requirement is not applicable to the facility. General secondary containment (e.g., adequately designed concrete dikes, drainage to the oil-water separator, facility drainage, etc.) has been provided for oil-filled operation equipment to satisfy the regulatory requirement.

14.0 Storage Containment-Area Drainage - Specific Requirements [112.8(b)]

If you are the owner or operator of an onshore facility (excluding a production facility) you must meet the general containment requirements discussed in 40 CFR Part 112.7- and the specifically sized secondary containment requirements of 40 CFR Part 112.8.

14.1 Diked Storage Area Drainage, Valves Used and Inspection of Retained Stormwater [112.8(b)(1-2)

The bulk storage tanks have several forms of specifically sized containment, including concrete walls and floors, steel containment boxes and doubled-walled tanks. Some double-walled tanks are present at the site and some of these, in accordance with the rules, are not located within a containment dike.

The oil storage containment systems are equipped with a manually-operated gate or ball valve. The valve is normally secured closed, except when draining the secondary containment structure. The content of the secondary containment dike is inspected by facility personnel prior to draining to ensure that only oil-free water is allowed to enter the stormwater drainage system. The bypass valve is opened and secured closed under direct personnel supervision. Drainage events are recorded in the log *example* included in **Appendix K** to this SPCC Plan. Facility personnel can use an equivalent stormwater drainage form but, as a minimum, it must include:

- Tank #
- Date
- Approximate depth, in inches, of water in containment system
- Presence/absence of oil sheen
- Drainage start and stop time
- Signature of person performing the work.

Drainage Records are only required to be maintained for oil storage tanks containment draining events. While stormwater within a containment structure surrounding oil filled equipment should be inspected prior to discharge, the regulations do not require that Drainage Records be kept for satisfying the general containment requirements.

14.2 Area Specific Drainage From Storage Area Containers Into Secondary Containment [112.8(b)(3)]

Area specific drainage into secondary containment occurs when the surrounding areas has been graded or designed such that an oil release would ultimately flow into a secondary containment system. The facility does not use area specific drainage (outside of a berm) to

comply with the ***specifically sized*** secondary containment requirements. However, the facility does use area specific drainage to comply, in most cases as a backup, with some of the ***general secondary*** containment requirements.

14.3 Facility Diversion System [112.8(b)(4)]

Similar to area specific drainage, a diversion system is a system designed to receive an oil release in the event of a tank failure. The facility does not use a diversion system to comply with the ***specifically sized*** secondary containment requirements for bulk storage tanks (all tanks have a dedicated containment system). However, the facility does use diversion systems (e.g., an oil-water separator at the CT site), in most cases as a backup, with some of the ***general secondary*** containment requirements.

14.4 Facility Treatment Unit Pumps [112.8(b)(5)]

This section of the regulations requires redundancy in the equipment (e.g., lift station pumps) that would be used in managing an oil release in case there is an equipment failure or human error. The only control devises that meets this criteria at the facility is the oil-water separator, whose effluent discharges to a wastewater storage tank. The oil-water separator is equipped with a primary and backup pump, as required by this section of the regulations. The wastewater tank discharge is controlled by operators and when opened, it discharges to the landfill stormwater basin that discharges through Outfall #104 and #102 to the Ohio River.

15.0 Bulk Storage Containers [112.8(c)]

Bulk storage tanks and containers require *specifically sized* secondary containment**.** **Appendix G** provides additional information regarding the Bulk Storage Tanks**.**

15.1 Compatibility [112.8(c)(1)]

The steel bulk storage tanks are compatible for the storage of fuel oil. The oil storage tanks are not pressurized and operate at approximately atmospheric temperature.

15.2 Specifically Sized Secondary Containment Techniques [112.8(c)(2)]

Bulk Storage tanks require specifically sized secondary containment. Containment information for each tank are included in **Appendices F and G**.

15.2.1 Double-walled Tanks

There are numerous tanks at the site that are of double-walled construction. The double walled construction provides intrinsic secondary containment for the tank capacity. The interstitial space between the primary and secondary containers is inspected on a monthly basis to detect any leak of product from the primary container.

In accordance with EPA' Letter on Double-walled Tanks, Double-walled tanks are considered to provide an environmental equivalence for secondary containment.

15.2.2 Tanks in a Containment Box

Few shop built tanks located at the facility are located within steel containment boxes. In some cases, these boxes were specifically designed for the tank and they could be considered one unit and in other cases, the tank has been set inside of a constructed containment box.

Some of the containment boxes are stamped with specification on the side (e.g., Rated for 360 gallons) and others the containment volume was calculated.

15.2.3 Drainage of Water from Tank Berms

As discussed in previous sections, water will be inspected for the presence of oil prior to discharge from a berm or dike containment system. The person draining the system will follow an approved stormwater drainage procedure, including documenting the information.

15.3 Buried Metallic Storage Tanks [112.8(c)(4)]

The facility does not have any buried ***oil*** storage tank(s).

15.4 Partially Buried or Bunkered Metallic Tanks [112.8(c)(5)]

The facility does not have any partially buried or bunkered storage tanks.

15.5 Testing and inspection of bulk storage tanks [112.8(c)(6)]

15.5.1 Visual Observation

Visual observations of the tanks are performed by facility personnel during operating hours. Inspections are conducted at least monthly to examine the exterior of the above-ground tanks and the containment areas for the following:

- Leaks,
- Shell distortions, signs of settlement,
- Corrosion,
- Condition of foundation and supports,
- Paint coatings,
- Insulations systems, and
- Appurtenances.

15.5.2 Testing

Testing will be performed using industry standards at specified intervals and after repairs or modifications are performed which may alter the integrity of the tank.

15.5.2.1 STI SP-001 Tanks

The oil storage tanks at the facility are considered shop built tanks. Shop built tanks are tanks that have been constructed at a manufacturing facility, tested before shipment and then tested again as part of the tank installation. These tanks will generally carry the UL142 designation on the tank name plate. While some tanks at the facility do not have name plates, it is assumed, based on their tank category, that the STI SP-001 can be used for tank inspection (API 653, a more thorough assessment, can be used as a substitute to STI SP-001; however, API 653 is specified, STI SP-001 cannot be used as a substitute for API 653),

As discussed in **Appendix I**, a Risk Category 1 Shop Built Tank less than 5,001-gallons does not require a formal inspection by a certified tank inspector. Risk Category 1 Shop Built Tank 5,001-gallons and larger require inspection. The tank inspection schedule may change as dictated by the results of any inspections performed on the tank.

The testing program, schedule and requirements are provided in **Appendix I**.

15.6 Internal Heating Coils [112.8(c)(7)]

This section relates to the potential for a release from internal heat transfer equipment in a process (e.g., heating coils, heat exchangers, etc.) where oil is used in the heat transfer process. In the event that a piece of equipment failed, this oil could enter process water and subsequently be discharged into navigable water. This type of equipment was not in use at the facility during the preparation of this Plan.

15.7 Fail-Safe Engineering [112.8(c)(8)]

This section of the regulations requires that bulk storage tanks be equipped with at least one of the following:

- High level alarm with audible or visual signal;
- High liquid level pump cutoff device;
- Direct audible or code signal communication between container gauger and pumping station;
- Fast response system for determining the liquid level, such as digital computer, telepulse, or direct vision gauge, provided that someone is present to monitor gauges and the overall filling operation; or
- Regular tests of liquid level sensing devices to ensure proper operation

In some instances, where it has been deemed acceptable, the tank may use a procedure (instead of a monitoring or shut off device) to satisfy this requirement. This procedure has to provide an environmental equivalent level of protection. Transfer into tanks will be monitored in cases where tanks are not equipped with automated controls to prevent tank overfills.

It is understood that totes and drums, and some smaller shop built tanks, may use an environmental equivalence.

Appendix L identifies how each tank satisfies this requirement.

15.8 Observation of Effluent Treatment Facilities [112.8(c)(9)]

The facility KPDES Outfalls are monitored in accordance with the permit requirements. Outfalls that discharge water collected from areas where oil is handled or stored have a containment boom to mitigate the release of floating materials, including oil, before discharge.

15.9 Visible Discharge Correction [112.8(c)(10)]

Visible discharges from any container or appurtenance – including seams, gaskets, piping, pumps, valves, rivets and bolts – are quickly corrected upon discovery. Accumulated oil in dikes is managed in a timely fashion. Oil may be removed by solidification, such as by adding a reactive polymer, oil dry, absorbents, etc.

15.10 Mobile or Portable Oil Storage Containers [112.8(c)(11)]

A variety of mobile and portable containers (e.g., 55-gallon drums, skid tanks, totes) are present at the facility. Mobile and/or portable storage containers with 55-gallons or more capacity require specifically sized secondary containment. The following forms of specifically sized containment were observed during the SPCC site reconnaissance.

15.10.1 Indoor Spill Platforms/Pallets

When drums are not stored in a designated drum storage area and are not located where the building and/or building drainage systems provides specifically sized secondary containment, the drums should be stored on a spill platform/pallet.

15.10.2 Outdoor Spill Pallets

The preferable storage method for exterior drums is containment in specially designed outdoor spill containment pallets. These pallets keep precipitation from accumulating inside the containment system thereby reducing concerns regarding the discharge of containment water. In addition, these systems help reduce environmental and chemical attacks on the primary shell that can weaken the container strength.

16.0 Facility Transfer Operations, Pumping, and Processes [112.8(d)]

The facility has the following oil transfer activities:

- Bulk tank truck into ASTs

Potential spill events associated with transfer areas are evaluated on the back of the Tank Information Sheets in **Appendix G**. A general risk evaluation for each individual transfer area was performed and an estimates maximum release potential calculated. A form of general secondary containment was selected, based on the potential release volume, to mitigate the release from entering navigable water. Those approaches are further discussed below.

16.1 Buried Piping [112.8(d)(1)]

Buried piping is a concern for SPCC regulated facilities in that 1) direct contact with soil can create an environment for pipe degradation and failure and 2) it is difficult to detect when a buried pipe has a release.

There is no piping in direct contact with soil at the facility.

16.2 Terminal Connections [112.8(d)(2)]

Terminal connections at transfer points (e.g., camlock fittings, fill ports, etc.) that are not in service or are on standby for an extended period of time are capped. Internal transfer piping that conveys material from one location to another (e.g., such as piping that transfers liquid from a bulk tank to a remote stand pipe), should be blank-flanged and marked as to their origin when not in use. The latter type of transfer equipment was not observed at the facility.

16.3 Pipe Supports [112.8(d)(3)]

The pipe support systems at the facility are designed to minimize abrasion and corrosion and allow for expansion and contraction.

16.4 Inspections [112.8(d)(4)]

Aboveground piping and valves are examined monthly to assess their condition. Inspection includes aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies, catch pans, piping supports, locking of valves, and metal surfaces. Observations are noted on the monthly inspection checklist or equivalent provided in **Appendix J**.

16.5 Vehicle Warning [112.8(d)(5)]

Aboveground piping is present at the site. The areas where above ground piping is located have a warning sign.

17.0 Additional Information

17.1 General Procedure Information Sheets

A number of general procedure information sheets that can be utilized to help maintain compliance with the SPCC regulations are included in **Appendix M**. These Procedure Sheets are designed to remind the facility personnel, in general, of the spill prevention, control and countermeasures requirements.

The Information Sheets are included in **Appendix M.**

17.2 Copies of Previous Tank Testing Documentation

Appendix N contains copies of previous tank testing documentation and results, if any. These test results must be maintained in a file for the life of the tank.

17.3 Other Information

Appendix O contains other relevant information including EPA memorandums referenced in the plan.

Emergency Information

Line of Business Spill Card

Revised July 2022

Spill Release Reporting

***Call** Corporate Environmental 24 Hours*

502-627-2341

LG&E KU
PPL companies

Land/Water Release Reporting

Spills/Releases/Upsets to Land or Water may require:

- **Oil spill reporting:** spills or sheens in streams, sewers, or ≥ 25 gal.
- **KPDES upset reporting:** regulated pollutants not managed as per permit
- **PCB reporting:** spills ≥ 50 ppm or unknown to water/sewer/pasture/crops, or 1 # PCBs, or ≥ 500 ppm
- **Hazardous chemicals reporting:** spills ≥ RQ (Reportable Quantity)

Air Release Reporting

Plant air pollution control equipment failures may require:

- **CERCLA-EPCRA Air Release Reporting; *and***
- **Startup/Shutdown/Malfunction Reports** *(separate reporting & submittal)*

RQs for potential reporting scenarios (for 24-hour time period):

- **SCR failures:** NOx RQ ≥ 1,000 lbs.; ammonia (EHS) RQ ≥ 100 lbs.
- **Baghouse failures:** Stack particulates (RQs: arsenic ≥ 1 lb.; selenium ≥ 10 lbs.)
- **FGD failures:** SO_2 RQ ≥ 500 lbs.; SO_3 RQ ≥ 1,000 lbs.
- **Misc. substances:** ***Chlorine (EHS) RQ ≥ 10 lbs.; Asbestos RQ ≥ 1 lb.***

lge-ku.com/spills-releases

15-minute steps for effective response

1. Identify emission or spilled substance, source, affected area. Call Supervisor.
2. Stop — Contain the release if trained or qualified to do so.
3. Notify **local** emergency response contacts. **Call 911** (or alternate #) if release exceeds spill RQ (Reportable Quantity). Supervisors or dispatch should make call within **15 minutes**.
4. Call Corporate Environmental: **502-627-2341**.

   If contacted within **15 minutes**, Corporate Environmental will make additional required notifications. Otherwise, site personnel must make notifications. (See QR code on front.)

LG&E KU
PPL companies

GENERAL SPILL/RELEASE RESPONSE STEPS

Facility & Field Operations (rev date.8/2022)

Recommended spill/release response steps are summarized below. Phone contacts and further information may be found in the Environmental Affairs (EA) ***wallet spill-release reporting cards*** and EA website which includes:

- the corporate Environmental Procedures Manual
- the site-specific Environmental Compliance Operating Manual (where applicable);
- the current EA Training Manual.

This information covers: spill-release reporting criteria; company & regulatory contacts & phone numbers; PCBs procedures; and spill-release scenarios requirements. Review procedures annually, update site-specific manuals promptly, and maintain reference information readily accessible to those involved with spills-releases and/or spill-release reporting.

Step 1: ***Identify Spilled-Released Substance, Call Supervisors-Trouble/Dispatch*** ***(as appropriate)***

The employee discovering a hazardous material/oil spill-release or evidence of there having been one, shall immediately notify their supervisor, designated site-contact, or any Manager. Identify the nature-cause-amount of the spill-release, location, any injuries or damages, and sensitive areas that might be contaminated by the spill-release.

Step 2: ***Safely Stop Or Minimize A Spill-Release***

Attempt to contain the leak or spill-release, if reasonably safe and practical actions can be taken (*e.g., close valve, dig gravel/absorbent dikes-ditches, etc.*). Otherwise, the employee should move to a safe area and wait for trained emergency response personnel to arrive and then assist them as needed. If necessary, barricade the area to reduce traffic and protect employees/the public.

Step 3: ***Notify Local Emergency Response Agency & Accompany Responders On-Site***

Notify 911 immediately if an Emergency Response is needed; if not needed, within 15 minutes of discovering the spill-release exceeds the reportable quantity notify EA. On-site personnel are responsible for notifying a local emergency response agency first. It is better to report a spill-release, even if some details are unknown (*to be corrected in follow-up calls*), instead of risking criminal-legal actions (i.e., intentionally not reporting a spill-release). Information should include:

1. your name, date, & time-of-spill-release
2. material spilled-released (e.g. oil, PCBs, chemical, etc.)
3. estimated spill-release size/quantity released
4. spill-release area description
5. spill-release: location, source, cause
6. corrective action taken

Any responding agencies shall be met at the facility entrance by a person designated by Management. They shall be prepared to provide the responder(s) with a copy of the Safety Data Sheet (SDS) for the substances(s) involved.

Step 4: ***Notify Corporate Environmental Affairs Personnel On-call or Environmental Regulatory Agencies***

Corporate Environmental Affairs personnel on-call will make the remaining required notifications (except *911* calls, etc.) if they are contacted promptly; otherwise, facility/field personnel are responsible for making all appropriate calls. The **wallet spill-release cards** and **spill-release scenario tables** list the calls required by the type & quantity of material spilled-released, if a waterway/vegetable garden/pastureland is involved, etc. Document all calls made on standard spill-release report forms. If 911 and/or emergency response agencies are called, please also contact Corporate Communications and Risk Management (if significant damage or injury.)

Step 5: ***Provide Information Updates Promptly***

If circumstances change, or if new information is discovered, notify the Corporate Environmental Affairs personnel on-call and the environmental regulatory agencies as appropriate of those changes as soon as possible.

Step 6: ***Complete Spill-Release Reports, Copy & Involve EA Dept. When Follow-up Reports Are Required***

Facility personnel or line-crew supervisors shall complete the spill-release form, retain an original to be filed, and forward a copy to the EA Department. Any written follow up reports required by a local regulatory agency shall be prepared by the facility or field personnel. Prior to submittal, reports (*to external parties*) should be reviewed by the EA Department.

Step 7: ***Spill-Release Clean-up & Confirmatory Sampling (if required)***

Spill-release areas should be cleaned up as soon as possible and restored to the previous condition. Any waste disposal should be coordinated through the Environmental Coordinator and/or EA staff. Soil sampling may also be required depending on the nature of the spill-release. Waste can be treated by:

- Absorbing onto inert materials (for most organic and inorganic liquids except acids)
- Neutralizing (for acids, using sodium bicarbonate)
- Diluting with water (for most water-soluble materials, including neutralizing acids)
- Covering with foam blanket (for volatile flammables like acetone, methanol, toluene, and mineral spirits)

In spill-release response, good communication between the facility/field personnel, EA Department, analytical laboratories, local emergency response agencies and environmental regulatory agencies is imperative. Being prepared beforehand and familiar with spill-release response steps and having clear and accessible reference materials can make a stressful situation run more smoothly.

SPILL/RELEASE INCIDENT REPORTING: Petroleum Products

For all* spills call 502-627-2341 and complete an eSTAR spill report within the next business day

Spill Scenario - KENTUCKY ONLY	Local Agency (911)	KDEP & KDEM	Federal NRC or EPA Regional Office
Releases with No Anticipated Impacts to Streams/Sewers and No Regulatory Agency Required Reporting			
Oil (Non-PCB) and Diesel/Fuel Oil #2 < 25 gal - On the ground			
Oil (Non-PCB) and Diesel/Fuel Oil #2 ≥ 25 gal - Inside or in containment (i.e. concrete dike)			
Gasoline < RQ (17 gal) - On the ground			
Reportable Release Amounts (exceeding the RQ)			
JEFFERSON CO. ONLY - Oil and Diesel/Fuel Oil #2 ≥ 56 gal - On the ground	**X**	**X**	
JEFFERSON CO. ONLY - Oil and Diesel/Fuel Oil #2 ≥ 56 gal - In sewer	**X**	**X**	
JEFFERSON CO. ONLY - Oil and Diesel/Fuel Oil #2 ≥ 25 gal AND < 56 gal - On the ground		**X**	
JEFFERSON CO. ONLY - Oil and Diesel/Fuel Oil #2 ≥ 25 gal AND < 56 gal - In sewer		**X**	
Oil and Diesel/Fuel Oil #2 ≥ 25 gal - On the ground	**X**	**X**	
Oil and Diesel/Fuel Oil #2 < 25 gal - In sewer (combinded or sanitary)	**X**		
Oil and Diesel/Fuel Oil #2 ≥ 25 gal - In sewer (combined or sanitary)	**X**	**X**	
Oil and Diesel/Fuel Oil #2 Any Quantity - Sheen in river or stream or surface water	**X**	**X**	**NRC**
Oil ≥ 50 ppm known or unknown PCB concentration - any amount which directly contaminates surface waters, sewers and treatment plants, public drinking water sources	**X**	**X**	**NRC + EPA RO**
Oil ≥ 50 ppm known or unknown PCB concentration - any amount which directly contaminates animal grazing lands/pastures, vegetable gardens/crop lands			**EPA RO**
Oil ≥ 50 ppm known or unknown PCB concentration (≥ 1# PCBs) released any location	**X**	**X**	**NRC**
Oil ≥ 50 ppm known or unknown PCB concentration (> 10# PCBs) released any location	**X**	**X**	**EPA RO**
Transformer ≥ 500 ppm PCBs- any release due to heat, pressure or fire	**X**	**X**	**NRC**
Gasoline ≥ RQ (17 gal) - On the ground		**X**	
Gasoline *Any Quantity* - Sheen in river or stream	**X**	**X**	**NRC**
Gasoline ≥ RQ (17 gal) - In sewer	**X**	**X**	**NRC**

Notes:

*See Internal Reporting Table for events requiring internal notification only.

In situations where incident reports are determined to be necessary, contacts with agencies should be may as soon as possible, starting with local & state agencies.

Louisville Hazardous Materials Ordinance (2) The reportable quantity for release of oil to the environment other than release to waters of the U.S. and adjoining shoreline is 56 gallons.

VA regulations (article 11. 62.1-44.34:19) has same reportable quantity for all petroleum products

IN Regulations (Section 327 IAC 2-6.1-5) has the same reportable quantity for all petroleum products

SPILL/RELEASE INCIDENT REPORTING: Hazardous Substances Misc. Products

For all* spills call 502-627-2341 and complete an eSTAR spill report within the next business day

Spill Scenario	Local Agency (911)	KDEP & KDEM	NRC or EPA Regional
HAZARDOUS/EXTREMELY HAZ. SUBSTANCE (HS/EHS)			
HS/EHS - < RQ - On the ground			
HS/EHS - < RQ - In sewer, river, or stream and does not violate water quality standards			
HS/EHS - Any Quantity - Violates water quality stds. (sheen, fish kill, etc.)		**KDOW Regional Office**	
For Release Amounts (HS/EHS) that exceed the RQ:			
HS/EHS - In sewer, river, or stream outside of facility boundaries	**X**	**X**	**NRC**
HS/EHS - On the ground & outside of containment & outside of facility boundaires	**X**	**X**	**NRC**
Any HS/EHS impacting persons only within facility boundaries			
MISC. (NON-PETROLEUM, NON-HS/EHS) PRODUCTS			
Misc. Product - Any Quantity - On the ground			
Misc. Product - Any Quantity - In sewer, river, or stream and does NOT violate water quality stds			
Any Product - Any Quantity - Violates water quality stds. (sheen, fish kill, etc.)		**KDOW Regional Office**	

Notes:

*See Internal Reporting Table for events requiring internal notification only.

All regulations exempt permitted releases and the application/use of products according to manufacturer intent.

40 CFR 355.31(a) exempts emergency release notification when release results in exposure to persons solely within the boundaries of the facility.

40 CFR 302.3 Environment means
(1) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Fishery Conservation and Management Act of 1976, and
(2) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the US or under the jurisdiction of the US

Common Hazardous Substances in Use at LG&E and KU Facilities and their Respective RQs (lbs.)

Ammonia, Anhydrous	100
Asbestos, Friable	1
Ethylene Glycol	5000
Hydrazine	1
Hydrochloric Acid	5000
Methanol	5000
Phosphonic Acid (HEDP)	5000
PCBs	1
Sulfuric Acid	1000

40 CFR 302.3 Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but **excludes:**
(1) Any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons

Louisville Hazardous Materials Ordinance (95.03) excludes any release which results in exposure to parties solely within a workplace from the definition of "Release."

In situations where incident reports are determined to be necessary, contacts with agencies should be may as soon as possible, starting with local & state agencies.

EOP-800-REF- Spill Response Contractors

Company	Contact	Phone Number
Chu Con Inc. 2024 State Hwy 190 Pineville, KY 40977	Chuck Sharp Chris Sharp Jon Sharp	**606-269-1605 – Mobile** 606-269-1670 - Mobile 606-269-1515 - Mobile 606-248-8356 - Office
Clean Harbors * (Navigable Waterway Spills) 4879 Spring Grove Avenue Cincinnati, OH 45232	Emergency Dispatch	**800-645-8265 – 24 hr.** 800-444-4244 – Customer Svc.
Doss and Horky, Inc. 108 Gose Pike Danville, Kentucky 40422	Justin Roution	**859-516-1987** 859-236-2690
Early Environmental Contracting * 857 Kentucky St. Shelbyville, KY 40065	Allen Early	**502-647-3223 – 24-hour** 502-220-2339 - Mobile
Groves Construction (Oil spills only) 11050 Electron Dr., Louisville, KY 40299 3135 Grapevine Rd, Madisonville, KY 42431	Jeff Groves Marc Gayheart Kris Rickard Clint Sharber	270-825-1437 – Office 270-836-8076 – Mobile/24 hr. **270-399-0768** **270-836-2233** 270-871-6731
PECCO Environmental * (Navigable Waterway Spills) 250 Etter Drive Nicholasville, KY 40356	Scottie Perdue	**859-887-5508 – 24 hr.**
Reed Utilities (non-emergency oil spills only) 4674 Ironworks Road Georgetown, KY 40324	Jeff Reed	**859-227-5314**
TPM, Inc. (Navigable Waterway Spills) 2040 Old Louisville Road Bowling Green, KY 42101	 Eddie Hanks Jimmy Gardner	**800-876-4378 – 24 hr.** 270-791-0610 - Mobile 270-791-0616 - Mobile

*Only authorized companies to perform sulfuric acid, fuel oil or hydrated lime spills.

Last updated 6/13/2023 by MaryAnn Smith

General SPILL/RELEASE Reporting Form

(rev. 4/29/2022)

For Facility & Field Operations

(Do not use if eSTAR Online Release Report is available. Complete & Attach documentation if online eSTAR form is unavailable)

Report Written By: _____ Report Date: _____

Reported/Discovered By: _____ *Date/Time:* _____

Spill/Release Date: _____

Start Time: _____ End Time: _____

Spill Location: _____

County: _____ Street Address: _____

Material Released: _____

Quantity: _____ *(gallons or #)* Reportable Quantity: _____ *(gallons or #)*

MSDS Checked: _____ *(yes/no)* PCB-Oil Content: _____ *(ppm PCB)*

Extremely Hazardous Substance: _____ *(yes/no)* Equipment/Serial No. _____

Release Area (describe all affected media): _____ **Size:** _____ *(length x width)*

Contained? _____

Material Leave Property? _____ *(yes/no)* Raining and/or Freezing Weather: _____

Spill into *waterway, pastureland, vegetable garden?* (yes/no *explain*) _____

Damage, Injuries or Evacuation: _____

Source/Cause: _____

Corrective Action: _____

Cleanup-Disposal: _____

NOTIFICATIONS

"911"/Local Emergency Response Agency ***(Site must call "911")*** Date _____ Time _____

Name of Company Personnel Calling "911": _____

Name of Official Receiving "911" Call: _____

Environmental Affairs Personnel Contacted *(e.g., spill card personnel)* Date _____ Time _____

Name: _____

KY Dept of Environmental Protection *(KYDEP 800-928-2380)* Date _____ Time _____

Name: _____

Agency Incident # _____

KY Div of Emergency Management *(KYDEM 800-255-2587)* Date _____ Time _____

Name: _____

Agency Incident # _____

National Response Center *(NRC 800-424-8802)* Date _____ Time _____

Name: _____

Agency Incident # _____

US EPA Region IV *(404-562-8700)* **or** Region III *(215-814-9016)* Date _____ Time _____

Name: _____

Agency Incident # _____

KY-DOW/DWM – Regional Office *(Courtesy Call)* Date _____ Time _____

Name: _____

Spill/Release Reportable Quantities (RQ) Table

For Spills/Releases greater than the Reportable Quantities listed below:

- *Notify "***911***"* ***And*** ***Environmental Affairs*** *- EA will make required notifications if contacted within 15 minutes, otherwise the following* **CALLS MUST BE MADE:**
- *Notify* **KYDEP** *(Kentucky Department for Environmental Protection)*
- ***And*** *Notify the* **NRC** *(National Response Center) if hazardous materials but* ***NOT*** *for oils unless spilled into waterways/sewers/etc.*
- ***And*** *Notify* **KYDEM** *(Kentucky Division of Emergency Management) if material is an Extremely Hazardous Substance (EHS)*

Hazardous Materials / Chemicals	lbs	Gallons	EHS
Alum (aluminum sulfate)	5,000		
Ammonia, anhydrous	100		X
Ammonia, aqua (ammonium hydroxide)	1,000	130	
Asbestos (friable)	1		
Benzene	10		
Bleach-sodium hypochlorite (12.5%)	800	75	
Caustic (50% sodium hydroxide)	2,000	150	
DiBasic Acid	100	11.5	
Diesel (fuel oil #2)		75	
Ethylene glycol	5,000	530	
Flyash (Arsenic Trioxide)	10,000 (1)		X
Flyash (Selenium Dioxide)	710,000 (10)		
Fuel Oil #2 (diesel)		75	
Ferric Chloride (45% Iron Trichloride)	1,000	190	
Flocculants (containing petroleum)		25	
Gasoline	100	17	
Gypsum (Arsenic Trioxide)	320,000 (1)		X
Gypsum (Selenium Dioxide)	1,890,000 (10)		
Hydrazine (35%)	3	0.3	X
Hydrochloric Acid (liquid)	5,000	500	
Hydrogen Chloride (gas)	5,000		
Hydrogen Fluoride (gas)	100		X
Kerosene	100	17	
Mercury (*gas or liquid*)	1	1 oz	
Methanol	5,000	760	
Mineral spirits-thinner	100	15	
Nitrogen Oxides	1,000		X
Odorant-Mercaptan	100		
Oil (hydraulic-trans. misc.)		25	
Organosulfide (1% Sodium Hydroxide)	1,000	8,929	
Parts washer fluid (solvent)		25	
Phosphonic Acid (HEDP)	100	8	
Sulfuric Acid (*gas or liquid*)	1,000	65	X
Sulfur Dioxide	500		X
Transformer Oil (any)		25	
1# PCB @ 50 ppm = 2380gal			
1# PCB @ 500 ppm = 238gal			
Vanadium Pentoxide (dust)	1,000		X
Hazardous-by-Characteristic Waste (not otherwise designated):			
pH < 2.0 or > 12.5 (ex. MerControl 8034	100		
Ignitable-flashpoint < 140 F	100		

Note: *Reporting of Solutions listed according to Reportable Quantity and % Dilution*

Business Use

Process Water System Chemical RQs

Product Name	Hazardous Ingredient and Percentage	Lbs.	Gallons	EHS
Ferric Chloride (45% Iron Trichloride)		1,000	**190**	
	Iron Trichloride (ferric chloride 31-45%),	1,000	190	
	Hydrogen chloride 0.0-1.0%,	5,000	42,800	
	Ferrous Chloride 0.0-0.7%	100	1,223	
Flocculants (GE AE1703, NALCLEAR 7766 Plus, NALCLEAR 7768)	Petroleum		25	
Hydrochloric Acid	Hydrochloric Acid	5,000	500	
Organosulfide NALMET 1689	Sodium Hydroxide 0.1-1%	1,000	8,929	

Rev. 12-6-2023

Spill Mitigation Techniques

WARNING: Spilled fuel constitutes a hazard of fire and explosion with the threat to human life and destruction of property. Petroleum vapors are also hazardous to personnel due to anesthetic and toxic concentrations below explosive levels. Volatile fuel may cause skin irritation if allowed to remain on the skin (e.g., soaked gloves and/or clothing). Personnel safety and protection of life and limb take precedence over environmental protection. If there is a threat to personnel safety, the fire department should be the first official agency notified.

General Spill Mitigation Actions

The following table and sections provide information on general spill mitigation techniques that can be employed to retard or stop a spill, either on dry land or a water course.

Guide to Clean-up Operations on Water Courses

Water Course	Large Amounts of Oil/Chemicals And First Stage of Operations	Small Amounts of Oil or Chemicals and Second Stage of Operations
Ditches	Improvised Impoundment/Dam Reservoirs	Straw Bale Dam
Streams Shallow, small flow	Underflow Dam	Straw Bale Dam Absorbent
Streams Shallow, large flow	Overflow Dam and Fixed Dam	Overflow Dam and Fixed Boom and Absorbent, or Straw Bale Dam and Absorbent
Pond	Boom plus Sweep Boom	Boom and Absorbent

1. Containment Dams and Barriers

Several approaches to oil spill control are suggested in this section including various dams and barriers.

1.1. Improvised Impoundment/Dams

Construction of a reservoir (dry land) impoundment will buy time to allow removal of the spill material. Complications such as heavy rain washing over the structure, or floating oil over the dam may occur. These hazards must be considered in the initial phases of response and precautions taken.

An earth fill dam, in one form or another, is commonly used for spill containment. Dams of this type may range from simple, manually constructed fills to more elaborate, controlled-flow structures designed to trap oil on water. Ideally, a spill should be caught in its earliest stage

close to the source, thus permitting the simplest means of containment and recovery, and with minimal damage to the surrounding environment.

Spills which occur on dry land, remote from water, generally provide better prospects for effective containment with an earth fill barrier forming a temporary reservoir. A dry ditch or ravine can be blocked with minimum effort. A shallow holding pond can be formed by trenching and terracing. The options will vary with terrain, spill volume, soil conditions, lead time, manpower, equipment availability, etc. Lead time is the most critical factor in an event and dictates where and how containment efforts must proceed.

Dams should be constructed and compacted by whatever means possible. If a track vehicle is available, a width of 6-8 feet is needed at the top. The usual fall angle of the earth will suffice for sloping. The top of the dam should be 3-4 feet higher than the level to which the oil-water layers are expected to rise.

If surface water drainage is anticipated, preparations should be made to pump or siphon off the water to the downgrade side. Valved pipes of adequate size extended through the dam during construction may offer an alternate solution. If valves are not available, set the intake at an upstream low point (well below oil level) and the discharge at the desired surface level.

This water bypass arrangement is also useful in cases where the spill has already reached a flowing stream or creek. Practical limits depend on flow rate of the stream and being able to provide sufficient water bypass capability. Necessary pipe size for low rates above 30 cu. ft./sec. is in the range of 24 to 30 inches diameter. Multiple pipes can be used; however, it may be more practical to consider some other type of underflow dam.

1.2. Underflow Dam

Since it may be impossible to quickly construct a dam capable of containing a release plus precipitation OR when a release has entered a moving body of water, an underflow dam may be desired. Underflow dams are applicable to retard the migration of materials that have a specific gravity less 1 (oils and some chemicals). This floating layer is often referred to as a light non-aqueous phase liquid (LNAPL).

The dam can be constructed in a fashion similar to the improvised impoundment/dam previously discussed or by using a floating boom containment system.

As constructed as an impoundment/dam, large diameter pipes are inserted below the expected water level to allow for the continuous flow of fluids with a specific gravity greater than the released material. Underflow dams are often constructed on small streams, when responding to an oil spill, where short sections of pipes can be placed parallel to the direction of the river flow and held in place by sand bags or other materials. The dam is then constructed around and on top of the pipes to a height greater than the normal pool elevation. The floating product will pool behind the dam structure while the moving water will continue to flow through the submersed pipes, which gives this type of dam its name, an underflow dam.

It is crucial to monitor the height of the flowing water and thickness of product behind the dam during the emergency to ensure that oil is not carried over through the underflow piping. Absorbents and/or a vacuum truck can removed the pooled material from behind the dam. If

the level of flow water drops below the inlet of the underflow piping; sand bags can be used to temporarily stop the flow of water through the pipes.

1.3. Overflow Dam

An overflow dam is generally used in a small stream for a spill where the specific gravity of the released material is greater than 1 (chemicals such as dry cleaner solvent). These materials are often referred to as dense non-aqueous phase liquids (DNAPLs). Since a DNAPL is heavier than water, this material will tend to sink to the lower level of the stream and pool in low areas or behind obstructions. For this type of release, an overflow dam allows the flowing water to continue, while containing the denser materials behind the dam structure. Removal of DNAPLs from behind a dam structure is not easy and will require specialized equipment.

2. Straw Barriers

Straw barriers have proven effective not only as an absorbent medium, but as an underflow type containment dam capable of backing up an oil film several inches in thickness. This type of containment can be rapidly constructed from materials commonly available in most areas and is a major advantage where a more elaborate or patented boom may not be available. Wire fencing (hog wire or chain link) and preferably steel posts form the backup for the straw. Steel posts can generally be driven into the stream bottom. These should be placed 8 to 10 feet apart depending on stream conditions, current flow, etc. Wire fencing is then tied to the posts and anchored adequately at each bank. The straw is then broken out of bails and spread across the full width of the structure and for a distance upstream of 10-15 feet. The depth of the straw should be maintained at a minimum of 6 inches.

In cases where posts cannot be used, the fencing can be strung or suspended on cable. The fence must be adequately anchored at the bottom to avoid dumping saturated straw as the load or current increases.

3. Absorbent and Containment Booms

Booms come in many different varieties with different purposes. Containment booms use floats to provide buoyancy to a plastic or rubber skirt that usually extends a minimum of 12 inches below and 6 inches above the water table. This skirt effective traps floating LNAPL behind the boom and allows for the material to accumulate for recovery. Therefore, containment booms provide a physical barrier to the movement of the material.

Absorbent booms are not as effective as containment booms in the mitigation of an oil release. Absorbent booms generally float on the water surface and do not provide as much protection to under and overflow as that provided by containment booms. However, absorbent booms do remove contaminants from the water. These are sometimes employed with containment booms or by themselves.

4. Sorbent Materials

Commercially supplied sorbent materials may be used if they are available and have the physical characteristics to perform adequately. A boom or barrier must be continuously maintained. At the completion of an emergency, material added to a stream must be removed and disposed of properly.

Placement of a barrier is critical with respect to water velocity. Chances of spill recovery diminish rapidly in water moving faster than 1-1/2 to 2 feet per second. The more quiescent pools of the stream should be selected for containment operations. At least two barriers, and preferably three or more, should be placed in series along the stream leaving work space between barriers for small boats, skimming devices and other necessary equipment. The spill material should be removed before significant seepage occurs. Additional barriers can be constructed downstream as conditions dictate.

Appendix A

Certification of Substantial Harm Determination

Certification of Substantial Harm Determination

Facility Name: **Cane Run Generating Station**
Facility Address: **5252 Cane Run Road**
Jefferson County
Louisville, KY 40216

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

   Yes ☐ No ■

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?

   Yes ☐ No ■

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

   Yes ☐ No ■

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility would shut down a public drinking water intake?

   Yes ☐ No■

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   Yes ☐ No ■

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

2/6/2025

Brian Sumner
General Manager Cane Run & Combustion Turbines

Date

Appendix B

Reportable Oil Discharge History Log for Previous 12 Months

Oil Discharge History Log

The Oil Discharge History Log summarizes oil discharges from the recent history of the facility which have resulted in a release to water of 1,000 gallons or two episodes of 42 gallon or more in a rolling twelve month period. Other release of oil that are not necessarily SPCC Reportable Discharges may also be included so that they can be used as examples for training or process improvement.

Description of Discharge	Corrective Action Taken	Plan for Preventing Recurrence

Appendix C

Professional Engineer Certification

Professional Engineer Certification

Facility

Cane Run Generating Facility
5252 Cane Run Road
Jefferson County
Louisville, KY 40216

The undersigned registered PE is familiar with the requirements of 40 CFR Part 112 and has visited and examined the facility or has supervised examination of the facility by appropriately qualified personnel. The undersigned attests that this SPCC plan been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR Part 112; that procedures for required inspections and testing have been established; and that this plan is adequate for the facility.

The terms "certify" and "certification," as used in this document, mean "to render a professional opinion." The terms do not mean and should not be construed as a guarantee or warranty that certain conditions exist. The owner/operator is in no way relieved of his/her duty to prepare and fully implement this SPCC plan in accordance with the requirements of 40 CFR Part 112. This plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this plan.

Seal

Engineer: Patricia A. Mason

Registration Number: 18332

State: Kentucky

Signature: Patricia A Mason Date: Feb 2, 2025

Appendix D

Amendment Log

Amendment Log

The following log documents technical and non-technical amendments to the SPCC Plan. Technical amendments to the Plan must be reviewed and certified by a Professional Engineer. Non-technical amendments can be performed by the facility owner and/or operator. An explanation of what constitutes a technical and non-technical amendment is provided in the Plan.

By	Date	Activity Technical/Non-technical	PE Certification Required	Comments
P. Mason and M. Hussung	*2/2/2025*	*Add T-21, modify T-20. I have competed 5-year review and evaluation of the SPCC Plan for the facility 2/2/2025 and will amend the plan as a result.*	*Yes*	*Five year review. Tank addition in progress and closure in place in progress.*

Note:
The following statement must be completed when reviewing the SPCC plan:

I have competed review and evaluation of the SPCC Plan for the facility <<Insert Date>> and will amend the plan as a result.

Amendment Log

The following log documents technical and non-technical amendments to the SPCC Plan. Technical amendments to the Plan must be reviewed and certified by a Professional Engineer. Non-technical amendments can be performed by the facility owner and/or operator. An explanation of what constitutes a technical and non-technical amendment is provided in the Plan.

By	Date	Activity Technical/Non-technical	PE Certification Required	Comments

Note:
The following statement must be completed when reviewing the SPCC plan:

I have competed review and evaluation of the SPCC Plan for the facility <<Insert Date>> and will amend the plan as a result.

Appendix E

Facility Personnel Responsible for SPCC compliance

LG&E Cane Run Generating Station
Identified Responsible Parties

Management Approval of SPCC Plan

The person identified as having the authority to commit the necessary resources to implement this Plan is:

Management Approval

Authorized Representative	Title
Brian Sumner (502) 449-8801 (859) 265-3696	General Manager – Cane Run & Combustion Turbine
	2/6/2025
Signature	Date

SPCC Identified Designated Person

The person identified as the Designated Person Accountable for Oil Spill Prevention at the facility is:

Designated Oil Spill Prevention Representative

Authorized Representative	Title
Cody Gibbons (502) 933-6860 (502) 396-1239	Power Plant Environmental Supervisor
Signature	Date

LG&E Cane Run Generating Station
Identified Responsible Parties

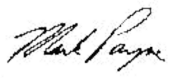
Primary Emergency Response Coordinator

Who you call in the event of a spill or release:

Authorized Representative	Title
Cody Gibbons (502) 933-6860 (502) 396-1239	Power Plant Environmental Supervisor
Signature	Date

Alternate Emergency Response Coordinator

Who you call in the event of a spill or release:

Authorized Representative	Title
Mark Payne (502) 449-8842 (502) 599-0725	Manager Operations & Maintenance (CT&CCGT)
	2/6/2025
Signature	Date

Appendix F

Plant Material Inventory

Louisville Gas and Electric and Kentucky Utility Company

Cane Run

Material Inventory & Bulk Container Listing

	Quantity	Units
Total Oil Capacity On-site (Containers ≥ 55-gallon capacity)= (Includes Bulk Storage & Reservoirs/Electrical but Excludes Transmission Substation)	133,968	Gallons
Total Bulk Oil Storage Capacity On-Site =	15,786	Gallons

Oil/Petroleum Products – Storage or Oil-Filled Equipment

	Quantity	Units
Oil Storage Tanks (T) (55 gallons or larger)	8,136	Gallons
Oils in Portable Containers Storage Areas (PA) -Drums or Totes (55 gallons or larger)	7,650	Gallons
Equipment Reservoirs/Oil-in-Use (R) and Equipment -Oil other than electrical equipment (55 gallons or larger)	35,498	Gallons
Electrical Equipment Reservoirs/Oil-in-Use – Dielectric Mineral Oil-Filled (E) (55 gallons or larger)	82,684	Gallons

Notes:
1. Refer to electronic version for updates
2. Total amounts of oil in Portable Container Storage Areas are included, but specific oil types in each area may vary.

Bulk Inventory Summary by Material (as defined in 401 KAR 5:002 Section 1(21))	Quantity	Units
Fuel- Diesel (#2 Fuel Oil Off Road)	7,286	Gallons
Fuel- Diesel (#2 Fuel Oil On Road)	550	Gallons
Fuel-#1 Fuel Oil (Kerosene)	300	Gallons
Oil- EH Fluid (Includes Fyrquel)	580	Gallons
Oil- Lubrication all grades	7,060	Gallons
Oil- Mineral Electrical	96,574	Gallons
Oil- Turbine	20,518	Gallons
Oil- Used for Recycling	1,100	Gallons

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
T-020	CR-7 Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	Outside-Not Covered	1,286	1,286	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-012.4	Active	Outside, steel AST, double-wall chassis-integral and housing-drip pan, bermed refueling truck area drains to oil water separator, generator area drains to stormwater drainage ditch (to Mill Creek to Ohio River).	Adjacent/south Steam Turbine Bldg
T-030	Diesel fuel tank (mobile refueling)	Fuel- Diesel (#2 Fuel Oil On Road)	Outside-Not Covered	550	550	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-012.4	Active	Outside, steel, ASTs, area drains to main stormwater drainage ditch (to Mill Creek to Ohio River). Tanks are leased from Albert Oil by LG&E.	CR-7 adjacent to roadway near guard shack
T-031	Kerosene	Fuel-#1 Fuel Oil (Kerosene)	Outside-Not Covered	300	300	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-012.4	Active	Outside, steel, ASTs, area drains to main stormwater drainage ditch (to Mill Creek to Ohio River). Tanks are leased from Albert Oil by LG&E. Kerosene tank is double walled.	CR-7 adjacent to roadway near guard shack

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
T-050	CR-7 Black Start Emergency Diesel Generator Fuel Storage Tank	Fuel- Diesel (#2 Fuel Oil Off Road)	Outside-Not Covered	4,000	4,000	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-012.9	Active	Outside, steel AST, double walled tank, concrete containment berm, valved berm, area drains to stormwater drainage ditch (to Mill Creek to Ohio River).	
T-051	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-OWS	Active	Inside, steel AST, double-wall chassis-integral and housing-drip pan, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).Transfers into tanks are via double walled piping with automatic pump shutoffs.	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
T-052	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-OWS	Active	Inside, steel AST, double-wall chassis-integral and housing-drip pan, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).Transfers into tanks are via double walled piping with automatic pump shutoffs.	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
T-053	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-OWS	Active	Inside, steel AST, double-wall chassis-integral and housing-drip pan, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).Transfers into tanks are via double walled piping with automatic pump shutoffs.	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
T-054	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Tanks - Oil	Double Walled Tank	CR-OWS	Active	Inside, steel AST, double-wall chassis-integral and housing-drip pan, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).Transfers into tanks are via double walled piping with automatic pump shutoffs.	
PA-040	Portable Storage Area Oil Storage Bldg.	Oil- Lubrication all grades	CR Oil Storage Bldg (Oil Room)	5,500	55	Gallons	100	Drums - Steel	Container Storage Area - Oil	Concrete Berm	CR-012.8	Active	Inside, sealed concrete floor with additional berm at roll-up door, area drains to stormwater drainage ditch (to Mill Creek to Ohio River).	
PA-040	Portable Storage Area Oil Storage Bldg.	Oil- Used for Recycling	CR Oil Storage Bldg (Oil Room)	1,100	275	Gallons	4	Tote - Steel Lined	Container Storage Area - Oil	Concrete Berm	CR-012.8	Active	Inside, sealed concrete floor with additional berm at roll-up door, area drains to stormwater drainage ditch (to Mill Creek to Ohio River).	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
PA-040	Portable Storage Area Oil Storage Bldg.	Oil- Lubrication all grades	CR Oil Storage Bldg (Oil Room)	720	60	Gallons	12	Steel Cube	Container Storage Area - Oil	Concrete Berm	CR-012.8	Active	Inside, steel cubes on dispenser racks (with spill containment) for equipment-fluids-tools	warehouse storage area west wall
PA-041	Portable Storage Area Adjacent CR-7 Steam Turbine EHC Control System Fluid Reservoir	Oil- EH Fluid (Includes Fyrquel)	CR Steam Turbine Building	330	55	Gallons	6	Drums - Steel	Container Storage Area - Oil	Sumps and/or collection system	CR-OWS	Active	Inside, ground floor of Steam Turbine Building, floor drains to oil-water separator	Inside, ground floor of Steam Turbine Building
R-033	CR-7 Reservoir 1 Combustion Turbines Lube Oil Skid	Oil- Turbine	CR CT-1 Enclosure	5,824	5,824	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	Outside, steel chassis reservoir/pump /cooler skid, adjacent east wall of each combustion turbine, bermed areas drain to oil-water separator, which is pumped to wastewater tank that is drained to stormwater basin that discharges through 104 and 102 to Ohio River	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
R-034	CR-7 Reservoir 2 Combustion Turbines Lube Oil Skid	Oil- Turbine	CR CT-2 Enclosure	5,824	5,824	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	Outside, steel chassis reservoir/pump /cooler skid, adjacent east wall of each combustion turbine, bermed areas drain to oil-water separator, which is pumped to wastewater tank that is drained to stormwater basin that discharges through 104 and 102 to Ohio River	
R-035	1 HRSG-Heat Recovery Steam Generators – Boiler Feedpumps	Oil- Turbine	CR HRSG-1 Boiler Feed Pump Bldg	132	132	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7-1/2 HRSG-Heat Recovery Steam Generators – Boiler Feedpumps Inside, steel chassis reservoir/pump /cooler skid, small buildings at west end of each combustion turbine, floor drains to oil-water separator	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
R-036	2 HRSG-Heat Recovery Steam Generators – Boiler Feedpumps	Oil- Turbine	CR HRSG-2 Boiler Feed Pump Bldg	132	132	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7-1/2 HRSG-Heat Recovery Steam Generators – Boiler Feedpumps Inside, steel chassis reservoir/pump /cooler skid, small buildings at west end of each combustion turbine, floor drains to oil-water separator	
R-037	CR-7 Steam Turbine Lube Oil Reservoir	Oil- Turbine	CR Steam Turbine Building	7,396	7,396	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7 Steam Turbine Lube Oil Reservoir Inside, steel chassis reservoir/pump /cooler skid, 2nd floor of Steam Turbine Building (north mid-site), floor drains to oil-water separator	
R-038	CR-7 Steam Turbine EHC Control System Fluid Reservoir	Oil- EH Fluid (Includes Fyrquel)	CR Steam Turbine Building	250	250	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	Inside, steel chassis reservoir/pump /cooler skid, ground floor of Steam Turbine Building, floor drains to oil-water separator	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
R-039	CR-7-1 Natural Gas Compressors Lube Oil Skids	Oil- Turbine	CR Gas Compressor Bldg	605	605	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	Inside, steel chassis reservoir/pump /cooler skid, separate compressor building (south mid-site), floor drains to oil-water separator	
R-040	CR-7-2 Natural Gas Compressors Lube Oil Skids	Oil- Turbine	CR Gas Compressor Bldg	605	605	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	Inside, steel chassis reservoir/pump /cooler skid, separate compressor building (south mid-site), floor drains to oil-water separator	
R-041	CR-7-1 Natural Gas Compressors Lube Oil Skids	Oil- Lubrication all grades	CR CT-1 Enclosure	100	100	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7-1/2 Control System Fluid Reservoirs Outside, steel chassis reservoirs, adjacent west wall of each combustion turbine, bermed areas drain to oil-water separator	
R-042	CR-7-1 Natural Gas Compressors Lube Oil Skids	Oil- Lubrication all grades	CR CT-2 Enclosure	100	100	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7-1/2 Control System Fluid Reservoirs Outside, steel chassis reservoirs, adjacent west wall of each combustion turbine, bermed areas drain to oil-water separator	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
R-051	Lubrication Reservoir for CR-7 Black Start Emergency Generators	Oil- Lubrication all grades	CR Diesel Generator Bldg	160	160	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7 Black Start Emergency Generators Inside, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).	
R-052	Lubrication Reservoir for CR-7 Black Start Emergency Generators	Oil- Lubrication all grades	CR Diesel Generator Bldg	160	160	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7 Black Start Emergency Generators Inside, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
R-053	Lubrication Reservoir for CR-7 Black Start Emergency Generators	Oil- Lubrication all grades	CR Diesel Generator Bldg	160	160	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7 Black Start Emergency Generators Inside, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).	
R-054	Lubrication Reservoir for CR-7 Black Start Emergency Generators	Oil- Lubrication all grades	CR Diesel Generator Bldg	160	160	Gallons	1	Steel Reservoir	Reservoirs - Oil	Sumps and/or collection system	CR-OWS	Active	CR-7 Black Start Emergency Generators Inside, concrete floor with sump (concrete basin) between oil storage and drains. Area inside building drains to oil/water separator, area outside building drains to main stormwater drainage ditch (to Mill Creek to Ohio River).	
E-047	Spare Transformers (Unit 6 GSU) S/N 90417-A	Oil- Mineral Electrical	Outside-Not Covered	21,952	21,952	Gallons	1	Equipment-Oil filled transformer	Electrical Equipment - Oil	Gravel Berm	CR-012.7	Temp. Out of Service	Front of Plant, concrete pad impounded by gravel, area drains to coal pile runoff pond-ATB (#001-002)	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
E-048	Spare Transformers (Unit 6 GSU) S/N 7002367	Oil- Mineral Electrical	Outside-Not Covered	9,700	9,700	Gallons	1	Equipment-Oil filled transformer	Electrical Equipment - Oil	Gravel Berm	CR-012.7	Temp. Out of Service	Front of Plant, concrete pad impounded by gravel, area drains to coal pile runoff pond-ATB (#001-002)	
E-701	CR-7-1 Combustion Turbines GSUs – Generator Step Up Transformers	Oil- Mineral Electrical	Outside-Not Covered	14,075	14,075	Gallons	1	Equipment-Oil filled transformer	Electrical Equipment - Oil	Sumps and/or collection system	CR-OWS	Active	Outside, Concrete Berms, adjacent east end of each combustion turbine buildings, valved drains to oil-water separator	
E-702	CR-7-2 Combustion Turbines GSUs – Generator Step Up Transformers	Oil- Mineral Electrical	Outside-Not Covered	14,075	14,075	Gallons	1	Equipment-Oil filled transformer	Electrical Equipment - Oil	Sumps and/or collection system	CR-OWS	Active	Outside, Concrete Berms, adjacent east end of each combustion turbine buildings, valved drains to oil-water separator	
E-703	CR-7-S CR-7-1/2 Steam Turbine GSU – Generator Step Up Transformer	Oil- Mineral Electrical	Outside-Not Covered	13,890	13,890	Gallons	1	Equipment-Oil filled transformer	Electrical Equipment - Oil	Sumps and/or collection system	CR-OWS	Active	Outside, Concrete Berm, adjacent east end of steam turbine building, valved drains to oil-water separator	
E-704	CR-7-1 Combustion Turbines –Unit Auxiliary Transformers	Oil- Mineral Electrical	Outside-Not Covered	4,496	4,496	Gallons	1	Equipment-Oil filled transformer	Electrical Equipment - Oil	Sumps and/or collection system	CR-OWS	Active	Outside, Concrete Berms, adjacent west end steam turbine buildings, valved drain to oil-water separator	

Material Inventory Sorted by Item ID (Storage, Reservoirs, Electrical, Chemicals) Refer to electronic version for updates														
Item ID	**Name Item Description**	**Material**	**Building List**	**Max Storage Capacity**	**Container Size**	**Capacity Unit**	**Number Of Containers**	**Container Type**	**Item Type**	**Secondary Containment**	**Drainage**	**Op Status**	**Comments General**	**Location Comments**
E-705	CR-7-2 Combustion Turbines –Unit Auxiliary Transformers	Oil- Mineral Electrical	Outside-Not Covered	4,496	4,496	Gallons	1	Equipment-Oil filled transformer	Electrical Equipment - Oil	Sumps and/or collection system	CR-OWS	Active	Outside, Concrete Berms, adjacent west end steam turbine buildings, valved drain to oil-water separator	
E-710	CR-7 CT/Steam Turbine Spare GSU Transformer	Oil- Mineral Electrical	Outside-Not Covered	13,890	13,890	Gallons	1	Equipment-Oil filled transformer	Equipment-Oil	Concrete Berm	CR-012.7	Temp. Out of Service	Outside, Concrete Berm, east end of contractor parking lot (adj. steam plant guardhouse), valved drains to parking lot toward CR-7 and to outfall #012	east end of contractor parking lot (adj. steam plant guardhouse)

Appendix G

Bulk Storage Tank Information Sheets

Source Tank Information Sheet

Facility Cane Run Generating Facility		Source or Tank Identification Tank #20; Emergency Generator
Location	Outside Fuel Storage	 
Type	Double wall	
Construction	Steel	
Contents	Diesel	
Volume	1,286	
Tank Category Category 1	Spill Control Yes –	
	CRDM Yes –	

Inspections Information

Tank Installation date	Inspection Standard	Certification by Outside Inspector Required?	Inspection Schedule	Corrosion Rate (inches/year)
2014	STI SP-001	No	Monthly by facility representative	N/A

Miscellaneous Information

Drain Valves with Direct Outward Discharge	Drain Valve Secured	Level Monitoring Method	Other Fail Safe Engineering	Corrosion Protection	Internal Heating Coils	Lighting
No	N/A	Gauge	Level Alarm	N/A	No	Yes

Secondary Containment Information

Type	Length (feet)	Width (feet)	Height (feet)	Displacement (cubic feet)	Available Volume (gallons)	Percentage of Volume of Largest Tank	Precipitation Drainage Method
Internal Containment						>100%	N/A

Potential Spill Predictions, Volumes, Rates and Controls

Facility Cane Run Generating Facility			Source or Tank Identification Tank #20; Emergency Generator	
Potential Event Rating	Maximum Potential Release Volume (gallons)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
Failure of internal tank wall **Unlikely**	X <1,286	Gradual to Instantaneous	North	Tank in located inside prefabricated containment system
Tank Overfill **Possible**	X < 20	Est. 20 gpm fill rate (less than 1 minute)	North	Active Containment (absorbents)
Hose leak during tank loading **Possible**	X < 20	Est. 20 gpm fill rate (less than 1 minute)	North	Active Containment (absorbents)
General Comments, Observations and/or Recommendations			**General Inspection Requirements(1)**	
• Tank has a controller. Controller monitors fuel level and initiates alarms for low-low level (25% capacity), low level (75% capacity), and high level (95% capacity). • Containment chassis has an interstitial spill monitor and alarm.			-Monthly • Perform visual inspections on tank monthly per STI SP-001 Standard. • Check operation of fuel visual indicator. • Inventory local spill kits, as applicable.	

(1) – please refer to the SPCC Plan STI SP-001 tank inspection checklist for the complete tank inspection requirements.
(2) –prior to refueling, please refer to tank loading procedures contained in this plan.

Source Tank Information Sheet

Facility	Source or Tank Identification
Cane Run Generating Facility	Tank #21; Emergency Generator Auxiliary Tank

Location	Outside Fuel Storage
Type	Double wall
Construction	Steel
Contents	Diesel
Volume	1,500
Tank Category	Spill Control Yes –
Category 1	CRDM Yes –

Inspections Information

Tank Installation date	Inspection Standard	Certification by Outside Inspector Required?	Inspection Schedule	Corrosion Rate (inches/year)
2024 Dec	STI SP-001	No	Monthly by facility representative	N/A

Miscellaneous Information

Drain Valves with Direct Outward Discharge	Drain Valve Secured	Level Monitoring Method	Other Fail Safe Engineering	Corrosion Protection	Internal Heating Coils	Lighting
No	N/A	Gauge	Level Alarm	N/A	No	Yes

Secondary Containment Information

Type	Length (feet)	Width (feet)	Height (feet)	Displacement (cubic feet)	Available Volume (gallons)	Percentage of Volume of Largest Tank	Precipitation Drainage Method
Double walled tank						>100%	N/A

Potential Spill Predictions, Volumes, Rates and Controls

Facility Cane Run Generating Facility			Source or Tank Identification Tank #21; Emergency Generator Auxiliary Tank	
Potential Event Rating	Maximum Potential Release Volume (gallons)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
Failure of internal tank wall **Unlikely**	X <1,500	Gradual to Instantaneous	North	Tank is double walled and located inside drainage system
Tank Overfill **Possible**	X < 20	Est. 20 gpm fill rate (less than 1 minute)	North	Drainage system to oil-water separator and active containment (absorbents)
Hose leak during tank loading **Possible**	X < 20	Est. 20 gpm fill rate (less than 1 minute)	North	Drainage system to oil-water separator and active containment (absorbents)
General Comments, Observations and/or Recommendations			**General Inspection Requirements(1)**	
• Tank has a controller. Controller monitors fuel level and initiates alarms for low-low level (25% capacity), low level (75% capacity), and high level (95% capacity). • Tank has an interstitial monitor.			-Monthly • Perform visual inspections on tank monthly per STI SP-001 Standard. • Check operation of fuel visual indicator and interstitial monitor. • Inventory local spill kits, as applicable.	

(1) – please refer to the SPCC Plan STI SP-001 tank inspection checklist for the complete tank inspection requirements.
(2) –prior to refueling, please refer to tank loading procedures contained in this plan.

Source Tank Information Sheet

Facility Cane Run Generating Facility		Source or Tank Identification Tank #30	Imber
Location	CR-7 near guard shack		
Type	Double wall		
Construction	Steel		
Contents	Diesel Fuel		
Volume	550		

Inspections Information

Tank Installation date	Inspection Standard	Certification by Outside Inspector Required?	Inspection Schedule	Corrosion Rate (inches/year)
2021	STI SP-001	No	Monthly by facility representative	N/A

Miscellaneous Information

Drain Valves with Direct Outward Discharge	Drain Valve Secured	Level Monitoring Method	Other Fail Safe Engineering	Corrosion Protection	Internal Heating Coils	Lighting
No	N/A	Gauge	None	No	No	Yes

Secondary Containment Information

Type	Length (feet)	Width (feet)	Height (feet)	Displacement (cubic feet)	Available Volume (gallons)	Percentage of Volume of Largest Tank	Precipitation Drainage Method
Double Walled Tank						>100%	N/A

Potential Spill Predictions, Volumes, Rates and Controls

Facility Cane Run Generating Facility			Source or Tank Identification Tank #30	
Potential Event Rating	Maximum Potential Release Volume (gallons)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
Failure of Tank **Unlikely**	550	Gradual to Instantaneous	North into drainage ditch to Mill Creek and then Ohio River	Double walled tank
Tank Overfill **Possible**	X < 10	20 gallons per minute (less than 1 minute)	Same as above	Active measures/spill kit
Hose leak during tank loading **Possible**	X < 10	20 gallons per minute (less than 1 minute)	Same as above	Active measures/spill kit
General Comments, Observations and/or Recommendations			**General Inspection Requirements(1)**	
• Spill kit is located in vicinity of tank. • Stormwater catch basin in vicinity of guard shack flows to the coal pile runoff pond.			-Monthly • Inspect tank monthly per standard. • Check for the presence of oil in interstitial space. • Check Operation of Level Gauge during filling. • Maintain the tank and equipment in accordance with the most recent STI SP-001 Inspection Document recommendations.	

(1) – please refer to the SPCC Plan STI SP-001 tank inspection checklist for the complete tank inspection requirements.
(2) – prior to refueling, please refer to tank loading procedures contained in this plan.

Source Tank Information Sheet

Facility Cane Run Generating Facility		Source or Tank Identification Tank #31					Imber
Location	Near Guard House						
Type	Double wall						
Construction	Steel						
Contents	Kerosene						
Volume	300						

Inspections Information

Tank Installation date	Inspection Standard	Certification by Outside Inspector Required?	Inspection Schedule	Corrosion Rate (inches/year)
2017	STI SP-001	No	Monthly by facility representative	N/A

Miscellaneous Information

Drain Valves with Direct Outward Discharge	Drain Valve Secured	Level Monitoring Method	Other Fail Safe Engineering	Corrosion Protection	Internal Heating Coils	Lighting
No	N/A	Visual Indicator	No	No	No	Yes

Secondary Containment Information

Type	Length (feet)	Width (feet)	Height (feet)	Displacement (cubic feet)	Available Volume (gallons)	Percentage of Volume of Largest Tank	Precipitation Drainage Method
Double-walled Tank							
Steel					>300	>100%	NA

Potential Spill Predictions, Volumes, Rates and Controls

Facility Cane Run Generating Facility			Source or Tank Identification Tank #31	
Potential Event Rating	Maximum Potential Release Volume (gallons)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
Failure of Tank **Unlikely**	300	Gradual to Instantaneous	South	Containment Box
Tank Overfill **Possible**	X < 10	20 gallons per minute (less than 1 minute)	Same as above	Containment Box
Hose leak during tank loading **Possible**	X < 10	20 gallons per minute (less than 1 minute)	The tank is in a relatively flat area. A release during loading would pool in the vicinity of the tank.	Spill Kit
General Comments, Observations and/or Recommendations			**General Inspection Requirements(1)**	
• Spill kit is located in vicinity of tank. • Tank appears to be a double walled tank managed inside a containment box. • Stormwater catch basin in vicinity of guard shack flows to the coal pile runoff pond.			-Monthly • Inspect tank monthly per standard. • Ensure drain remains secure when unattended. • Check for the presence of oil/water in containment. • Remove oil before draining stormwater, as applicable. • Record drainage event of applicable recording system. • Check Operation of Level Gauge during filling. • Check interstitial space. • Maintain the tank and equipment in accordance with the most recent STI SP-001 Inspection Document recommendations.	

(1) – please refer to the SPCC Plan STI SP-001 tank inspection checklist for the complete tank inspection requirements.
(2) – prior to refueling, please refer to tank loading procedures contained in this plan.

Source Tank Information Sheet

Facility Cane Run Generating Facility		Source or Tank Identification Tank #50	Imber
Location	Outside Blk. Start Generator Bldg.		
Type	Double wall		
Construction	Steel		
Contents	Diesel Fuel		
Volume	4,000		

Inspections Information

Tank Installation date	Inspection Standard	Certification by Outside Inspector Required?	Inspection Schedule	Corrosion Rate (inches/year)
2017	STI SP-001	No	Monthly by facility representative	N/A

Miscellaneous Information

Drain Valves with Direct Outward Discharge	Drain Valve Secured	Level Monitoring Method	Other Fail Safe Engineering	Corrosion Protection	Internal Heating Coils	Lighting
No	N/A	Visual Indicator	No	No	No	Yes

Secondary Containment Information

Type	Length (feet)	Width (feet)	Height (feet)	Displacement (cubic feet)	Available Volume (gallons)	Percentage of Volume of Largest Tank	Precipitation Drainage Method
Double-walled Tank							
Steel					>500	>100%	NA

Potential Spill Predictions, Volumes, Rates and Controls

Facility Cane Run Generating Facility			Source or Tank Identification Tank #50	
Potential Event Rating	Maximum Potential Release Volume (gallons)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
Failure of Tank **Unlikely**	4,000	Gradual to Instantaneous	South	Containment Box
Tank Overfill **Possible**	X < 10	20 gallons per minute (less than 1 minute)	Same as above	Containment Box
Hose leak during tank loading **Possible**	X < 10	20 gallons per minute (less than 1 minute)	The tank is in a relatively flat area. A release during loading would pool in the vicinity of the tank.	Spill Kit
General Comments, Observations and/or Recommendations			**General Inspection Requirements(1)**	
• Spill kit is located in vicinity of tank. • Double walled tank inside a concrete containment with manual stormwater drainage valve. • Area drains to ditch to Mill Creek to Ohio River.			-Monthly • Inspect tank monthly per standard. • Ensure drain remains secure when unattended. • Check for the presence of oil/water in containment. • Remove oil before draining stormwater, as applicable. • Record drainage event of applicable recording system. • Check Operation of Level Gauge during filling. • Check interstitial space. • Maintain the tank and equipment in accordance with the most recent STI SP-001 Inspection Document recommendations.	

(1) – please refer to the SPCC Plan STI SP-001 tank inspection checklist for the complete tank inspection requirements.
(2) – prior to refueling, please refer to tank loading procedures contained in this plan.

Source Tank Information Sheet

Facility Cane Run Generating Facility		Source or Tank Identification Tanks #51-54	Imber
Location	Inside Diesel Generator Bldg.		
Type	Double wall		
Construction	Steel		
Contents	Diesel Fuel		
Volume	500 each		

Inspections Information

Tank Installation date	Inspection Standard	Certification by Outside Inspector Required?	Inspection Schedule	Corrosion Rate (inches/year)
2017	STI SP-001	No	Monthly by facility representative	N/A

Miscellaneous Information

Drain Valves with Direct Outward Discharge	Drain Valve Secured	Level Monitoring Method	Other Fail Safe Engineering	Corrosion Protection	Internal Heating Coils	Lighting
No	N/A	Visual Indicator	No	No	No	Yes

Secondary Containment Information

Type	Length (feet)	Width (feet)	Height (feet)	Displacement (cubic feet)	Available Volume (gallons)	Percentage of Volume of Largest Tank	Precipitation Drainage Method
Double-walled Tank							
Steel					>500	>100%	NA

Potential Spill Predictions, Volumes, Rates and Controls

Facility Cane Run Generating Facility			Source or Tank Identification Tank #51-54	
Potential Event Rating	Maximum Potential Release Volume (gallons)	Maximum Discharge Rate	Direction of Flow	Secondary Containment
Failure of Tank **Unlikely**	500	Gradual to Instantaneous	South	Containment Box
Tank Overfill **Possible**	X < 10	20 gallons per minute (less than 1 minute)	Same as above	Containment Box
Hose leak during tank loading **Possible**	X < 10	20 gallons per minute (less than 1 minute)	The tank is in a relatively flat area. A release during loading would pool in the vicinity of the tank.	Spill Kit
General Comments, Observations and/or Recommendations			**General Inspection Requirements(1)**	
• Spill kit is located in vicinity of tank. • Double walled tanks inside building with a concrete pit. Drains inside building go through oil / water separator before entering wastewater tank (ww tank goes to stormwater retention basin to Outfalls 104 and 102 to Ohio River. • Area outside building drains to ditch to Mill Creek to Ohio River.			-Monthly • Inspect tank monthly per standard. • Ensure drain remains secure when unattended. • Check for the presence of oil/water in containment. • Remove oil before draining stormwater, as applicable. • Record drainage event of applicable recording system. • Check Operation of Level Gauge during filling. • Check interstitial space. • Maintain the tank and equipment in accordance with the most recent STI SP-001 Inspection Document recommendations.	

(1) – please refer to the SPCC Plan STI SP-001 tank inspection checklist for the complete tank inspection requirements.
(2) – prior to refueling, please refer to tank loading procedures contained in this plan.

Appendix H

Fuel Loading Procedure Checklist

Example Truck to Bulk Tank Fuel Transfer Procedures

Prior to filling a bulk tank, you must determine the ullage

The inadvertent overfilling of vessels and tanks accounts for a large percentage of petroleum releases each year. Prior to any fuel delivery, facility personnel must confirm the ullage (the unfilled volume) of the receiving vessel or tank. To determine the ullage, use one of the following methods: 1) stick smaller tanks; 2) obtain volume information from existing direct read gauges; 3) obtain volume information from sensors installed I the tank. The ullage is the amount of fuel that can be accepted by the tank. For example, a tank may have a total volume capacity of 1,000-gallons. If one of the approved methods above indicates that the tank contains 300 gallons, the ullage would be determined to be 700 gallons.

As a rule of thumb, tanks should not be filled to more than 90% of their total capacity. This 10% buffer allows for expansion of fuels during ambient heating and cooling cycles and as a safeguard against an overfill event. Therefore, this 700 gallons would be reduced by 100 gallons (total tank volume multiplied by 10% or 1,000 x 0.10 = 900). Based on this information, a maximum of 600 gallons of fuel should be ordered from the vendor.

When the vendor arrives on site to provide fuel, the tank readings should be again re-taken and the ullage and the volume of fuel desired for delivery confirmed.

Transfer Procedure Checklist

Stage		Task
Prior to loading/ unloading	□	Visually check all hoses for leaks and wet spots.
	□	Verify that sufficient volume (ullage) is available in the storage tank.
	□	Lock in the closed position all drainage valves of the secondary containment structure.
	□	Secure the tank vehicle with wheel chocks and interlocks (as applicable).
	□	Ensure that vehicle's parking brakes are set.
	□	Verify proper alignment of valves and proper functioning of the pumping system.
	□	If transferring fuel into a tank truck, inspect the lower most drain and all outlets.
	□	Establish adequate bonding/grounding prior to connecting to the fuel transfer point.

Example Truck to Bulk Tank Fuel Transfer Procedures

Transfer Procedure Checklist (cont.)

During loading/ unloading	□	Driver must stay with the vehicle at all times during loading/unloading activities.
	□	Periodically inspect all system, hoses and connections.
	□	When loading, keep internal and external valves on the receiving tank open along with the pressure relief valves.
	□	When making a connection, shut off the vehicle engine. When transferring Class 3 materials, shut off the vehicle engine unless it is used to operate a pump.
	□	Maintain communication with the pumping and receiving stations.
	□	Monitor the liquid level in the receiving tank to prevent overflow.
	□	Monitor flow meter to determine rate of flow and whether they are properly working.
	□	When topping off the tank, reduce flow rate to prevent overflow. Tank should not be filled more than 90% of its total capacity.
After loading/ unloading	□	Make sure the transfer operation is completed.
	□	Close all tank and loading valves before disconnecting.
	□	Securely close all vehicle internal, external, and dome cover valves before disconnecting.
	□	Secure all hatches.
	□	Disconnect grounding/bonding wires.
	□	Make sure the hoses are drained to remove the remaining oil before moving them away from the connection. Use a drip pan.
	□	Cap the end of the hose and other connecting devices before moving them to prevent uncontrolled leakage.
		Remove wheel chocks and interlocks.
		Inspect the lowermost drain and all outlets on tank truck prior to departure. If necessary, tighten, adjust or replace caps, valves, or other equipment to prevent oil leaking while in transit.

Appendix I

Inspection Schedule

Appendix I Discussion – Inspections of Tanks and Equipment

40 CFR Part 112 requires that various inspections and testing be performed at SPCC regulated facilities. Inspections are required to ensure that various equipment, structures, and practices are in good working order and/or being followed, while testing involved the physical assessment of a component.

The regulations require that the Professional Engineer certifying the SPCC Plan establish a minimum frequency for inspection and tests that adhere to either referenced standards or good engineering practices.

An example of an inspection may involve a monthly visual assessment, following a specific checklist of a bulk storage tank and/or containment system.

An example of testing may include actuating a float or sensor (e.g., tank overfill sensor) to ensure that the required response (e.g., alarm condition) occurs.

Lastly, some inspections (e.g., structural integrity tests, etc.) may be required to be performed by a certified inspector to ensure regulatory compliance.

The documents contained within this appendix were prepared to direct the Station staff to the various regulatory requires inspection and testing (including integrity tests, where applicable) for SPCC compliance.

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Cane Run Generating Facility Inspection and Testing Program Schedule

The following table identifies the overall inspection and testing program and scheduled frequency designed for this facility. The table includes broad headings for the general inspection and testing areas. The actual inspection and/or testing checklist to be populated is included in subsequent appendices.

Facility Inspection Schedule		
Facility Component	**Action**	**Frequency/Circumstance**
General Facility Security, Conditions, and Outfalls/Drainage Areas		
General Facility Drive Around	Observe perimeter facility areas accessible by vehicle	Monthly (and more frequently by plant security)
Outfalls and Drainage Areas	Observe surface outfalls and drainage areas	Monthly
Bulk Storage Tanks		
ASTs (T-#)	Inspect Visually Inspect Integrity	See Tank and Portable Container Specific Schedule
Containment Accumulated Rainwater (if applicable)	Check for oil, if present Remediate before draining	Monthly
Mobile/Portable Storage Containers (drums, totes, etc.)		
Portable Container Areas (PA-#)	Inspect Visually	See Tank and Portable Container Specific Schedule
Aboveground Piping		
Storage Tank Associated Piping	Leak and Integrity Check Walk pipe run and inspect pipe and pipe supports	Monthly With Tank Inspection
Equipment Associated Piping	Leak and Integrity Check	Routine by Operation of Equipment.
Transformer		
Transformers	Leak Check	Routine by Operation of Equipment.
Containment Accumulated Rainwater (if applicable)	Check for oil, if present Remediate before draining	Monthly
Fuel Transfer Areas		
Containment	Is stormwater accumulated in the system. If yes, drain stormwater in accordance with approved procedure.	Monthly or after large stormwater events
Fill Ports/Hoses	Ensure transfer connection are closed and capped when not in use	After each Use and Monthly
Transfer Pump	Inspect Building that houses transfer pump for oil leaks.	Monthly.

Facility Inspection Schedule		
Facility Component	**Action**	**Frequency/Circumstance**
Outside Operational Equipment (Reservoirs)		
Fans, Coolers, etc.	Leak Check	Routine by Operation of Equipment.
Containment Accumulated Rainwater (if applicable)	Check for oil, if present Remediate before draining	Monthly
Inside Operational Equipment (Reservoirs)		
Turbines, Fans, Coolers, etc.	Leak Check	Routine by Operation of Equipment.
Plant Waste Waters - Diversionary Containment Structures		
Basins	Presence of Oil Sheen Containment Boom Integrity	Monthly
Security		
Facility Security	Contractor Checks Site Security	Routine Daily Rounds
Lighting	Local lighting is operational.	
Fuel Dispensers Security	Locked/Status (Vandalism)	
Roads, Ditches, and Swales	Spill Discovery	
Spill Kits		
Land Based Response (Spill Kit)	Inventory and re-order	Monthly and after each use.
Tank Trucks		
Follow Fuel Transfer Procedure	Visually Inspect.	Prior to filling and departure.

Cane Run Oil Storage Tanks/Containers - General Inspection and Testing Program [40 CFR 112.7(e)]

ATC has reviewed and concurs with the following specific Inspection Schedule developed for the Cane Run bulk storage tanks by Stantec. The inspection schedule was developed using the criteria provided in STI SP-001 for Shop Built Tanks. The table below identifies the inspection standard to use used AND the inspection frequency. A separate Appendix provides information on what to be inspected. The rationale for the inspection criteria is included in the pages that follow this table.

Cane Run Generating Station Tank Specific Inspection Schedule

Inspection/Test	T-1	T-2	T-30	T-31
	#2 Fuel Oil	#2 Fuel Oil	Diesel Fuel	Kerosene Fuel
Visual inspection by facility personnel (as per the provided monthly checklist)	M A	M A	M A	M A
External inspection by certified inspector (as per **API 653**)	N/A	N/A	N/A	N/A
External inspection by certified inspector (as per STI SP-001)	**Yes E(20)**	**Yes E(20)**	N/R	N/R
Inspection/Test	T-32	T-33	PA-40 (Totes)	T-13 thru T- 17
	Gasoline	Diesel Fuel	Mixed Oil	Turbine Oil
Visual inspection by facility personnel (as per the provided monthly checklist)	M A	M A	M A	M A
External inspection by certified inspector (as per API 653)	N/A	N/A	N/A	N/A
External inspection by certified inspector (as per STI SP-001)	N/R	N/R	N/R	N/R

M – Periodic AST Inspection (minimum monthly interval)
A – Annual AST Inspection (more detailed)
E – Formal external inspection by a certified inspector
(x) – indicates the ***maximum*** inspection frequency in years
- a more frequent inspection frequency may be indicated in the individual, most recent, tank inspection report
N/A – Not Applicable
N/R – Not Required,
Tank less than 5,000 gallons

(1) – contractors are required to maintain their own inspection records on their tanks

Inspection/Test	T-18	T-20	T-21	55-gallon drums
	Turbine Oil	Diesel Fuel	Diesel Fuel	Oil
Visual inspection by facility personnel (as per the provided monthly checklist)	M A	M A	M A	M A
External inspection by certified inspector (as per **API 653**)	N/A	N/A	N/A	N/A
External inspection by certified inspector (as per STI SP-001)	**Yes E(20)**	N/R	N/R	N/R

Inspection/Test	T-50	T-51 through T-54		
	Diesel Fuel	Diesel Fuel		
Visual inspection by facility personnel (as per the provided monthly checklist)	M A	M A		
External inspection by certified inspector (as per **API 653**)	N/A	N/A		
External inspection by certified inspector (as per STI SP-001)	**Yes E(20)**	N/R		

M – Periodic AST Inspection (minimum monthly interval)
A – Annual AST Inspection (more detailed)
E – Formal external inspection by a certified inspector
(x) – indicates the ***maximum*** inspection frequency in years
- a more frequent inspection frequency may be indicated in the individual, most recent, tank inspection report
N/A – Not Applicable
N/R – Not Required,
Tank less than 5,000 gallons

(1) – contractors are required to maintain their own inspection records on their tanks

Bulk Storage Containers Inspection and Tests.

Testing Clarification

> **Section 112.8(c)(6)** states - Test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skidmounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of nondestructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph. (underling added).

The reference to "another testing technique" is only applicable IF required by the referenced standard. For example, STI SP-001 does not require testing, other than visual inspection, for shop built tanks less than a certain volume (depending on tank category). For tanks that require inspection by a certified tank inspector, the inspector will determine the type of "testing technique" applicable for that tank during their inspection.

Single Wall Shop Built Tanks (greater than 5,000 gallons)

Tank #1, #2, #6 and #18 are shop built tanks located within specifically sized secondary containment. Per Inspection Standard STI SP-001, these (Category 1) tanks require periodic visual inspection plus an external inspection by a certified inspector at a minimum interval of every 20 years OR in accordance with the last/most recent certified inspection.

Single Wall Shop Built Tanks (less than 5,000 gallons)

There are a number of single-wall shop built tank less than 5,000 gallons located at the site. Per Inspection Standard STI SP-001, these (Category 1) tanks only require visual inspection. Some are equipped with fuel gauges and some rely on the fuel transfer operator to visually observe the fuel during the transfer operation.

Double-Wall Shop Built Tanks (less than 5,000 gallons)

There are a number of double-wall shop built tank less than 5,000 gallons located at the site. Per Inspection Standard STI SP-001, these (Category 1) tanks only require visual inspection. These tanks are equipped with a interstitial space monitor that monitors the space between the primary and secondary shell for liquid. Some of the tanks have indicator gauges and some require a plug to be removed. The interstitial space has to be evaluated on a monthly basis for compliance with the regulation.

Outdoor Drums

55-gallon drums are located in several areas of the facility. Drums located at these areas must be inspected on a monthly basis. If located within an outdoor dike, the rain water must be inspected before the contents of the dike can be discharged in accordance with the requirements contained in the SPCC plan.

STI SP-001 Inspection Standard Summary

STI SP-001 establishes its inspection schedule and requirements based on a tank category evaluation. The definitions of the AST's categories are:

- Category 1 – AST with spill control and with a Continuous Release Detection Method (CRDM)
- Category 2 – AST with spill control and without CRDM
- Category 3 – AST without spill control and without CRDM.

Spill Control is defined as:

- Remote impounding
- Secondary containment dike/berm
- Secondary containment AST
- Secondary containment system

Continuous Release Detection Method is defined as:

- Release Protection Barrier (RPB) is a barrier designed to divert leaks toward the perimeter of the AST where they can easily be detected (e.g., concrete, elastomeric liners, etc.)
- Secondary containment including double-walled ASTs, double-bottom ASTs, or an AST that is located in a dike, pan, box, etc. such that the entire capacity of the AST can be contained.
- Elevated AST that is not in contact with the ground and which is raised above the surface of the ground or bottom of a vault using tank supports. An elevated AST allows for a visual external inspection of the bottom of the primary tank (e.g., tanks located on grills, grates, cradles, with legs or other types of support.

The following table provides an example of assigning a Category to a type of AST:

Tank Configuration	Tank Has CRDM	AST Category
AST in contact with the ground(1)	No	2 or 3
Elevated tank with no part of the AST in contact with ground (includes concrete encased tanks) (1)	Yes	1
Vertical tank with a Release Protection Barrier and spill control	Yes	1
Vertical tank with double bottom and spill control	Yes	1
Vertical tank with RPB under tank and spill control	Yes	1
Double-walled AST	Yes	1
AST with secondary containment dike/berm	Yes	1

(1)Ground is understood to mean bare earth.

Once the AST category has been identified, STI SP-001 provides the following Inspection Schedule:

AST Type and Size (U.S. gallons)		Category 1	Category 2	Category 3
Shop-Fabricated ASTs	0-1100	P	P	P, E&L (10)
	1101-5,000	P	P, E&L (10)	[P, E&L(5), I(10)] Or [P, L(2), E(5)]
	5001-30,000	P, E(20)	[P, E(10), I(20)] Or [P, E(5), L(10)]	[P, E&L(5), I(10)] Or [P, L(2), E(5)]
	30,001-50,000	P, E(20)	[P, E&L(5), I(15)]	[P, E&L(5), I(10)]
Portable Containers		P	P	P**

** Owner shall either discontinue use of portable container for storage or have the portable container Department of Transportation tested and recertified per the following schedule:
Plastic portable containers – every 7 years
Steel portable containers – every 12 years
Stainless steel portable containers – every 17 years
P – Periodic AST Inspection (minimum monthly interval)
E – Formal external inspection by a certified inspector
I – Formal internal inspection by a certified inspector
L – Leak test by owner or owner's designee
( ) – indicates maximum inspection interval in years. For example, E(5) indicates formal external inspection every 5 years.

Appendix J

Example

Inspections Checklists

Example

Site-Specific Inspections Checklists

A facility may use the STI SP001 inspections checklist templates provided or alternate inspection checklists if inspection items are equivalent.

Cane Run Generating Station

SPCC-BMP-GPP Monthly Facility Inspection

The Monthly Facility Inspection focuses on general facility areas and equipment, such as site security, equipment common to more than on tank (e.g., facility oil/water separator) or stormwater retention systems.

Facility Inspection Checklist

Inspection Area	Y	N	N/A
SPCC Tanks/ Portable Tanks/Drum Areas			
Is spill plan / response procedures posted in each area?			
Instrumentation			
Are there any alarms or operational issues related to the sensors or floats?			
Are there any issues with the test on alarm and sensors?			
Piping			
Any visual signs of oil releases from aboveground piping within concrete containment walls, pump house and Unit?			
Are any liquids in the interstitial space in double-walled piping?			
Any visual signs of structural changes in piping supports and piping (e.g., sagging)?			
Fuel Transfer Equipment			
Any stormwater accumulation in concrete loading area?			
Is piping capped when not in use?			
Any visual signs of oil drip/seep/leak from pumps or piping in transfer building?			
Oil Storage Building			
Is oil rack secured?			
Any visual cracks or issues in concrete containment system that would impact integrity?			
Reservoirs			
Are there any visual signs of oil leaks in the operating oil reservoirs?			
Do any spill kits need refilling?			
Landfill			
Does inactive landfill show any signs of active erosion?			
Does inactive landfill show any signs of animal burrows?			
Does inactive landfill show any signs of ponded water?			
Are any of the access/haul roads in unsatisfactory condition?			
Are there any signs of fugitive dust?			
Area Stormwater Collection Basin			
Is there any indication of oil on water in Basin?			
Are any skimmer booms missing or require replacement?			
Landfill Stormwater Collection Basin			
Is there any indication of oil on water in Basin?			
Are any skimmer booms missing or require replacement?			
CR-7 Stormwater Collection Basin			
Is there any indication of oil on water in Basin?			
Are any skimmer booms missing or require replacement?			
Transformers (CR7 Combined Cycle Plant)			
Does the exterior of the transformer should signs of an oil release?			
Is there any surface staining in the general area of the transformer?			
Transformers (Spare Transformer)			
Does the exterior of the transformer should signs of an oil release?			
Is there any surface staining in the general area of the transformer?			
Transformer (Combustion Turbine)			
Does the exterior of the transformer should signs of an oil release?			
Is there any surface staining in the general area of the transformer?			

Cane Run Generating Station

SPCC-BMP-GPP Monthly Facility Inspection

The Monthly Facility Inspection focuses on general facility areas and equipment, such as site security, equipment common to more than on tank (e.g., facility oil/water separator) or stormwater retention systems.

Facility Inspection Checklist

KPDES Outfalls			
For the following outfalls, are there any visual signs of erosion; need for maintenance/ housekeeping; or spillage/contamination near wells, bore holes or core holes? ***Note any issues in Comments box below.***	**Y**	N	N/A
• Outfall 008 – Stormwater runoff from landfill A-3 discharged to the Ohio River.			
• Outfall 009 – Stormwater runoff from Annex parking lot and southwest plant yard discharged to the Ohio River.			
• Outfall 010 – Stormwater from northwest plant yard discharged to the Ohio River.			
• Outfall 011 – Stormwater from north plant yard discharged to Ohio River via Mill Creek Cutoff.			
• Outfall 012 – Stormwater from east plant yard discharged to Ohio River via Mill Creek Cutoff.			
• Outfall 015 – Stormwater runoff from frontage property along Cane Run Rd discharged to Ohio River via county roadside drainage ditch.			
• Outfall 016 – Stormwater runoff from the closed/capped landfill corner property having no contact with industrial processes, equipment, or storage.			
• Outfall 102 – Outfall 104 Effluent, NGCC Unit 7 Cooling Tower Blowdown, Stormwater and Roof Drains			
• Outfall 104 – NGCC Unit 7 & 11 Wastewaters, Retired Unit 4-6 Sumps, Outfall 105 Effluent, Non-contact Runoff from Reclaimed CCR Landfill			
• Outfall 107 – Plant Intake			
• Outfall 108 – NGCC Unit 7 Cooling Tower Blowdown (Discharge to Outfall 102)			
Security			
• Are gates and buildings locked when unattended?			
• Are there any signs of trespass associated with fencing, gates or lighting?			
• Are there any visible issues for security of Master Flow Valves on bulk storage tanks?			
• Are there any visible issues for security of Starter Controls for discharge control of oil from bulk storage tanks?			
Facility Spill Kits			
• Do any facility spill kits require supplies?			
Comments			
Inspection Performed By		Date	

Cane Run Generating Station - CR7 Plant

STI SP001 AST Monthly Inspection Checklist

• For other ASTs, follow manufacturer recommended inspection/testing schedules and procedures. • Periodic AST Inspection intended to monitor AST and containment structiure condition. Visual inspection must be performed by inspector familiar with site and able to identify changes and developing problems. • Non-conforming items on tank or containment integrity require evaluation by a qualified person to determine the corrective action. Note non-conformance and corresponding corrective action in comment section. • Retain completed checklists for 36 months.	**T-50 Diesel Fuel Tank Black Start Emergency Generator Storage (4000 gal)**			**T-31 Kerosene Tank Vehicle Refueling (300 gal)**			**T-20, T-21Diesel Fuel Tank CR7 Em. Generator (1,286/1,500 gal)**		
	Steel Double Walled			Steel Double Walled			Steel Double Walled		
	Yes	**No**	**NA**	**Yes**	**No**	**NA**	**Yes**	**No**	**NA**
Was previous SPCC Inspection reviewed?									
Were all maintenance activities requested completed?									
Tank Containment (Double-Walled Tank)									
Is tank containment exterior in good repair?									
Is area free of debris or other fire hazards?									
Does interstitial space level indicator read "0" for fluid in spece between double walls?									
Leak Detection									
Is tank in good repair with no visible signs of leakage?									
Are tank structural supports in good repair (no sagging, buckling,									
Is ground free of evidence of leakage or spill from tank?									
Describe any leakage:									
Tank Attachments & Appurtenances									
Are stairs and platform secure?									
Are stairs and platform in good repair (ie free of corrosion or damage)?									
Describe required maintenance:									
Is tank liquid level gauge readable and in good condition?									
Are tank openings properly sealed?									
Other Conditions									
Describe conditions that need to be addressed for safe-future operations per SPCC plan?									

Inspector Signature:_____ Date: _____ Date: _____ Date: _____

Cane Run Generating Station - CR7 Plant

STI SP001 AST Monthly Inspection Checklist

• For other ASTs, follow manufacturer recommended inspection/testing schedules and procedures. • Periodic AST Inspection intended to monitor AST and containment structiure condition. Visual inspection must be performed by inspector familiar with site and able to identify changes and developing problems. • Non-conforming items on tank or containment integrity require evaluation by a qualified person to determine the corrective action. Note non-conformance and corresponding corrective action in comment section. • Retain completed checklists for 36 months.	**T-51 Diesel Fuel Tank CR7 Black Start Emergency Generator (500 gal)**			**T-52 Diesel Fuel Tank CR7 Black Start Emergency Generator (500 gal)**			**T-53 Diesel Fuel Tank CR7 Black Start Emergency Generator (500 gal)**		
	Steel Double Walled			Steel Double Walled			Steel Double Walled		
	Yes	**No**	**NA**	**Yes**	**No**	**NA**	**Yes**	**No**	**NA**
Was previous SPCC Inspection reviewed?									
Were all maintenance activities requested completed?									
Tank Containment (Double-Walled Tank)									
Is tank containment exterior in good repair?									
Is area free of debris or other fire hazards?									
Does interstitial space level indicator read "0" for fluid in spece between double walls?									
Leak Detection									
Is tank in good repair with no visible signs of leakage?									
Are tank structural supports in good repair (no sagging, buckling,									
Is ground free of evidence of leakage or spill from tank?									
Describe any leakage:									
Tank Attachments & Appurtenances									
Are stairs and platform secure?									
Are stairs and platform in good repair (ie free of corrosion or damage)?									
Describe required maintenance:									
Is tank liquid level gauge readable and in good condition?									
Are tank openings properly sealed?									
Other Conditions									
Describe conditions that need to be addressed for safe-future operations per SPCC plan?									

Inspector Signature:_____ Date: _____ Date: _____ Date: _____

Cane Run Generating Station - CR7 Plant

STI SP001 AST Monthly Inspection Checklist

• For other ASTs, follow manufacturer recommended inspection/testing schedules and procedures. • Periodic AST Inspection intended to monitor AST and containment structiure condition. Visual inspection must be performed by inspector familiar with site and able to identify changes and developing problems. • Non-conforming items on tank or containment integrity require evaluation by a qualified person to determine the corrective action. Note non-conformance and corresponding corrective action in comment section. • Retain completed checklists for 36 months.	**T-54 Diesel Fuel Tank CR7 Black Start Emergency Generator (500 gal)**			**T-30 Diesel Fuel Tank Mobile Refueling (275 gal)**		
	Steel Double Walled			Steel Box Rain Sheild		
	Yes	**No**	**NA**	**Yes**	**No**	**NA**
Was previous SPCC Inspection reviewed?						
Were all maintenance activities requested completed?						
Tank Containment (Double-Walled Tank)						
Is tank containment exterior in good repair?						
Is area free of debris or other fire hazards?						
Does interstitial space level indicator read "0" for fluid in spece between double walls?						
Leak Detection						
Is tank in good repair with no visible signs of leakage?						
Are tank structural supports in good repair (no sagging, buckling,						
Is ground free of evidence of leakage or spill from tank?						
Describe any leakage:						
Tank Attachments & Appurtenances						
Are stairs and platform secure?						
Are stairs and platform in good repair (ie free of corrosion or damage)?						
Describe required maintenance:						
Is tank liquid level gauge readable and in good condition?						
Are tank openings properly sealed?						
Other Conditions						
Describe conditions that need to be addressed for safe-future operations per SPCC plan?						

Inspector Signature:_____ Date: _____ Date: _____

Cane Run Generating Station

STI SP001 Portable Container/Drums Monthly Inspection Checklist

Storage Area	PA-40 Misc. Machine & Lube Oil, Used Oil		
Location	CR7 Oil Storage Building		
Containment	Plant Sumps, Ash Pond		
	Yes	**No**	**NA**
Previous Inspection			
Was previous SPCC Inspection reviewed?			
Were all maintenance activities requested completed?			
Storage Area			
Are portable containers and drums located in designated storage areas?			
Is containment area free of debris or other fire hazard?			
Is water in secondary containment?			
Are drain valves operational?			
Are dain valves closed?			
Are containment egress pathways clear?			
Are gates and doors operable?			
Leak Detection			
Is container storage area free of any visible signs of leakage from containers?			
Container			
Describe any conditions that need to be addressed for safe-future operations per SPCC plan?			

Inspector

Signature

Date

Cane Run Generating Station

STI SP001 AST Annual Inspection Checklist

Tank ID#	T-30 Diesel Fuel Tank (275 gal)			T-31 Kerosene Tank (300 gal)			T-20 Diesel Integrated Fuel Tank (1,286 gal)			T-21 Diesel Aux.Fuel Tank (1,500 gal)			T-50 Diesel Fuel Tank (4,000 gal)		
Location	Vehicle Refueling Tank			No. 1 Fuel Oil Tank			CR-7 Emergency Diesel Generator			CR-7 Emergency Diesel Generator			CR-7 Black Start Emergency Generator Fuel Storage Tank		
Containment	Steel Box Rain Sheild			Double- walled Tank			Double-Walled Tank			Double-Walled Tank			Double-Walled Tank		
	Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
Previous Inspection															
Was previous Annual SPCC Inspection reviewed?															
Were all maintenance activities requested completed?															
Tank Containment															
Is tank containment structure in good repair?															
Are drainage pipes in good repair?															
Are dainage valves in good repair?															
Tank Foundation and Supports															
Is tank foundation in good repair (ie free of settlement or foundation washout)?															
Is tank concrete pad or ring wall free of cracking or spalling?															
Are tank supports in satisfactory condition?															
Is water draining away from the tank?															
Is grounding strap secure?															
Is grounding strap in good condition?															
Cathodic Protection															
Is cathodic protection system functional?															
Is rectifier reading properly?															
Tank External Coating															
Is the tank external paint in good condition (ie no evidence of paint failure)?															
Tank Shells / Heads															
Is tank shell/head in good repair (free of distortion, buckling, denting or bulging)?															
Is tank shell/head free of corrosion?															
Is tank shell/head free of cracks?															
Tank Manways, Piping and Equipment within Secondary Containment															
Are flanged connection bolts tight?															
Are flanged connection bolts fully engaged?															
Are flanged connection bolts free of wear?															
Are flanged connection bolts free of corrosion?															
Tank Roof															
Is tank roof free of standing water?															
Is tank roof coating in good repair (ie free of cracking, crazing, peeling, blistering)?															
Is tank roof free of holes?															
Venting															
Are tank vents free of obstructions?															
Are emergency vents operational?															
Do emergency vents lift as required?															
Insulated Tanks															
Is all tank insulation in place?															
Is the tank insulation dry with no areas of moisture?															
Is the tank insulation free of mold?															
Is the tank insulation in good condition?															
Is tank insulation protected from water intrusion?															
Level and Overfill Prevention Instrumentation of Shop-Fabricated Tanks															
Was tank liquid level device tested?															
Is tank liquid level device operating properly?															
Are overfill prevention devices working pproperly?															
Electrical Equipment															
Are tank grounding lines in good condition?															
Is electrical wiring in good condition?															
Are electrical boxes in good condition?															
Are lights in good condition?															
Other Conditions															
Describe any conditions that need to be addressed for safe-future operations per SPCC plan?															

Cane Run Generating Station

STI SP001 AST Annual Inspection Checklist

Tank ID#	T-51 Diesel Fuel Tank (500 gal)			T-52 Diesel Fuel Tank (500 gal)			T-53 Diesel Fuel Tank (500 gal)			T-54 Diesel Fuel Tank (500 gal)		
Location	CR-7 Black Start Emergency Generator			CR-7 Black Start Emergency Generator			CR-7 Black Start Emergency Generator			CR-7 Black Start Emergency Generator		
Containment	Double-Walled Tank			Double-Walled Tank			Double-Walled Tank			Double-Walled Tank		
	Yes	**No**	**NA**	**Yes**	**No**	**NA**	**Yes**	**No**	**NA**	**Yes**	**No**	**NA**
Previous Inspection												
Was previous Annual SPCC Inspection reviewed?												
Were all maintenance activities requested completed?												
Tank Containment												
Is tank containment structure in good repair?												
Are drainage pipes in good repair?												
Are dainage valves in good repair?												
Tank Foundation and Supports												
Is tank foundation in good repair (ie free of settlement or foundation washout)?												
Is tank concrete pad or ring wall free of cracking or spalling?												
Are tank supports in satisfactory condition?												
Is water draining away from the tank?												
Is grounding strap secure?												
Is grounding strap in good condition?												
Cathodic Protection												
Is cathodic protection system functional?												
Is rectifier reading properly?												
Tank External Coating												
Is the tank external paint in good condition (ie no evidence of paint failure)?												
Tank Shells / Heads												
Is tank shell/head in good repair (free of distortion, buckling, denting or bulging)?												
Is tank shell/head free of corrosion?												
Is tank shell/head free of cracks?												
Tank Manways, Piping and Equipment within Secondary Containment												
Are flanged connection bolts tight?												
Are flanged connection bolts fully engaged?												
Are flanged connection bolts free of wear?												
Are flanged connection bolts free of corrosion?												
Tank Roof												
Is tank roof free of standing water?												
Is tank roof coating in good repair (ie free of cracking, crazing, peeling, blistering)?												
Is tank roof free of holes?												
Venting												
Are tank vents free of obstructions?												
Are emergency vents operational?												
Do emergency vents lift as required?												
Insulated Tanks												
Is all tank insulation in place?												
Is the tank insulation dry with no areas of moisture?												
Is the tank insulation free of mold?												
Is the tank insulation in good condition?												
Is tank insulation protected from water intrusion?												
Level and Overfill Prevention Instrumentation of Shop-Fabricated Tanks												
Was tank liquid level device tested?												
Is tank liquid level device operating properly?												
Are overfill prevention devices working pproperly?												
Electrical Equipment												
Are tank grounding lines in good condition?												
Is electrical wiring in good condition?												
Are electrical boxes in good condition?												
Are lights in good condition?												
Other Conditions												
Describe any conditions that need to be addressed for safe-future operations per SPCC plan?												

Inspector

Signature

Date

Example

STI SP001 Inspections Checklist Templates

STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Prior Inspection Date: _____ Retain until date: _____

Inspector Name (print): _____ Title: _____

Inspector's Signature (): _____

Container(s) inspected ID _____

Regulatory facility name and ID number (if applicable) _____

- This checklist is intended as a model. Locally developed checklists are acceptable as long as they are equivalent and meet all applicable inspection checklist items.
- This periodic Inspection is intended for monitoring the external condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for at least 36 months.

	Item	Area:	Area:	Area:	Area:
	Portable Container Containment/Storage Area				
1	Are all portable container(s) within designated storage area?	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*
2	Is the containment and storage area free of excess liquid, debris, cracks or fire hazards?	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*
3	Are drain valves closed and in good working condition?	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A
4	Are containment egress pathways clear and any gates/doors operable?	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A
	Container				
5	Is the container free of leaks? Note*: If "No", discontinue use of container*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*
6	Is the container free of distortions, buckling, denting or bulging? Note: *If "No", discontinue use of container*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*

Comments:

STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Prior Inspection Date: _____ Retain until date: _____

Inspector Name (print): _____ Title: _____

Inspector's Signature _____

Tank(s) inspected ID _____

Regulatory facility name and ID number (if applicable) _____

- This checklist is intended as a model. Locally developed checklists are acceptable as long as they are equivalent and meet all applicable inspection checklist items. Inspections of multiple tanks may be captured on one form as long as the tanks are substantially the same.
- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Inspect the liquid for regulated products or other contaminants and dispose of properly.
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note that some non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- If the inspection finds the integrity of the spill control system and/or the CRDM, such as items 13 and 14, is compromised the tank category and inspection time table should be re-evaluated by someone knowledgeable about the SP001 standard.
- Retain the completed checklists for at least 36 months.
- **After severe weather (snow, ice, wind storms) or maintenance (such as coating) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

	ITEM	STATUS	COMMENTS / DATE CORRECTED
	Tank and Piping		
1	Is tank exterior (roof, shell, heads, bottom, connections, fittings, valves, etc.) free of visible leaks? **Note**: *If "No", identify tank and describe leak and actions taken.*	☐ Yes ☐ No*	
2	Is the tank liquid level gauge legible and in good working condition?	☐ Yes ☐ No* ☐ N/A	
3	Is the area around the tank (concrete surfaces, ground, containment, etc.) free of visible signs of leakage?	☐ Yes ☐ No*	

4	Is tank shell or supports free of soil, vegetation, water, or foreign material collected or covering the grade line (tank chime or bottom projection)?	☐ Yes ☐ No* ☐ N/A	
5	Is the primary tank free of water or has another preventative measure been taken? NOTE: Refer to paragraphs 6.10 and 6.11 of the standard for alternatives for Category 1 tanks. N/A is only appropriate for these alternatives.	☐ Yes ☐ No* ☐ N/A	
6	For double-wall or double bottom tanks or CE-ASTs, is interstitial monitoring equipment (where applicable) in good working condition?	☐ Yes ☐ No* ☐ N/A	
7	For double-wall tanks or double bottom tanks or CE-ASTs, is interstice free of liquid? Remove the liquid if it is found. If tank product is found, investigate possible leak.	☐ Yes ☐ No* ☐ N/A	
	Equipment on tank		
8	If overfill equipment has a "test" button, does it activate the audible horn or light to confirm operation? If battery operated, replace battery if needed.	☐ Yes ☐ No* ☐ N/A	
9	Is overfill prevention equipment in good working condition? If it is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	☐ Yes ☐ No* ☐ N/A	
10	Is the spill container (spill bucket) empty, free of visible leaks and in good working condition?	☐ Yes ☐ No* ☐ N/A	
11	Are piping connections to the tank (valves, fittings, pumps, etc.) free of visible leaks? **Note***: If "No", identify location and describe leak.*	☐ Yes ☐ No*	
12	Do the ladders/platforms/walkways appear to be secure with no sign of severe corrosion or damage?	☐ Yes ☐ No* ☐ N/A	
	Containment (Diking/Impounding)		
13	Is the containment free of excess liquid, debris, cracks, corrosion, erosion, fire hazards and other integrity issues?	☐ Yes ☐ No* ☐ N/A	
14	Are dike drain valves closed and in good working condition?	☐ Yes ☐ No* ☐ N/A	
15	Are containment egress pathways clear and any gates/doors operable?	☐ Yes ☐ No* ☐ N/A	
	Concrete Exterior AST (CE-AST)		
16	Inspect all sides for cracks in concrete. Are there any cracks in the concrete exterior larger than 1/16"?	☐ Yes* ☐ No ☐ N/A	
17	Inspect concrete exterior body of the tank for cleanliness, need of coating, or rusting where applicable. Tank exterior in acceptable condition?	☐ Yes ☐ No* ☐ N/A	
18	Visual inspect all tank top openings including nipples, manways, tank top spill containers, and leak detection tubes. Is the sealant between all tank top openings and concrete intact and in good condition?	☐ Yes ☐ No* ☐ N/A	
	Other Conditions		
19	Is the system free of any other conditions that need to be addressed for continued safe operation?	☐ Yes ☐ No*	

Additional Comments:

STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____ Prior Inspection Date: _____ Retain until date: _____

Inspector Name (print): _____ Title: _____

Inspector's Signature: _____

Tank(s) inspected ID _____

Regulatory facility name and ID number (if applicable) _____

- This checklist is intended as a model. Locally developed checklists are acceptable as long as they are substantially equivalent and meet all applicable inspection checklist items.
- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Promptly remove standing water or liquid discovered in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and dispose of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility should regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note that non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for at least 36 months.
- Complete this checklist on an annual basis, supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

	ITEM	STATUS	COMMENTS / DATE CORRECTED
	Tank Foundation/Supports		
1	Free of tank settlement or foundation washout?	☐ Yes ☐ No*	
2	Concrete pad or ring wall free of cracking and spalling?	☐ Yes ☐ No* ☐ N/A	

3	Tank supports in satisfactory condition?	☐ Yes ☐ No* ☐ N/A	
4	Is water able to drain away from tank if tank is resting on a foundation or on the ground?	☐ Yes ☐ No* ☐ N/A	
5	Is the grounding strap between the tank and foundation/supports in good condition?	☐ Yes ☐ No* ☐ N/A	
Tank Shell, Heads and Roof			
6	Free of visible signs of coating failure?	☐ Yes ☐ No*	
7	Free of noticeable distortions, buckling, denting, or bulging?	☐ Yes ☐ No*	
8	Free of standing water on roof?	☐ Yes ☐ No* ☐ N/A	
9	Are all labels and tags intact and legible?	☐ Yes ☐ No*	
Tank Manways and Piping			
10	Are piping system joints, manway covers, gaskets, and attachment bolts tight and in good condition with no sign of wear, damage, leaks or corrosion?	☐ Yes ☐ No* ☐ N/A	
11	Are piping supports in good condition and free of corrosion and damage?	☐ Yes ☐ No* ☐ N/A	
12	Is leak or release detection on underground piping being performed and documented if required?	☐ Yes ☐ No* ☐ N/A	
Tank Equipment			
13	Normal and emergency vents free of obstructions?	☐ Yes ☐ No*	
14	Have the level sensing devices (e.g, level gauges, alarms) been checked for operability, where possible, as per manufacturer's instructions or good engineering practice?	☐ Yes ☐ No* ☐ N/A	
15	Have flame arrestors been maintained per manufacturer's recommendations?	☐ Yes ☐ No* ☐ N/A	
16	Is the emergency vent in good working condition and functional, as required by manufacturer? Consult manufacturer's requirements. Verify that components are moving freely (including long-bolt manways).	☐ Yes ☐ No* ☐ N/A	

17	Is interstitial leak detection equipment in good condition? Are windows on sight gauges clear? Are wire connections intact? If equipment has a test function, does it activate to confirm operation?"	☐ Yes ☐ No* ☐ N/A	
18	Are all valves free of leaks, corrosion, and other damage? Follow manufacturers' instructions for regular maintenance of these items. Check the following and verify (as applicable): ☐ Anti-siphon valve ☐ Check valve ☐ Gate, ball, or isolation valve ☐ Pressure regulator valve ☐ Expansion relief valve ☐ Solenoid valve ☐ Fire valve ☐ Shear valve	 ☐ Yes ☐ No* ☐ N/A ☐ Yes ☐ No* ☐ N/A ☐ Yes ☐ No* ☐ N/A ☐ Yes ☐ No* ☐ N/A ☐ Yes ☐ No* ☐ N/A ☐ Yes ☐ No* ☐ N/A ☐ Yes ☐ No* ☐ N/A ☐ Yes ☐ No* ☐ N/A	
19	Are strainers and filters clean and in good condition?	☐ Yes ☐ No* ☐ N/A	
	Insulated Tanks		
20	Free of missing insulation? Insulation free of visible signs of damage? Insulation adequately protected from water intrusion?	☐ Yes ☐ No* ☐ N/A	
21	Insulation free of noticeable areas of moisture?	☐ Yes ☐ No* ☐ N/A	
22	Insulation free of mold?	☐ Yes ☐ No* ☐ N/A	
23	Free of visible signs of coating failure?	☐ Yes ☐ No* ☐ N/A	
	Other Equipment		
24	Are electrical wiring and boxes in good condition?	☐ Yes ☐ No* ☐ N/A	
25	Has the cathodic protection system on the tank been tested as required by the designing engineer?	☐ Yes ☐ No* ☐ N/A	

Additional Comments:

STI SP001 AST Record

Form completed by (Name) _____ Date _____

(Title) _____

OWNER INFORMATION	FACILITY INFORMATION	INSTALLER INFORMATION
Name	Name	Name
Number and Street	Number and Street	Number and Street
City, State, Zip Code	City, State, Zip Code	City, State, Zip Code
	Regulatory facility ID number (if applicable)	

.

OWNER'S TANK ID	OTHER ID	INITIAL SERVICE DATE

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Product Date:

Design: ☐ UL _____ ☐ SwRI _____ ☐ API _____ ☐ Other _____ ☐ Unknown
☐ Horizontal ☐ Vertical ☐ Rectangular

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____
☐ Coated Steel ☐ Concrete encased steel ☐ Stainless steel ☐ Other _____
☐ Double-Bottom ☐ Double-Wall ☐ Lined inside; Date lining installed: _____

Spill control: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete
☐ None ☐ Other _____

Tank elevated on supports ☐ yes ☐ no
Support material: ☐ steel ☐ concrete ☐ other _____

CRDM: ☐ yes ☐ no
If yes, type: ☐ Release Prevention Barrier ☐ Elevated tank ☐ Double bottom tank
☐ Double wall tank ☐ CE-AST ☐ other _____

Release Prevention Barrier: ☐ yes ☐ no If yes, Date Installed: _____
If yes, Type: ☐ concrete ☐ synthetic liner ☐ clay liner ☐ steel ☐ other _____

AST Category: ☐ Category 1 ☐ Category 2 ☐ Category 3

OWNER'S TANK ID	**OTHER ID**	**INITIAL SERVICE DATE**

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Product Date:

Design: ☐ UL _____ ☐ SwRI _____ ☐ API _____ ☐ Other _____ ☐ Unknown
☐ Horizontal ☐ Vertical ☐ Rectangular

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____
☐ Coated Steel ☐ Concrete encased steel ☐ Stainless steel ☐ Other _____
☐ Double-Bottom ☐ Double-Wall ☐ Lined inside; Date lining installed: _____

Spill control: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete
☐ None ☐ Other _____

Tank elevated on supports ☐ yes ☐ no
Support material: ☐ steel ☐ concrete ☐ other _____

Release Prevention Barrier: ☐ yes ☐ no If yes, Date Installed: _____
If yes, Type: ☐ concrete ☐ synthetic liner ☐ clay liner ☐ steel ☐ other _____

CRDM: ☐ yes ☐ no
If yes, type: ☐ Release Prevention Barrier ☐ Elevated tank ☐ Double bottom tank
☐ Double wall tank ☐ CE-AST ☐ other _____

AST Category: ☐ Category 1 ☐ Category 2 ☐ Category 3

OWNER'S TANK ID	**OTHER ID**	**INITIAL SERVICE DATE**

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Product Date:

Design: ☐ UL _____ ☐ SwRI _____ ☐ API _____ ☐ Other _____ ☐ Unknown
☐ Horizontal ☐ Vertical ☐ Rectangular

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____
☐ Coated Steel ☐ Concrete encased steel ☐ Stainless steel ☐ Other _____
☐ Double-Bottom ☐ Double-Wall ☐ Lined inside; Date lining installed: _____

Spill control: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete
☐ None ☐ Other _____

Tank elevated on supports ☐ yes ☐ no
Support material: ☐ steel ☐ concrete ☐ other _____

Release Prevention Barrier: ☐ yes ☐ no If yes, Date Installed: _____
If yes, Type: ☐ concrete ☐ synthetic liner ☐ clay liner ☐ steel ☐ other _____

CRDM: ☐ yes ☐ no
If yes, type: ☐ Release Prevention Barrier ☐ Elevated tank ☐ Double bottom tank
☐ Double wall tank ☐ CE-AST ☐ other _____

AST Category: ☐ Category 1 ☐ Category 2 ☐ Category 3

Appendix K

Stormwater Drainage Procedure

Example Bulk Storage Tank
Containment (e.g. berm, concrete dikes, steel box, etc.) Drainage Instructions

Precipitation, including rain, snow, sleet and ice, should be removed from containment areas after the precipitation event.

Rainwater:
Prior to draining rainwater, the entire containment area should be observed for signs of spill or leaks.

If signs of spills or leaks are observed, they should be removed and the source identified and correct prior to a) opening a discharge valve or b) starting a discharge pump.

- Sheens on the surface of the water can be removed with absorbent pads or pigs*. CI Agent can also be used to solidify the oil.
- Sludges or large leaks may require a pump or special handling. Environmental Affairs (EA) coordinator should be contacted prior to attempting to remove.
- The tank and transfer lines should be observed for sources of the leak. If a leak is identified, it should be corrected before draining.
- If no leak is identified, the source may have been from a spill or drip during transfer operations.

After the containment area is observed for spills or leaks, the a) drain valve or b) pump may be opened/started and the rainwater allowed to drain.

- The draining of rainwater should be observed until the containment area is free of standing water.
- If signs of spills or leaks are observed during the draining, the valve/pump should be closed/stopped.
- After the rainwater has drained out of the containment area, the valve/pump should be closed/stopped.
- The Diked Area Drainage Report Form or a MAXIMO report, should be completed, signed and given to the appropriate supervisor for their signature and properly filled.

* If the containment area has other hazardous materials petroleum fuel, oils, or lubricants, consult a manager to determine if the material used for collecting or cleaning the containment area are considered hazardous waste.

Table 1. Diked Area Drainage Report Form

Diked Area Drainage Report Form			
Containment Area:			
Appearance of water at time of draining and estimate of liquid depth (in inches):			
If oil or sheen is present, what was done to clean it up:			
Was the source of oil or sheen identified, and if so, what was done to correct the problem:			
Date Drainage Started		Time Drainage Started:	
Date Drainage Stopped (Containment Resealed)		Time Drainage Stopped (Containment Resealed)	
Operator Name			
Operator Signature			
Supervisor Name			
Supervisor Signature			

Appendix L

Failsafe Tank Listing

Appendix L Discussion – Method of Satisfying Failsafe Requirements

40 CFR Part 112.8(c)(8) requires that ***bulk storage tank(s)*** include one of the following

(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.
(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.
(iii) Direct audible or code signal communication between the container gauger and the pumping station.
(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.
(v) You must regularly test liquid level sensing devices to ensure proper operation.

Or achieve these “failsafe” objectives through the use of a means that satisfies the environmental equivalence of these specific requirements.

To document that each ***bulk storage tank(s)*** was evaluated for compliance **AND** to specifically identify how each bulk storage tank complies with this requirement, a compliance table was populated for the regulated ***bulk storage tank(s)*** present at the Station.

Louisville Gas and Electric and Kentucky Utility Company

Cane Run

Fail Safe Engineering Details
Refer to electronic version for updates

Item ID	Name Item Description	Material	Building List	Max Storage Capacity	Container Size	Unit	Number Of Containers	Container Type	Secondary Containment	Tank Level Gauging	High Level Alarm	Double Wall Monitoring	SPCCDrainage Log	Tank Category
T-020	CR-7 Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	Outside-Not Covered	1,286	1,286	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Visual	Yes	No	STI SP001 Cat 1 (5,000 gal or less)
T-030	Diesel fuel tank (mobile refueling)	Fuel- Diesel (#2 Fuel Oil On Road)	Outside-Not Covered	550	550	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Environmental Equivalent Measures	Yes	No	STI SP001 Cat 1 (5,000 gal or less)
T-031	Kerosene	Fuel-#1 Fuel Oil (Kerosene)	Outside-Not Covered	300	300	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Environmental Equivalent Measures	Yes	No	STI SP001 Cat 1 (5,000 gal or less)
T-050	CR-7 Black Start Emergency Diesel Generator Fuel Storage Tank	Fuel- Diesel (#2 Fuel Oil Off Road)	Outside-Not Covered	4,000	4,000	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Visual	Yes	No	STI SP001 Cat 1 (5,000 gal or less)
T-051	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Visual	Yes	No	STI SP001 Cat 1 (5,000 gal or less)
T-052	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Visual	Yes	No	STI SP001 Cat 1 (5,000 gal or less)
T-053	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Visual	Yes	No	STI SP001 Cat 1 (5,000 gal or less)
T-054	CR-7 Black Start Emergency Diesel Generator	Fuel- Diesel (#2 Fuel Oil Off Road)	CR Diesel Generator Bldg	500	500	Gallons	1	AST - Double Walled - Steel	Double Walled Tank	Direct Read	Visual	Yes	No	STI SP001 Cat 1 (5,000 gal or less)

Appendix M

Compliance Topics Information Sheets

Appendix M Discussion – Containment Example(s) Information Sheets

Information sheets associated with equipment commonly included in SPCC plans (e.g., bulk storage tanks, portable containers, transformers, etc.) were developed to assist the Person Designated for SPCC Plan implementation in SPCC compliance at the point of use. The information sheets can be placed in plastic sleeves and posted to remind Station personnel of the compliance requirements associates with various bulk storage tanks and oil filled equipment. The Station is encouraged to make copies of these information sheets and locate one in close proximity to all SPCC local points of compliance.

Shop Built Bulk Storage Container Requirements

(e.g., petroleum fuels, used oil, mineral oil, etc.)

***Shop built bulk storage containers are generally less than 20,000-gallons in size.**

Do

- ✓ **Label** to indicate contents.
- ✓ **Provide** specifically sized secondary containment for the tank contents plus precipitation and freeboard.
- ✓ **Provide** with level sensing and overfill prevention.(1)
- ✓ **Secure** master flow or drain valves. For fuel dispensers, secure pump.(1)
- ✓ **Maintain** containment valve in the closed position.
- ✓ **Use** SPCC approved procedure for transferring liquids into or out of container.
- ✓ **Check** containment for the presence of oil before draining precipitation.
- ✓ **Document** the drainage of precipitation from containment structures on form provided by facility.
- ✓ **Immediately** clean up any small spills.





Don't

- ✘ **Leave** container unattended during oil transfers.
- ✘ **Smoke**, use a cell phone or have an open flame present during oil transfers.
- ✘ **Leave** dispenser or a tank drainage valve unsecured.
- ✘ **Fail** to drain precipitation from containment**.**
- ✘ **Leave** the containment valve in the open position.
- ✘ **Fail** to follow the SPCC provided spill procedures in the event of an oil release.



If… Then

- ➤ **If** you spill a small amount of oil during an oil transfer, **then** use spill kit material to absorb the release.
- ➤ **If** a spill occurs outside of the secondary containment system, **then** attempt to prevent the spill from reaching floor drains, storm water ditches or structures that may convey spill to navigable water.
- ➤ **If** a large spill occurs, request spill response help immediately.

Factsheet Checklist

- ☐ Is bulk storage container is located within containment?
- ☐ Observe container for weeps/seeps/leaks.
- ☐ Is fuel transfer dispenser or pump maintained in a secure position?
- ☐ If tank is not equipped with an overfill prevention system, does staff understand the environmental equivalence procedure?
- ☐ That containment is free of oil or and water.
- ☐ Containment valve is maintained in the closed position.
- ☐ That site lighting and security are operational.

Materials & Waste Management

- ▶ Contact the Plant Environmental Coordinator for proper disposal directions of spill kit materials.

Training

- ▶ Personnel should be trained on oil container handling and spill prevention when assigned to a position and annually **thereafter**.

Relevant Environmental Programs

- ● SPCC
- ● GWPP
- ● BMP
- ○ Waste Management

Environmental Reference

- ▶ 40 CFR Part 112

(1) Some requirements of the SPCC regulations may be met by using an environmental equivalence (EE), per the direction of the certifying Professional Engineer (PE). Carefully read the SPCC Plan to determine whether the PE has indicated that an EE is allowable for the specific storage container in question.

Oil Tote Storage Requirements

(e.g., mineral oil, petroleum fuels, used oil, etc.)

Do

- ✓ Store totes in a containment area, on a containment pallet or on properly sized containment platforms.
- ✓ Keep totes elevated of floor so they don't require integrity testing.
- ✓ Use an overspill funnel when filling totes.
- ✓ Keep tote fill ports (bung holes) sealed when not is use.
- ✓ Label totes with proper contents.
- ✓ Immediately clean up any small spills.
- ✓ Use proper personnel protective equipment when adding or removing liquids or when handling totes.
- ✓ Totes stored outside require secondary containment and should be protected from precipitation accumulation.
- ✓ Store empty totes within a secondary containment area.

Don't

- ✘ Fail to notify Supervisor if you observe a spill or leaking tote.
- ✘ Store tote in direct contact with soil or on the floor.
- ✘ Store totes outside of secondary containment.

If… Then

- ➤ **If** you spill a small amount of oil during tote filling or oil transfer, **then** use spill kit material to absorb the release.
- ➤ **If** a spill occurs outside of the secondary containment system, **then** attempt to prevent the spill from reaching floor drains, storm water ditches or structures that may convey spill to navigable water.

Factsheet Checklist

- ☐ Check that totes are within secondary containment.
- ☐ Check for precipitation in containment area.
- ☐ Check that totes are elevated off the ground to assist in leak detection.
- ☐ Check that tote fill ports are closed when not in use.
- ☐ Observe totes for any weeps/seeps/leaks.

Materials & Waste Management

- ▶ Contact the Plant Environmental Coordinator for proper disposal directions of spill kit materials.

Training

- ▶ Personnel should be trained on oil container handling and spill prevention when assigned to a position and annually **thereafter**.

Relevant Environmental Programs

- ● SPCC
- ● BMP
- ● GWPP
- ○ Waste Management

Environmental Reference

- ▶ 40 CFR Part 112

55-Gallon Oil Drum Storage Requirements

(e.g., mineral oil, petroleum fuels, used oil, etc.)

Do

- ✓ **Use only closed top drums for the storage of liquids.**
- ✓ Store 55-gallon drums in a containment area, on a containment pallet or on properly sized containment platforms.
- ✓ Portable drums, on drum carriers, are required to be stored within containment structures, also.
- ✓ Use an overspill funnel when filling drums.
- ✓ Keep drums fill ports (bung holes) sealed when not is use.
- ✓ Label drums with proper contents.
- ✓ Use a drum handler, drum dolly, portable lift or forklift when moving drums.
- ✓ Immediately clean up any small spills.
- ✓ Use proper personnel protective equipment when handling drums.
- ✓ Drums stored outside require secondary containment and should be protected from precipitation accumulation.
- ✓ Store empty oil closed top drums within a secondary containment area.
- ✓ New (unused) oil drums can be stored outside containment until brought into service.





Don't

- ✖ **Use open head drums for the storage of liquids.**
- ✖ Fail to take appropriate actions if you observe a spill or leaking drum.
- ✖ Store drums in direct contact with soil or outside of some form of secondary containment.



If… Then

- ➤ **If** you spill a small amount of oil during drum filling or oil transfer, **then** use spill kit material to absorb the release.
- ➤ **If** a spill occurs outside of the secondary containment system, implement the procedures in the SPCC Plan (e.g., attempt to prevent the spill from reaching floor drains, storm water ditches or structures if safe to do so)

Factsheet Checklist

- ☐ Check that fluids are only stored in closed topped drums.
- ☐ Check that drums are within secondary containment.
- ☐ Check for precipitation in containment area.
- ☐ Check that drums ports are closed when not in use.
- ☐ Observe drums for any weeps/seeps/leaks.
- ☐ Check to see if drum is labeled.

Materials & Waste Management

- ▶ Contact the Plant Environmental Coordinator for proper disposal directions of spill kit materials.

Training

- ▶ Personnel should be trained on oil container handling and spill prevention when assigned to a position and annually **thereafter**.

Relevant Environmental Programs

- ● SPCC
- ● BMP
- ● GPP
- ○ other

Environmental Reference

- ▶ 40 CFR Part 112

Electrical Equipment Requirements

(e.g., transformers, breakers, switches, capacitors, etc.)

Electrical equipment can achieve regulatory compliance by:

a. being provided general secondary containment, or
b. through an inspection, monitoring, and contingency plan process at Qualified Facilities.

Make sure, per the SPCC Plan, you know which method applies to your equipment.

Do

- ✓ **Review** your site's SPCC Plan.
- ✓ **Understand** which method of compliance is used at your facility.
- ✓ **Inspect** equipment for signs of weeps/seeps/leaks.
- ✓ **Repair** minor leaks before they become major leaks.
- ✓ **Clean up** spilled oil in accordance with the SPCC plan.
- ✓ **Plug** maintenance valves and drains to discourage vandalism or accidental oil releases.
- ✓ **Remove** oil from salvaged equipment to prevent releases.
- ✓ **Inspect** containment areas, if utilized for accumulated rain water.
- ✓ **Inspect** and replace CI Agent, if used, as necessary.




Don't

- ✗ **Assume** that electrical equipment does not require some form of containment (active, passive, or a contingency plan) for SPCC compliance**.**
- ✗ **Assume** that stored electrical equipment is exempt from containment requirements.
- ✗ **Store** electrical equipment in close proximity to storm water systems (e.g., storm sewers, floor drains that discharge into the storm sewer, storm water drainage ditches, etc.)
- ✗ Forget to perform periodic inspections.


If… Then

- ➤ **If** electrical equipment has a release of a small amount of oil, **then** use spill kit material to absorb the release.
- ➤ **If** electrical equipment has a major oil release (e.g., lightning strike) which threatens to enter navigable water, **then** implement the procedures in the SPCC Plan (e.g., attempt to prevent the spill from reaching floor drains, storm water ditches or structures if safe to do so).
- ➤ **If** a fire suppression system is engaged**, then** make sure the oily water is managed without creating a release.

Fact sheet Checklist

- ☐ Check the SPCC Plan for methods of compliance for electrical equipment.
- ☐ Identify electrical equipments means of SPCC compliance.
- ☐ Check to see that require inspections are being performed.
- ☐ Check to see if spill materials are sized appropriately for the potential release.
- ☐ Check to see if spill response equipment is located closely enough to the spill potential to rapid respond in an emergency.

Materials & Waste Management

- ▶ Contact the Facility Environmental Coordinator for proper disposal directions of spill kit materials.

Training

- ▶ Personnel should be trained on oil container handling and spill prevention when assigned to a position and annually **thereafter**.

Electrical Equipment Requirements (Continued)

(e.g., transformers, breakers, switches, capacitors, etc.)

SPCC Rule (40 CFR 112) Oil-filled Equipment Secondary Containment Guidance for Facilities *(For Substations see: Substation SPCC Plan Appendix I)*		
Oil-filled equipment < 55 gallon capacity	At any facility	No Secondary Containment Required
Oil-filled equipment ≥ 55 gallon capacity	At any facility where the sum of company owned/operated oil-filled equipment/oil containers is ≤ 1,320 gallons.	
Oil-filled equipment ≥ 55 gallon capacity	At any facility where the sum of company owned/operated oil-filled equipment/oil containers capacity is > 1,320 gallons.	General secondary containment must include physical controls when there is a lack of notification of a release and where active measures would be inadequate to prevent a discharge from reaching a sewer or waterway. Sizing can vary. An example is using the equipment capacity and a 2" rain event (approximate 1-year, 6-hour storm).

Notes:

1. For determining a facility's capacity:
   - Count all types of oils including oil mixtures.
   - Count only oil-filled equipment/oil containers with 55-gallon capacity and larger.
2. A SPCC facility is defined based upon location, ownership, and operational control. SPCC facilities must not be divided or split in order to avoid regulatory requirements.

Appendix N

Tank Testing Results

Appendix N Discussion – Tank Testing Results

During the preparation of the SPCC document, attempts were made to obtain and review integrity testing results for tanks, and as applicable, buried piping (if applicable), and new or modified piping. The purpose of reviewing this information was to document that baseline or periodic integrity inspections by a certified inspector had been performed and determine whether the certified inspector established a more conservative inspection schedule than the schedule included in the applicable tank testing standard (e.g., STI SP-001, SPI-653, etc.). If, due to corrosion or other factors, the certified inspector determines a frequency greater than the one identified in the referenced standard, this more conservative frequency was used to establish the integrity testing schedule included in the SPCC plan.

As new or additional integrity tests are performed, the inspection reports should be reviewed and the new suggested integrity testing schedule established for the tank(s) and equipment tested.

In all instances, the recommendations from the certified integrity test results will supersede the schedule established in this plan.

Appendix O

Other Information

OSWER 9360.8-38

MEMORANDUM

SUBJECT: Use of Alternative Secondary Containment Measures at Facilities Regulated under the Oil Pollution Prevention Regulation (40 CFR Part 112)

FROM: Marianne Lamont Horinko
Assistant Administrator

TO: Oil National Policy Managers, Regions 1-10

PURPOSE

This memorandum amends the guidance issued on April 29, 1992 (i.e., Use of Alternative Secondary Containment Measures at Facilities Regulated under the Oil Pollution Regulation (40 CFR Part 112), (OSWER 9360.8-37) concerning the potential use of certain double-wall aboveground storage tanks (ASTs) for secondary containment purposes. A copy is attached for your reference. This guidance also clarifies when shop-built double-walled ASTs satisfy the applicable secondary containment requirements in the Spill Prevention, Control, and Countermeasure (SPCC) rule, found at 40 CFR part 112. We take this step because larger shop-built ASTs that use the protective measures described in the 1992 guidance are generally protective of the environment under certain circumstances.

BACKGROUND

On April 29, 1992, EPA issued guidance on how certain shop-built double-wall ASTs may comply with the secondary containment requirements of §112.7(c). The guidance discussed compliance with §112.7(c) only, and did not discuss compliance with other applicable SPCC provisions. We said at the time that "there should be many situations in which protection of navigable waters substantially equivalent to that provided by the secondary containment systems listed in section 112.7(c) could be provided by alternative AST systems that have capacities generally less than 12,000 gallons and are installed and operated with protective measures other than secondary containment dikes."

DISCUSSION

SPCC secondary containment requirements. Section 112.7(c) requires that the owner or operator:

"Provide appropriate containment and/or diversionary structures or equipment to

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prevent a discharge as described in §112.1(b). The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank or pipe, will not escape the containment system before cleanup occurs. At a minimum, you must use one of the following preventive systems or its equivalent:

(1) For onshore facilities:
(i) Dikes, berms or retaining walls sufficiently impervious to contain oil;
(ii) Curbing;
(iii) Culverting, gutters or other drainage systems;
(iv) Weirs, booms or other barriers;
(v) Spill diversion ponds;
(vi) Retention ponds; or
(vii) Sorbent materials.
(2) For offshore facilities:
(i) Curbing, drip pans; or
(ii) Sumps and collection systems."

After nearly a decade of evaluation of the construction, performance, and use of certain shop-built double-wall ASTs, we believe that they may serve as an "equivalent" preventive system for purposes of §112.7(c).

In 1992, we recognized that a shop-built double-wall AST with a capacity "generally less than 12,000 gallons" that was installed and operated with protective measures other than a secondary containment dike might meet the secondary containment requirements of §112.7(c). We described those protective measures as "when the inner tank is an Underwriters' Laboratory-listed steel tank, the outer wall is constructed in accordance with nationally accepted industry standards (e.g., those codified by the American Petroleum Institute, the Steel Tank Institute, and the American Concrete Institute), the tank has overfill prevention measures that include an overfill alarm and an automatic flow restrictor or flow-shutoff, and all product transfers are constantly monitored."

Today, after nearly a decade of experience in which we have seen the construction, performance, and use of shop-built double-wall ASTs, we note a low

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occurrence of discharges from such tanks, including tanks with a capacity of 12,000 gallons or more. In some cases, such tanks provide secondary containment where none existed before, or superior environmental protection to alternative containment systems previously used. We believe that a 12,000 gallon limitation on the use of certain shop-built double-wall ASTs is therefore no longer necessary, and believe that shop-built double-wall ASTs that use the protective measures described in 1992 generally satisfy the secondary containment requirements found in §112.7(c).

Bulk storage secondary containment requirements (§112.8(c)(2)); inspection requirements (§112.8(c)(6)). For the same reasons outlined above, we also believe that shop-fabricated double-wall AST, regardless of size, may generally satisfy not only the secondary containment requirements of §112.7(c), but also the bulk storage secondary containment requirements found at §112.8(c)(2). Section 112.8(c)(6) requires the owner or operator to conduct integrity testing on a regular schedule and whenever he makes repairs. The owner or operator must also frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. To comply with the requirement to frequently inspect the outside of the tank, an owner or operator must inspect the inner wall and interstitial spaces of a shop-built double-wall AST. We recommend the use of automatic detection devices to detect discharges into the interstitial space. Owners or operators should conduct this integrity testing and inspection in accordance with industry standards, when practicable. One industry standard presently available is “SP001-00, Standard for Inspection of In-Service Shop-Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids.” Other applicable standards may be developed in the future.

Other applicable SPCC requirements. While shop-fabricated double-wall ASTs may satisfy the requirements of §112.7(c) and §112.8(c)(2), such tanks must also continue to satisfy all other applicable SPCC requirements. For example, the facility owner or operator must satisfy §112.7(h) requirements for tank car and tank truck loading/unloading racks if he transfers oil in bulk to those tanks from highway vehicles or railroad cars. If such transfers occur, where loading/unloading area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system must be used. The containment system must be designed to hold at least the maximum capacity of any single compartment of a tank car of tank truck loaded or unloaded at the facility.

Additionally, any piping, equipment, or device not contained within a double-wall AST is subject to the requirements of §112.8(b)(3) and (4), if such piping, equipment, or device is in an undiked area.

CONCLUSION/IMPLEMENTATION Should you have any questions concerning this memorandum, please contact Hugo Fleischman, of my staff, at 703-603-8769.

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Attachment

cc: Michael B. Cook
Elaine Davies
Andrew Gordon
David Drelich
Oil Removal Managers
OERR Records Manager, IMC 5202G
OERR Documents Coordinator, HOSC 5202G
Jeff Josephson, Superfund Lead Region Coordinator, USEPA Region 2
NARPM Co-Chairs
Doug Kodama, Oil Lead Region Coordinator, USEPA Region 2

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ENVIRONMENTALLY FRIENDLY ci agent solutions & RECYCLABLE PRODUCTS

C.I.Agent® Barrier Boom

Back-to-grade application.

Installation of Barrier Boom

Completed installation - dike method

Site preparation and installation

BARRIER BOOM DESCRIPTION:

C.I.Agent® Barrier Boom is a proven Secondary Containment System designed to allow the unimpeded flow of water during normal rainfall or snow melt events, but becomes an impervious barrier in the event of an oil release. Barrier Boom is constructed from non-woven geotextile materials filled with C.I.Agent® Granules, a proprietary blend of several USDA food-grade polymers, and backed with Agent-X, a non-woven geotextile material with C.I.Agent® embedded within the fabric. C.I.Agent® Barrier Boom has become the accepted solution for SPCC Secondary Containment by professional engineers across the nation.

BARRIER BOOM APPLICATIONS:

C.I.Agent® Barrier Boom is the ideal solution for providing Secondary Containment as required by 40 CFR 112, SPCC. C.I.Agent® Barrier Boom has been installed and PE Certified more than 7,500 times over the past decade in substations for the electric utility industry. Other applications for Secondary Containment with C.I.Agent® Barrier Boom include pad-mounted transformers, oil-filled equipment storage areas, bulk fuel and oil storage areas — all without the use of concrete walls, sump pumps, and oil-water separator systems. C.I.Agent® Barrier Booms can be used with clay and vinyl liner systems.

BARRIER BOOM PERFORMANCE SPECIFICATIONS:

- Hydrocarbon flow rate: 0 GPM (100% containment)
- Solidifies approximately a half gallon of oil per square foot depending on oil viscosity
- Service life of installed product: Life of equipment
- UV resistance of 70%
- Oxidation resistance of 80%
- Contains 12 to 16 oz. of loose C.I.Agent polymers per square foot

BARRIER BOOM BENEFITS:

- Meets SPCC requirement 40 CFR 112
- Barrier Boom is designed to meet your site's needs
- Ease of installation: typically completed in one day
- No special tools required
- Your equipment remains fully energized
- Little or no maintenance required
- Eliminates the need for concrete walls, sump pump systems, and oil-water separators
- Reduces containment cost by 50% to 80% (on average)

11760 Commonwealth Dr. • Louisville, KY 40299 **office** 502.267.0101 **toll free** 866.242.4368 **fax** 502.267.0181 **web** www.ciagent.com

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"We were impressed with the product because it is a reliable low-cost alternative to other products. C.I.Agent was estimated to provide a 50-75% cost savings over equivalent solid concrete containment. We have been very pleased with the product and the supplier."
Jude Beyerle, Group Leader, Substation Engineering, E. On U.S.

Dike installation for large equipment.

Pad mount for smaller containment.

Water gate install to process water.

The front of the C.I.Agent® Barrier Boom is a basic geotextile made from a patented blend of recycled synthetic materials that is both hydrophobic and oleophilic. The material wicks the oil throughout its fibers and has a tremendous load capability per square inch.

C.I.Agent® is a non-toxic, non-hazardous, and environmentally friendly blend of cross-linking polymers that encapsulates transformer oils into a cohesive rubber-like mass.

Agent-X makes up the back wall of the C.I.Agent® Barrier Boom. It is made of two layers of a geotextile with C.I.Agent® polymers laminated between the layers. The material itself has a tremendous filtering effect and keeps oil from passing through this unique final outside wall.

A unique quilting pattern (not shown) keeps the C.I.Agent® polymers from shifting during handling and installation.

BARRIER BOOM AVAILABILITY:

C.I.Agent® Barrier Boom is manufactured to the specific requirements of the containment site. In most cases the C.I.Agent® Barrier Boom can be delivered within two to four weeks from date of the order.

ENVIRONMENTAL INSURANCE POLICY

C.I.Agent Solutions carries a $2 Million Product Liability and $2 Million Environmental Insurance policy on C.I.Agent® Barrier Boom.

For additional information call C.I.Agent® Solutions.

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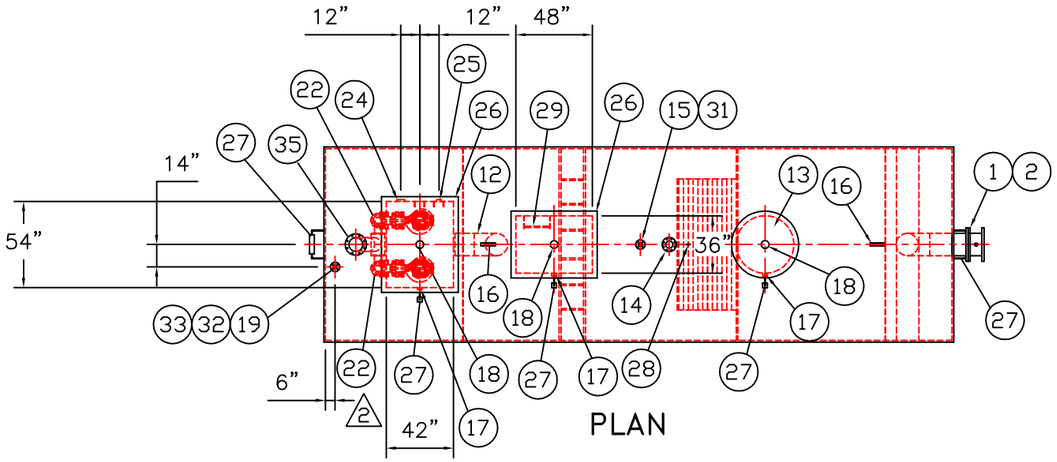
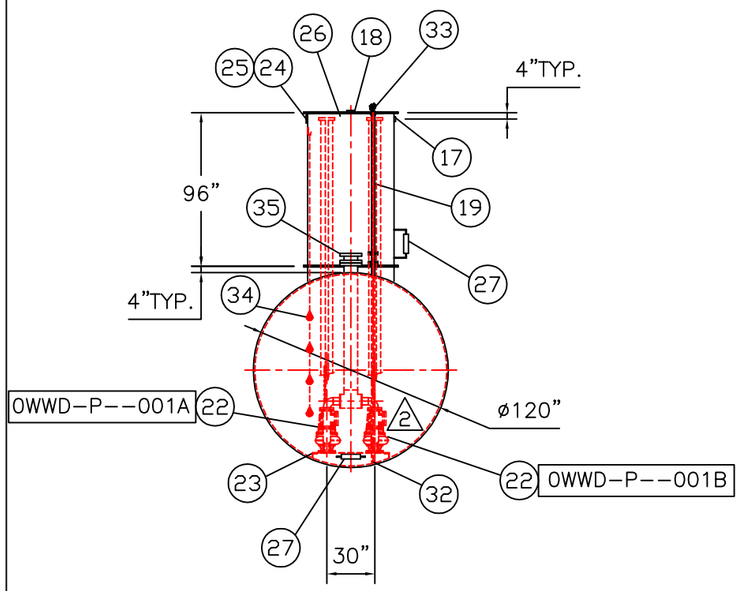
DRAWING 1 OF 2

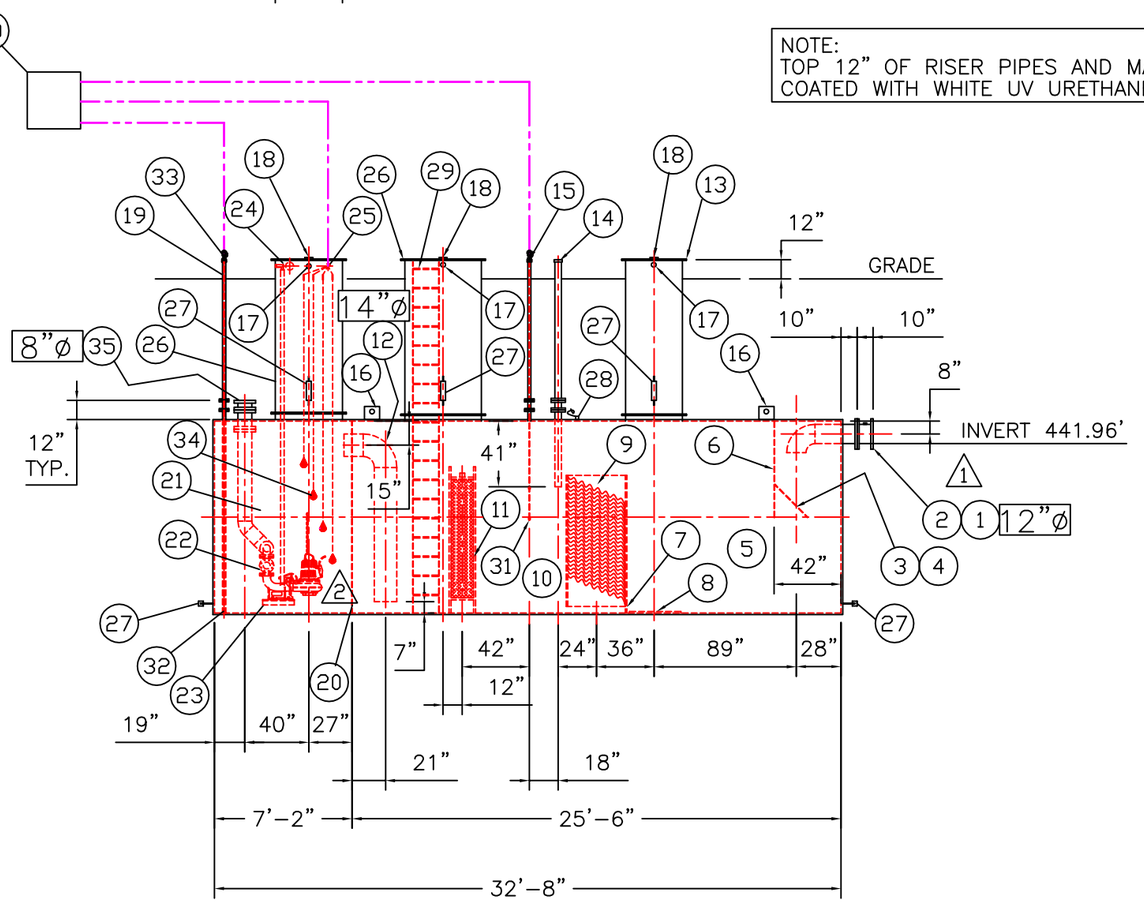


TAG#: 0WWD–CPL––001

NOTE:
TOP 12” OF RISER PIPES AND MANWAY EXTENSIONS COATED WITH WHITE UV URETHANE.



END VIEW



ELEVATION

3	-CORRECT TAG NUMBERS	11-15-13	REM
2	-REV TO FLYGT 3127 EFFLUENT PUMP	2-26-13	REM
1	-REV INLET TO 12”ø–8” CL -ADDED INLET INVERT -REV TANK TAG #	2-12-13	REM

REVISIONS

Highland Tank

U.S. Patent #4,722,800 #6,606,224 Canadian Patent # 1,296,263 # 2,389,065

15000 GALLON OIL WATER SEPARATOR
UL–HTC–J, STIP3, DOUBLE WALL

CUSTOMER: BLACK & VEATCH INTERNATIONAL
CANE RUN–7 POWER PLANT
PROJECT: BLUEGRASS POWER
LOUISVILLE, KY.

QUOTE NO: 310964

CHK’D BY:

1 REFERENCE DRAWING NO. 82854 FOR NOTES/DETAILS

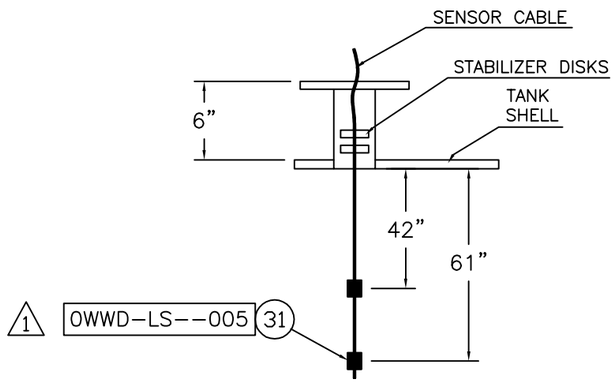
TANK TAG #: 0WWD–CDS––001

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE + OR - 1”

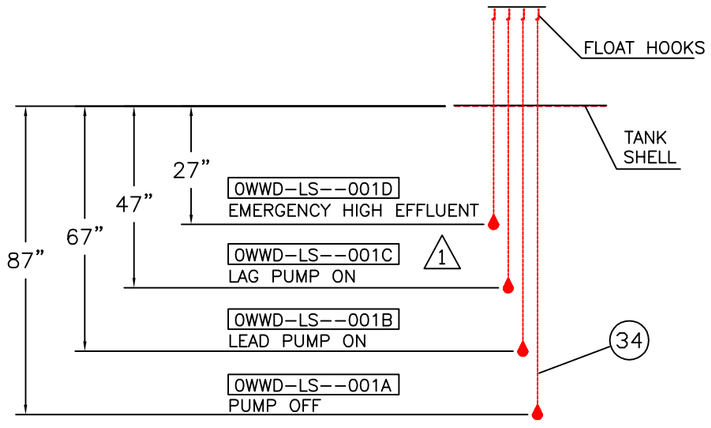
SCALE:	DATE:	DWG. BY:	DWG. NO.:
1/8”=1’-0”	1-30-13	REM	82853

PROVIDED EQUIPMENT

1. 150# R.F.S.O. FLANGE
2. ISOLATION SPOOL PIECE WITH 2" FNPT FOR VENT
3. VELOCITY HEAD DIFFUSION BAFFLE
4. WEAR PLATE
5. SEDIMENT CHAMBER
6. UNDERFLOW BAFFLE
7. SLUDGE BAFFLE
8. STRIKER PLATES
9. PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES (82"x82"x36") (3" PLATE SPACING)
10. OIL/WATER SEPARATOR CHAMBER
11. PETROSCREEN COALESCER MATERIAL INSTALLED W/ PULL ROD SHIPPED LOOSE (82"x82"x14")
12. STEEL OUTLET DOWNCOMER
13. 36"ø MANWAY WITH NEO-CORK GASKETS. BOLT-ON EXTENSION SHIPPED LOOSE
14. 4"ø 150 # R.F.S.O. FLANGE W/ ISOLATION SPOOL FTG.FOR OIL PUMPOUT WITH INTERNAL PVC PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
15. 2"ø 150 # R.F.S.O. FLANGE W/ ISOLATION SPOOL FTG. FOR LEVEL SENSOR WITH RISER PIPE SHIPPED LOOSE
16. LIFTING LUG
17. 3"ø FNPT W/ 3"øX2"ø NYLON BUSHING FTG. FOR VENT TYP. ALL MANWAYS
18. 5"ø FNPT W/ 5"øX4"ø NYLON BUSHING FTG. FOR GAUGE WITH PLUG- TYP. ALL MANWAYS
19. 2"ø 150 # R.F.S.O. FLANGE W/ ISOLATION SPOOL FTG. FOR LEAK SENSOR WITH RISER PIPE SHIPPED LOOSE
20. 1/4" BULKHEAD
21. EFFLUENT WATER CHAMBER
22. (2) FLIGHT CP 3127 SUBMERSIBLE EFFLUENT PUMPS, 433 IMPELLAR. 3PH-60HZ-460V, 7.5 HP, FLA=9.6 DESIRED FLOW 550 GPM @ 27' TDH EACH. ACTUAL FLOW 567 GPM @ 27' TDH EACH. (2) 4" PUMP DISCHARGES WITH CHECKVALVES TO THEN BE MANIFOLDED INTO (1) 8" DISCHARGE LINE. SLIDE RAILS AND BRACKETS INCLUDED. 50' OF POWER CABLE WITH PUMP △2
23. PUMP MOUNT
24. 5"ø FNPT W/ 5"øX4"ø NYLON BUSHING FTG. FOR PUMP CONDUIT
25. 3"ø FNPT W/ 3"øX2"ø NYLON BUSHING FTG. FOR EFFLUENT WATER CHAMBER LEVEL SENSOR CONDUIT
26. RECTANGULAR MANWAY W/ CLOSED CELL FOAM GASKETS. BOLT-ON EXTENSION SHIPPED LOOSE
27. SACRAFICIAL ANODES PER STI-P3 SPECS
28. P.P.2 MONITOR LUG
29. 16" WIDE STAINLESS STEEL INTERNAL LADDER
30. CC-NEMA 4XFRP F-DPLX-LDFW SPCL CONTROL PANEL
31. HTSF SUSPENDED ADJUSTABLE 2 FLOAT INTERFACE SENSOR WITH NEMA 4 CAP AND 40' CABLE
32. HTLP 1.5 LIQUID ONLY LEAK DETECTION SENSOR W/ 40' CABLE
33. HTSC-2B NEMA 4 CAP FOR LEAK SENSOR
34. (1) SET OF (4) ENM10 PUMP CONTROL FLOATS W/ 40' CABLE EACH
35. 150# R.F.S.O. FLANGE W/ ISOLATION SPOOL FOR WATER PUMPOUT



INTERFACE SENSOR FLOAT POSITION
HTSF 3B-161D-142D/61
N.C. SENSOR
△1 △2



SUGGESTED PUMP CONTROL FLOAT POSITIONS

GENERAL SPECIFICATIONS

NO. REQ'D: (1)
CAPACITY: 15,000 GALLONS
TYPE: UL-HTC-J, STIP3, DOUBLE WALL
MATERIAL: MILD CARBON STEEL
FLOW RATE: 550 GPM MAX.

GAUGE:	INNER	OUTER
SHELL-	1/4"	10 GA.
HEADS-	1/4"	1/4"

SURFACE PREP:
- SSPC NO.6 BLAST ALL EXTERIOR SURFACES
- SSPC NO.10 BLAST ALL INTERIOR SURFACES

COATING: △1	MATERIAL	THICKNESS
EXTERIOR-	CHEMTHANE 2240	15 MILS
INTERIOR-	CHEMTHANE 4200 PW	12-15 MILS

CONSTRUCTION : LAP FIT AND WELD ALL INTERIOR AND EXTERIOR SEAMS

OPERATING PRESSURE: ATMOSPHERIC

HI OIL LEVEL @ 20% TANK CAPACITY : 2,620 GALLONS
HI-HI OIL LEVEL @ 43% TANK CAPACITY : 5,632 GALLONS
MAX. EMERGENCY SPILL @ 80% TANK CAPACITY : 10,478 GALLONS

APPROVED LABELS : U.L. 2215

NOTES

1. ALL VENT PIPING BY INSTALLER
2. CERTIFIED WELDERS CONSTRUCTED PER AWSD1.1 REQUIREMENTS
3. CERTIFIED FABRICATION SHOP TRAVELER-TESTS & COATINGS FORMS
4. CERTIFIED A-36 CARBON QUALITY STEEL CERTS REQUIRED

△4	-CORRECT TAG NUMBERS	11-15-13	REM
△3	-REV INTERFACE SENSOR TO N.C.- "D" FLOATS	07-05-2013	NED
△2	-REV TO FLYGT 3127 EFFLUENT PUMP	2-26-13	REM
△1	-REV INTERFACE SNSR TO STAINLESS STEEL -ADDED TAG NO'S TO SNSRS -REV TANK TAG # -REV COATINGS	2-12-13	REM

REVISIONS

HIGHLAND TANK & MFG CO. **Highland Tank**

U.S. Patent #4,722,800 #6,606,224 Canadian Patent # 1,296,263 # 2,389,065

NOTES / DETAILS

CUSTOMER: BLACK & VEATCH INTERNATIONAL

PROJECT: CANE RUN-7 POWER PLANT
BLUEGRASS POWER
LOUISVILLE, KY.

QUOTE NO: 310964

CHK'D BY:

△1

TANK TAG #: 0WWD-ODS--001

REFERENCE DRAWING NO. 82853 FOR OWS

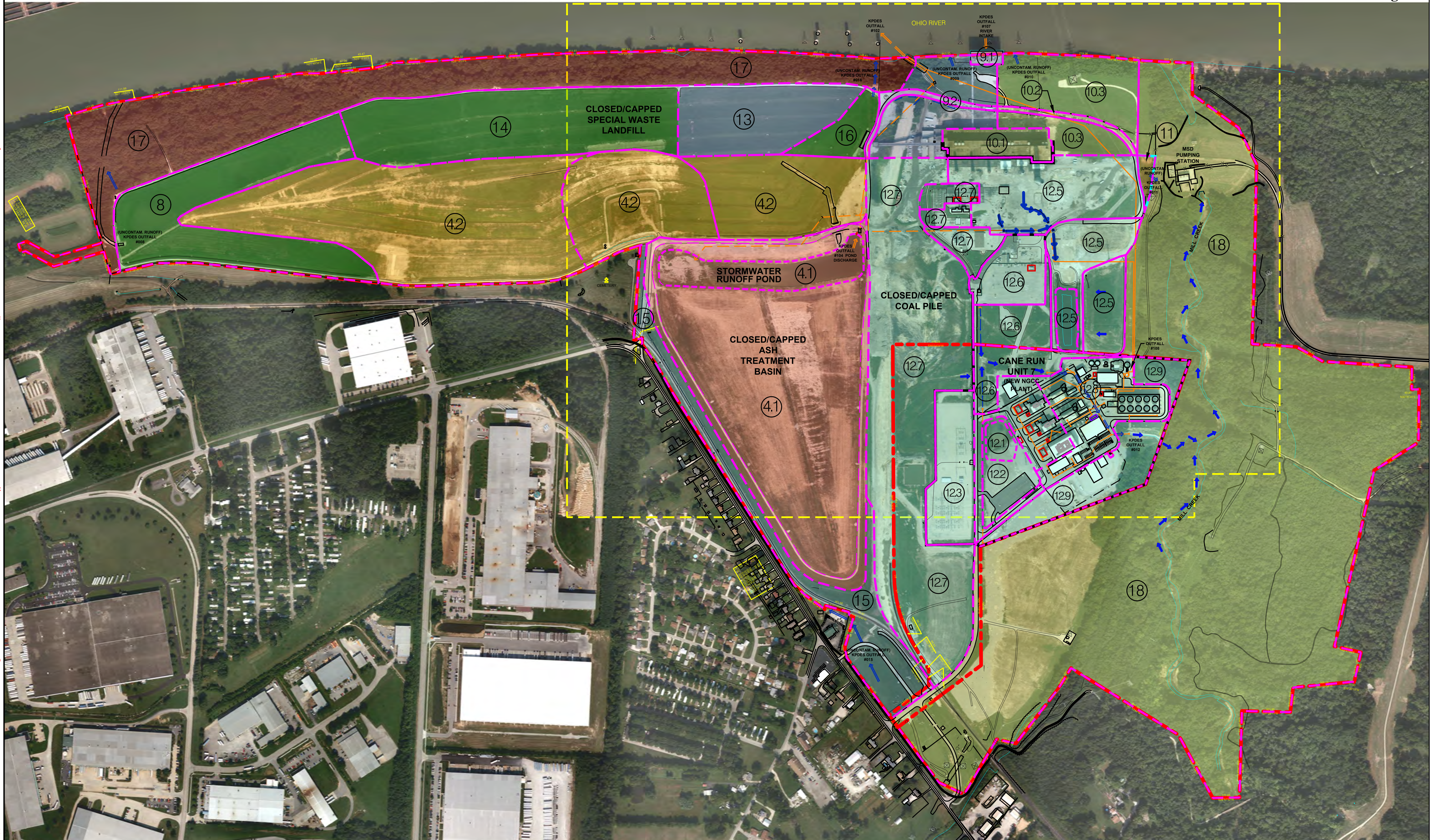
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE + OR - 1"

SCALE:	DATE:	DWG. BY:	DWG. NO.:
NTS	1-31-13	REM	82854

Cane Run Generating Facility
Facility Drainage Areas and Discharge/Outfalls Details

Sub-Drainage Area ID	Drainage Area Description	Sub Area Drainage Controls (Primary)	Sub Area Drainage Controls (Secondary)	Downstream Drainage Area ID	Sub-Drainage Area Comments
CR-002	Outfall 102 - Stormwater Runoff Pond (Outfall 104) and Cooling Tower (Outfall 108) Discharges			SW-OR	Riverbank submerged discharge
CR-004.1	Outfall 104 - Unit CR-7 Process and Stormwater Runoff Pond Discharge Flows (to Outfall 102) Stormwater Runoff Pond - Basin Surface and Adjacent Closed Capped Ash Treament Basin Runoff Areas To Basin	Basin (Retention-normally wet)		CR-002	
CR-004.2	Closed/Capped Landfill Southeast and Northeast Runoff Areas to Basin	Ditch (normally dry)		CR-002	
CR-007	Outfall 107 RIVER INTAKE (No Areas Designation)	NA		NA	
CR-008	Outfall 008 - Uncontaminated Runoff from Landfill A-3 Backside/South Slopes to Ohio River	Ditch (normally dry)	Vegetated Buffer	SW-OR	
CR-009.1	Outfall 009 - River Intake Screenhouse Roof			SW-OR	
CR-009.2	Uphill Fields, Haul Road and Riverbank/Fields Adjacent River Intake Screenhouse Areas	Vegetated Buffer		SW-OR	
CR-010.1	Outfall 010 - Uncontaminated Stormwater Runoff from Demolished Coal Plant, Road, & Riverbanks (to Ohio River) Demolished Coal Plant (footprint of Steam-Turbine Building Basement)			CR-010.3	
CR-010.2	Haul Road Adjacent Demolished PlantBuilding to North Floodwall Point			CR-010.3	
CR-010.3	Fields and Riverbanks Below Demolished Coal Plant Building (Above& Below Haul Road)	Vegetated Buffer		SW-OR	
CR-011	Outfall 011 - Uncontaminated Runoff to North Yard Area to Ohio River	Vegetated Buffer		SW-OR	
CR-012.1	Uncontaminated Stormwater Runoff Cane Run NGCC CR-7 Retention Pond	Basin (Retention-normally wet)		CR-012.6	CR-7 Retention Basin
CR-012.2	Employee Paved Parking Lot Adjacent CR-7 Retention Pond			CR-012.1	
CR-012.3	CR-7 Substation	Berm - Other		CR-012.7	
CR-012.4	CR-7 Plant Combustion & Steam Turbines Buildings Area to Retention Pond			CR-012.1	
CR-012.5	Areas to Basin Pond - Basin Pond Surface, Field Drainage to Basin Pond, Cleaned/Regraded Areas East/adjacent Previous Clearwell/Lime Slurry Prep Areas to Basin Pond, and Cleaned/Regraded Previous Unit 6 to Unit 1 Plant Areas to Basin Pond	Basin (Retention-normally wet)	Vegetated Buffer		
CR-012.6	Fields, Roads & Paved Parking Lot (Spare GSU) Areas East/South Adjacent to Area 12.5 (drain to Stormdrains to 012)	Ditch (normally dry)		CR-012.9	
CR-012.7	Closed Coal Pile, GT-11, Cane Run Distribution Substation (Remainder of Old Plant Substation) Areas (to Outfall 012)	Basin (Retention-normally wet)		CR-012.6	Coal Yard Runoff Basin and ditch to 12.6
CR-012.8	CR-7 HRSG-Buildings, Water Treatment, Cooling Tower, Office & Warehouse/Maintenance Shops (drain to Stormdrains to 012)	Stormwater collection system w/catchment basins		CR-012.9	
CR-012.9	Outfall 012 Areas North/East of Outfall 012 to Mill Creek (to MSD Pumping Station to Ohio River) 13	Ditch (normally dry)		CR-018	
CR-015	OUTFALL 015-East/Cane Run Road Frontage Property Uncontaminated Runoff to Roadside Ditch (to Ohio River)	Ditch (normally dry)		SW-CRRCD	
CR-016	OUTFALL 016-Closed/Capped Landfill NW Area Uncontaminated Runoff to Riverbank (Near Previous LimeBarge Unload Facility)	Ditch (normally dry)	Vegetated Buffer	CR-017	
CR-017	Uncontaminated Runoff from Riverbanks Adjacent/West of Landfill to Ohio River	Vegetated Buffer		SW-OR	
CR-018	Uncontaminated Runoff from North Fields/Vegetated Areas to Mill Creek Cutoff/Ohio River	Vegetated Buffer		SW-MCC	
CR-106	Outfall 106 Boiler Chemical Cleaning Wastewater			CR-004.1	
CR-108	Outfall 108 - NGCC-CR-7 Cooling Tower Blowdown Discharge Flows (to Outfall 102)			CR-002	
CR-OWS	Cane Run Oil/Water Separator	Oil Water Separator		CR-004.1	Oil-water separator is pumped to a wastewater tank that is drained to stormwater basin that discharges through Outfall 104 to Ohio River. Emergency oil capacity = 10,478 gal (Highland Tank Dwg 82854)

Revisions



LEGEND

PLANT LAYOUT, BUILDINGS AND EQUIPMENT SHOWN CONSISTENT WITH SPCC/BMP/GPP SERIES DRAWINGS. CONSTRUCTION ACTIVITIES OF 2012 ADDED SEPARATELY.

- CEMETERY
- EMERGENCY RESPONSE EQUIPMENT
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- VALVE
- WELL (PRODUCTION, MONITORING)
- ABOVEGROUND FUEL OIL SUPPLY
- DRAINAGE FLOW
- OVERLAND FLOW
- PROCESS WATER PIPELINE / DITCH
- SPILL-FLOW PATH BY SYMBOL COLOR
- STORM SEWER
- SECONDARY CONTAINMENT
- OIL-WATER SEPARATOR
- CATCH BASIN
- RR TRACKS
- PLANT PROPERTY BOUNDARY

DOTTED OR DASHED = UNDERGROUND DOUBLE LINES = GENERAL FLOW DIRECTION
TANKS/EQUIPMENT SPILL DIRECTIONS INTO DRAINS WHERE SYMBOL OVERLAPS LINES (e.g.,SEWERS etc.)

DIGITAL ORTHO IMAGERY PROVIDED BY:

STORMWATER RUNOFF AREA DESCRIPTION	COEFFICIENT OF RUNOFF
- VEGETATED - WOODS & GRASS AREAS	0.25
- UNCOMPACTED GRAVEL/LIMESTONE & GYPSUM	0.25
- COMPACTED GRAVEL, COALPILE, TRAFFIC AREAS	0.50
- IMPERVIOUS PAVEMENT, ROOFS, COOLING TOWER	0.85
- IMPOUNDMENT BASIN SURFACES	1.0

0 150' 300' 600'
SCALE: 1"=300'

Location and Unit: Cane Run Common	LG&E Louisville Gas & Electric Company / KU Kentucky Utilities Company — PPL companies		Drawn: Michael Dasaro
Scale: 1"=300'	Contract No. n/a		Checked: 9-30-19
Engineering discipline: ENVIRONMENTAL	Drawing type: Misc.		Approved: Roger Medina
Title: KPDES STORMWATER MANAGEMENT – CANE RUN STATION STORMWATER RUNOFF AREAS IDENTIFICATION SITE OVERVIEW			Released for: CONSTRUCTION
			Alternate Drawing No:
Originator: ENVIRONMENTAL AFFAIRS	Job or Project No:	Drawing No:	Rev.

DMS Version2.0

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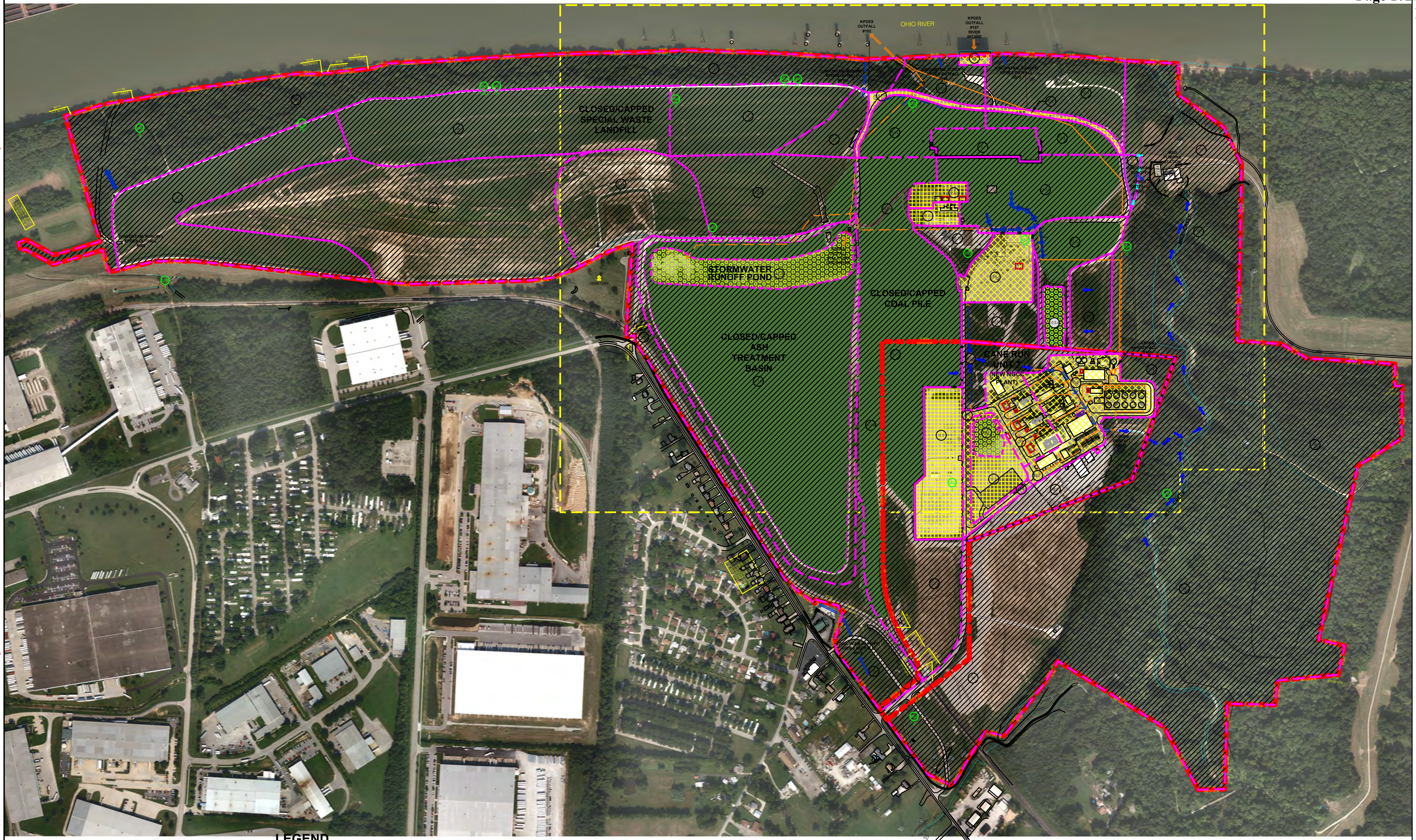
24x36Master 1"=300' <-60

Revisions



LEGEND

PLANT LAYOUT, BUILDINGS AND EQUIPMENT SHOWN CONSISTENT WITH SPCC/BMP/GPP SERIES DRAWINGS. CONSTRUCTION ACTIVITIES OF 2012 ADDED SEPARATELY.

- CEMETERY
- EMERGENCY RESPONSE EQUIPMENT
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- VALVE
- WELL (PRODUCTION, MONITORING)
- ABOVEGROUND FUEL OIL SUPPLY
- DRAINAGE FLOW
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DIGITAL ORTHO IMAGERY PROVIDED BY:

STORMWATER RUNOFF AREA DESCRIPTION	COEFFICIENT OF RUNOFF
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- UNCOMPACTED GRAVEL/LIMESTONE & GYPSUM	0.25
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- IMPERVIOUS PAVEMENT, ROOFS, COOLING TOWER	0.85
- IMPOUNDMENT BASIN SURFACES	1.0

SCALE: 1"=300'

Location and Unit:	Cane Run Common
Scale:	1"=300'
Contract No.	n/a
Engineering discipline:	ENVIRONMENTAL
Drawing type:	Misc.
	LG&E LOUISVILLE GAS & ELECTRIC COMPANY / KU Kentucky Utilities Company / PPL companies
Title	KPDES STORMWATER MANAGEMENT – CANE RUN STATION STORMWATER RUNOFF AREAS IDENTIFICATION TOTAL SITE AREAS
Drawn:	Michael Busaro
Checked:	9-30-19
Approved:	Roger Medina
Released for:	CONSTRUCTION
Alternate Drawing No:	
Originator:	ENVIRONMENTAL AFFAIRS
Job or Project No:	
Drawing No:	
Rev.	

DMS Version2.0

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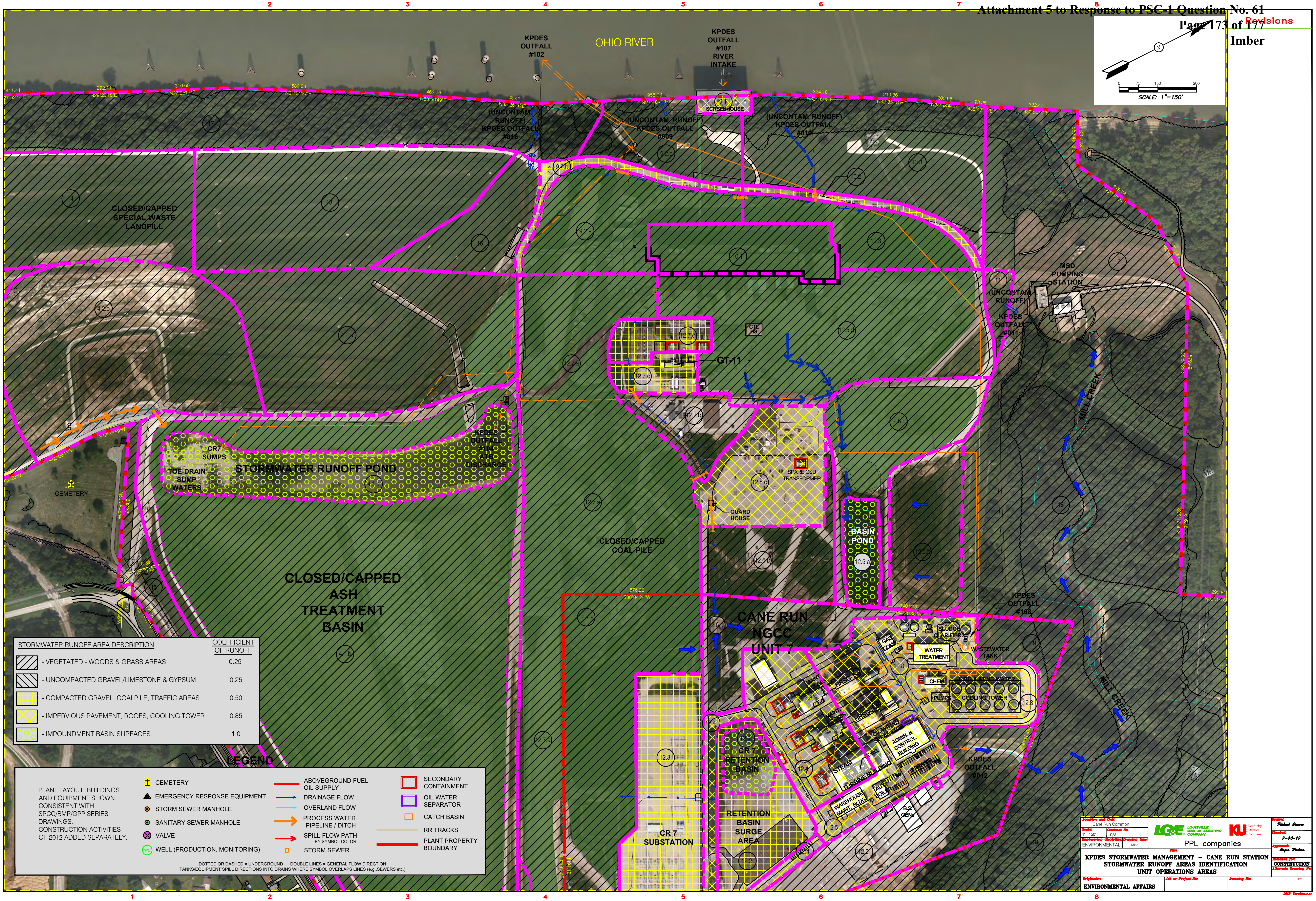
24x36Master 1"=300' <-60


OHIO RIVER
KPDES OUTFALL #102
KPDES OUTFALL #107 RIVER INTAKE
SCREENHOUSE
(UNCONTAM. RUNOFF) KPDES OUTFALL #016
(UNCONTAM. RUNOFF) KPDES OUTFALL #009
(UNCONTAM. RUNOFF) KPDES OUTFALL #010
CLOSED/CAPPED SPECIAL WASTE LANDFILL
MSD PUMPING STATION
(UNCONTAM. RUNOFF) KPDES OUTFALL #011
GT-11
MILL CREEK
CR7 SUMPS
TOE-DRAIN SUMP WATERS
STORMWATER RUNOFF POND
CEMETERY
SPARE GSU TRANSFORMER
GUARD HOUSE
BASIN POND
CLOSED/CAPPED COAL PILE
CLOSED/CAPPED ASH TREATMENT BASIN
CANE RUN NGCC UNIT 7
KPDES OUTFALL #183
WATER TREATMENT
WASTEWATER TANK
COOLING TOWER
CHEM
ADMIN. & CONTROL BUILDING
CR 7 RETENTION BASIN
KPDES OUTFALL #012
CR 7 SUBSTATION
RETENTION BASIN SURGE AREA
WAREHOUSE MAINT. BLDG.
STORMWATER RUNOFF AREA DESCRIPTION
COEFFICIENT OF RUNOFF
- VEGETATED - WOODS & GRASS AREAS 0.25
- UNCOMPACTED GRAVEL/LIMESTONE & GYPSUM 0.25
- COMPACTED GRAVEL, COALPILE, TRAFFIC AREAS 0.50
- IMPERVIOUS PAVEMENT, ROOFS, COOLING TOWER 0.85
- IMPOUNDMENT BASIN SURFACES 1.0
LEGEND
PLANT LAYOUT, BUILDINGS AND EQUIPMENT SHOWN CONSISTENT WITH SPCC/BMP/GPP SERIES DRAWINGS. CONSTRUCTION ACTIVITIES OF 2012 ADDED SEPARATELY.
CEMETERY
EMERGENCY RESPONSE EQUIPMENT
STORM SEWER MANHOLE
SANITARY SEWER MANHOLE
VALVE
WELL (PRODUCTION, MONITORING)
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DRAINAGE FLOW
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SPILL-FLOW PATH BY SYMBOL COLOR
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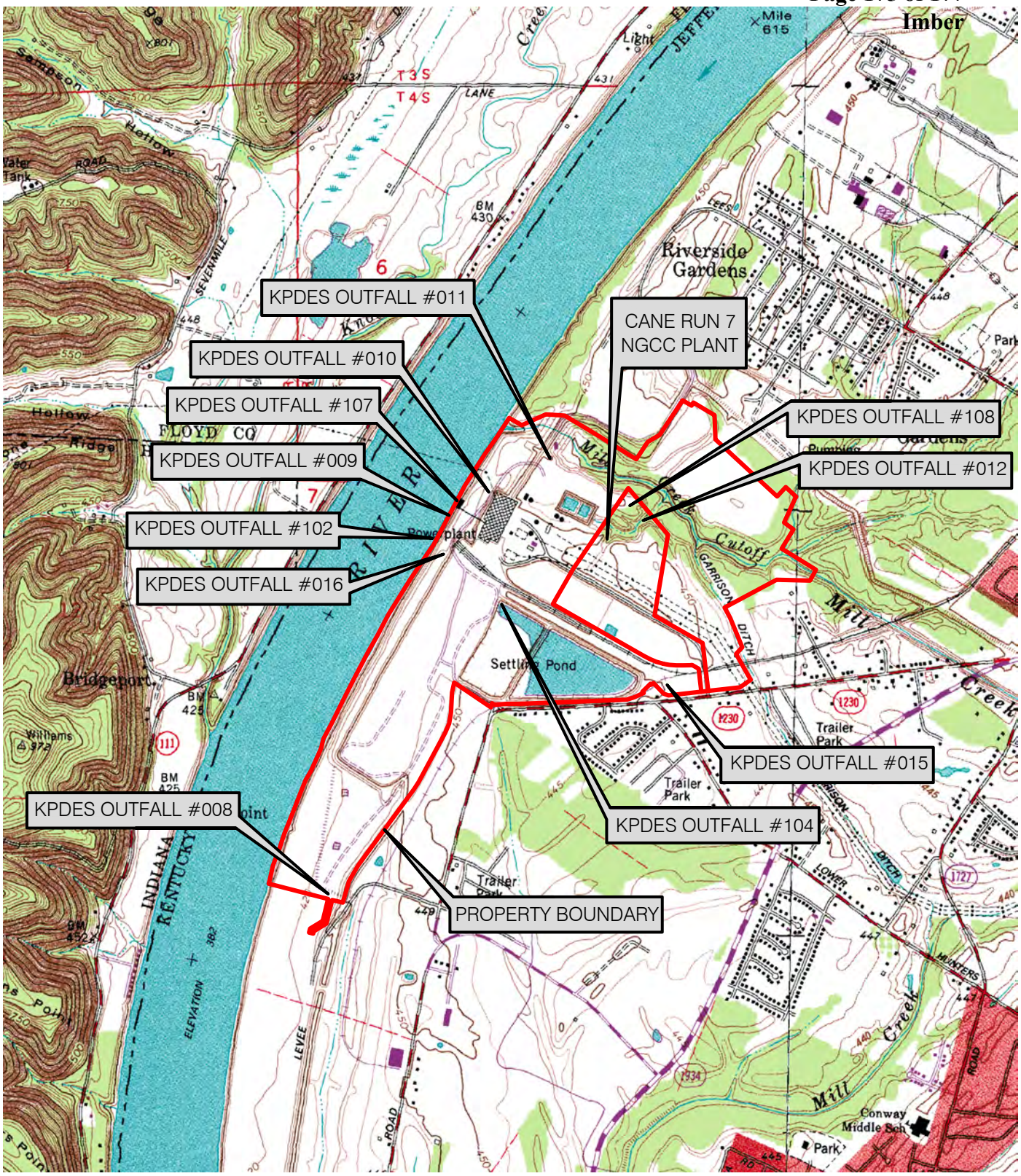
PLANT PROPERTY BOUNDARY
DOTTED OR DASHED = UNDERGROUND DOUBLE LINES = GENERAL FLOW DIRECTION
TANKS/EQUIPMENT SPILL DIRECTIONS INTO DRAINS WHERE SYMBOL OVERLAPS LINES (e.g.,SEWERS etc.)
Revisions
SCALE: 1"=150'
PPL companies
KPDES STORMWATER MANAGEMENT – CANE RUN STATION
STORMWATER RUNOFF AREAS IDENTIFICATION
UNIT OPERATIONS AREAS
ENVIRONMENTAL AFFAIRS
CONSTRUCTION
W:\Document Management\SPCC-ENVIRONMENTAL\Cane Run\3 Current KPDES DWGs\EPA-CANE RUN STORMWATER_2018 image_1.dwg, 10/1/2019 7:24:12 AM, AutoCAD PDF (General Documentation).pc3
24x36Units 1"=150' <-60

Figures



CANE RUN GENERATING FACILITY

LOUISVILLE GAS & ELECTRIC COMPANY

JEFFERSON COUNTY, LOUISVILLE, KENTUCKY

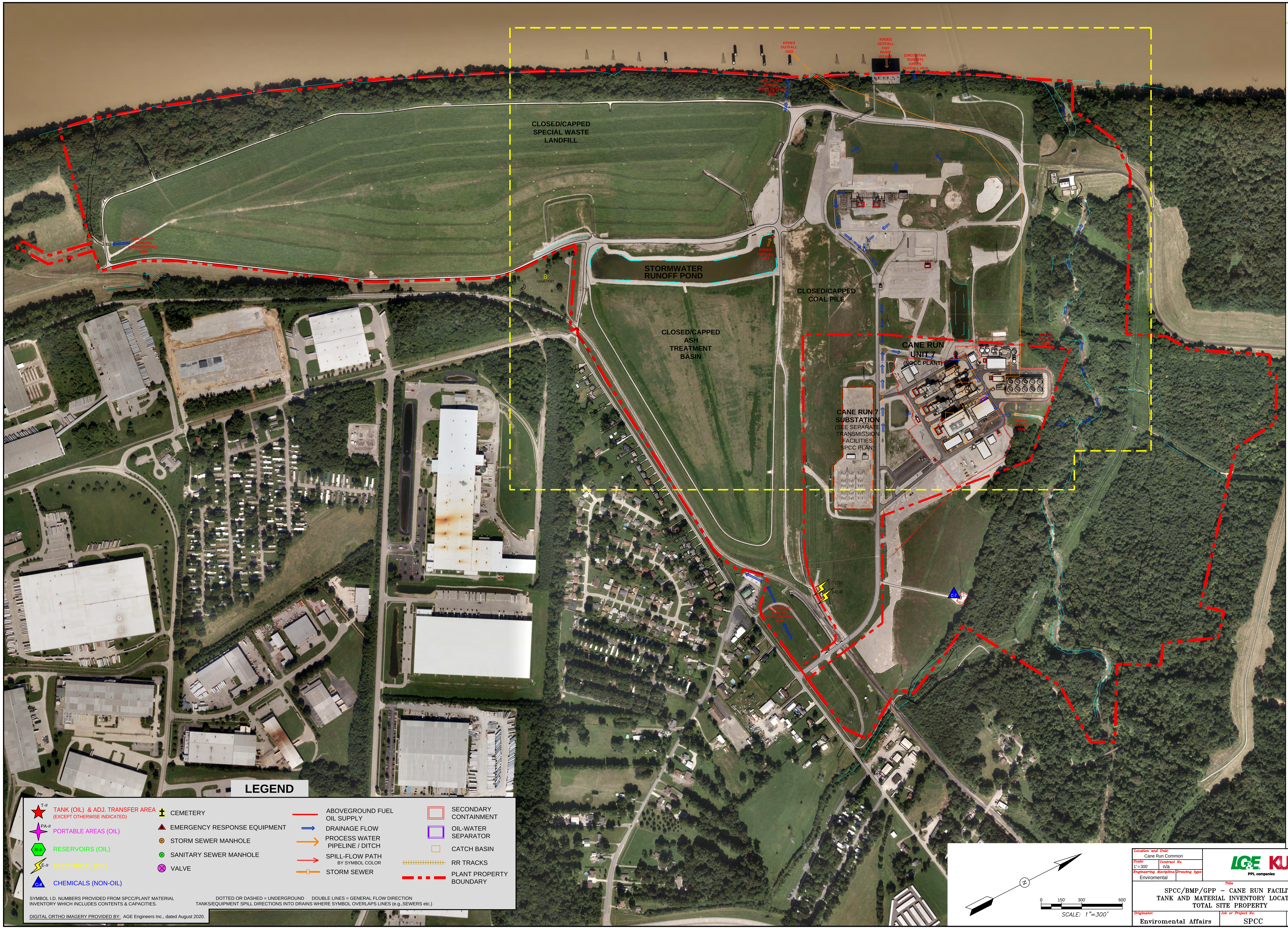
LANESVILLE, IN & LOUISVILLE WEST, KY USGS QUADRANGLE MAPS

Scale: 1"=2000'

W:\Document Management\SPCC-ENVIRONMENTAL\Cane Run\3 Current KPDES DWG\sIEPA-CANE RUN Figure 1_2018.dwg, 10/3/2019 7:21:10 AM, AutoCAD PDF (General Documentation).pc3

Misc

Revisions


CLOSED/CAPPED SPECIAL WASTE LANDFILL
STORMWATER RUNOFF POND
CLOSED/CAPPED ASH TREATMENT BASIN
CLOSED/CAPPED COAL PILE
CANE RUN UNIT 7 (NGCC PLANT)
CANE RUN 7 SUBSTATION (SEE SEPARATE TRANSMISSION FACILITIES SPCC PLAN)
LEGEND
TANK (OIL) & ADJ. TRANSFER AREA (EXCEPT OTHERWISE INDICATED)
PORTABLE AREAS (OIL)
RESERVOIRS (OIL)
ELECTRICAL (OIL)
CHEMICALS (NON-OIL)
CEMETERY
EMERGENCY RESPONSE EQUIPMENT
STORM SEWER MANHOLE
SANITARY SEWER MANHOLE
VALVE
ABOVEGROUND FUEL OIL SUPPLY
DRAINAGE FLOW
PROCESS WATER PIPELINE / DITCH
SPILL-FLOW PATH BY SYMBOL COLOR
STORM SEWER
SECONDARY CONTAINMENT
OIL-WATER SEPARATOR
CATCH BASIN
RR TRACKS
PLANT PROPERTY BOUNDARY
SYMBOL I.D. NUMBERS PROVIDED FROM SPCC/PLANT MATERIAL INVENTORY WHICH INCLUDES CONTENTS & CAPACITIES.
DOTTED OR DASHED = UNDERGROUND DOUBLE LINES = GENERAL FLOW DIRECTION
TANKS/EQUIPMENT SPILL DIRECTIONS INTO DRAINS WHERE SYMBOL OVERLAPS LINES (e.g.,SEWERS etc.)
DIGITAL ORTHO IMAGERY PROVIDED BY: AGE Engineers Inc., dated August 2020.
0 150' 300' 600'
SCALE: 1"=300'

Location and Unit: Cane Run Common		LG&E KU PPL companies	Drawn: Michael Dasaro
Scale: 1"=300'	Contract No. n/a		Checked: 12/05/24
Engineering discipline: Enviromental	Drawing type:		Approved: Patty Mason
Title: SPCC/BMP/GPP – CANE RUN FACILITY TANK AND MATERIAL INVENTORY LOCATIONS TOTAL SITE PROPERTY			Released for: CONSTRUCTION
			Alternate Drawing No:
Originator: Enviromental Affairs	Job or Project No: SPCC	Drawing No:	Rev.

DMS Version 2.0

Imber

Revisions

A Project:

Updated aerial flow on August 2022, revised location of Diesel & Kerocene tanks, removed drainage flow for T-20

Dwn: M. Dasaro 02/23/24
Chkd: M. Hussung 02/27/24
Appd: M. Hussung 02/27/24

B Project:

Added Tank T-21 to Plan

Dwn: M. Dasaro 12/05/24
Chkd: P. Mason 12/06/24
Appd: P. Mason 12/06/24

N

0 75' 150' 300'

SCALE: 1"=150'

KPDES OUTFALL #102

KPDES OUTFALL #107 RIVER INTAKE

(UNCONTAM. RUNOFF) KPDES OUTFALL #010

SCREENHOUSE

(UNCONTAM. RUNOFF) KPDES OUTFALL #016

CLOSED/CAPPED SPECIAL WASTE LANDFILL

KPDES OUTFALL #104

STORMWATER RUNOFF POND

CEMETERY

CLOSED/CAPPED ASH TREATMENT BASIN

CLOSED/CAPPED COAL PILE

STORM-WATER BASIN

CANE RUN UNIT 7 (NGCC PLANT)

CANE RUN 7 SUBSTATION (SEE SEPARATE TRANSMISSION FACILITIES SPCC PLAN)

CR 7 RETENTION BASIN

SLUDGE CLARIFIERS

WATER TREATMENT

WASTEWATER TANK

CHEM. FEED

CIRCULATING WATER PUMP

COOLING TOWER

OIL/WATER SEPARATOR

ADMIN. & CONTROL BUILDING

PARKING

STEAM TURBINE BUILDING

WAREHOUSE MAINT. BLDG.

AUX BOILER

MAINT. ACCESS

HRSG-1

HRSG-2

CT-1

KPDES OUTFALL #202

KPDES OUTFALL #203

LEGEND

- T-# TANK (OIL) & ADJ. TRANSFER AREA (EXCEPT OTHERWISE INDICATED)
- PA-# PORTABLE AREAS (OIL)
- R-# RESERVOIRS (OIL)
- E-# ELECTRICAL (OIL)
- C-# CHEMICALS (NON-OIL)
- CEMETERY
- EMERGENCY RESPONSE EQUIPMENT
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- VALVE
- ABOVEGROUND FUEL OIL SUPPLY
- DRAINAGE FLOW
- PROCESS WATER PIPELINE / DITCH
- SPILL-FLOW PATH BY SYMBOL COLOR
- STORM SEWER
- SECONDARY CONTAINMENT
- OIL-WATER SEPARATOR
- CATCH BASIN
- RR TRACKS
- PLANT PROPERTY BOUNDARY

SYMBOL I.D. NUMBERS PROVIDED FROM SPCC/PLANT MATERIAL INVENTORY WHICH INCLUDES CONTENTS & CAPACITIES.

DOTTED OR DASHED = UNDERGROUND DOUBLE LINES = GENERAL FLOW DIRECTION
TANKS/EQUIPMENT SPILL DIRECTIONS INTO DRAINS WHERE SYMBOL OVERLAPS LINES (e.g.,SEWERS etc.)

DIGITAL ORTHO IMAGERY PROVIDED BY: AGE Engineers Inc., dated August 2022.

Location and Unit: Cane Run Common
Scale: 1" = 150
Contract No.: n/a
Engineering discipline: Enviromental
Drawing type:

LG&E KU PPL companies

Title: SPCC/BMP/GPP – CANE RUN FACILITY TANK AND MATERIAL INVENTORY LOCATIONS MAIN PLANT PROPERTY

Originator: Enviromental Affairs
Job or Project No.: SPCC
Drawing No.:
Rev.:

Drawn: Michael Dasaro
Checked: 12/05/24
Approved: Patty Mason
Released for: CONSTRUCTION
Alternate Drawing No.:

SW2 Version 2.0