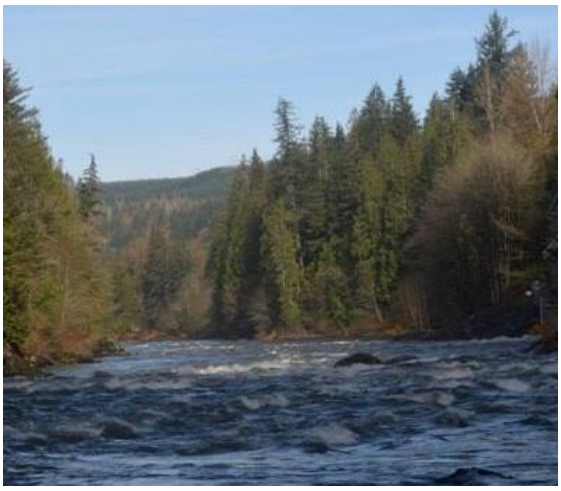
Oil Containment Systems



1. Scope

This standard covers the oil containment system requirements for transformers that are mounted at-grade or on a pad in the Seattle City Light (SCL) distribution system.

2. Application

This standard provides customers with the requirements for oil containment systems.

An oil containment system shall be installed to support every oil-filled padmounted transformer.

3. Industry Standards

Oil containment systems shall meet the applicable requirements of the following industry standard:

Code of Federal Regulations (CFR), Title 40, Chapter 1, Subchapter D, Part 112, Subpart A, 112.7 General Requirements for Spill Prevention, Control, and Countermeasure Plans

4. General Requirements

The customer shall design, install, and maintain the oil containment system to contain any and all oil spilled by the transformer. The customer shall design the system to meet the requirements of 40 CFR 112.7 with the following clarification: oil containment is required for all oil-filled transformers of any capacity. All transformer pad penetrations shall be sealed.

5. Capacity Requirements

The system shall contain all spilled oil and all oil-contaminated rainwater until cleanup. Transformer oil capacity will be communicated by SCL during the design process. Since this containment system is subject to rain and snow accumulation, provisions shall be made to handle water runoff.

6. System Review

The oil containment system design shall be designed and stamped by a qualified Professional Engineer licensed in the State of Washington and submitted to the SCL Electrical Service Representative (ESR) or Electrical Service Engineer (ESE) for review prior to construction.

The SCL ESR or ESE shall submit the design to the SCL Environmental Review Project Lead for review. The SCL Environmental Review Project Lead shall consult with the Environmental and Civil Engineering Leads for Spill Prevention Control and Countermeasures (SPCC).

7. System Inspection

The customer shall notify the SCL ESR or ESE of the oil containment system installation schedule. SCL will inspect the oil containment system prior to transformer installation and liner cover, if applicable.

8. System Design Options

The oil containment system can potentially be constructed of any of the following products, another product designed for this purpose, or an alternate spill prevention system listed in 40 CFR 112.7(c)(1):

- Oil water separator
- Impervious barriers with Solidification Products International, Inc. (SPI) Petro-Plugs or CI Agent HFF Oil Stop Valves on the outlets. See Figure 8a.
- Containment blankets made with C.I. Agent Polyvinyl or SorbWeb Plus material. See Figure 8b.

If containment design is an at-grade basin, provide sufficient slope to prevent standing water. Maximum slope shall not exceed 2%.

Figure 8a. SPI Petro-Plug and CI Agent HFF Oil Stop Valve

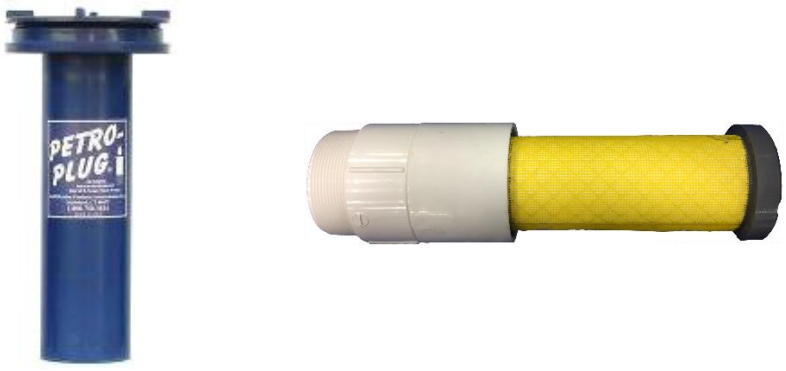
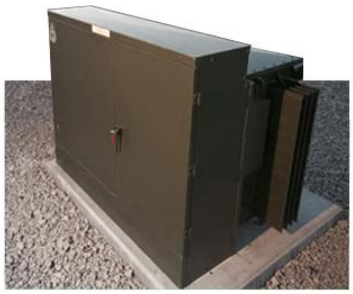


Figure 8b. C.I. Agent Polyvinyl or SorbWeb Plus Blankets



9. System Maintenance

The customer shall conduct periodic maintenance on the system to ensure adequate secondary containment.

10. Sources

Garcia, Larry; SCL Environmental analyst and subject matter expert for 0735.50 (larry.garcia@seattle.gov)

Hamlin, Pam; SCL Engineer and subject matter expert for 0735.50 (pam.hamlin@seattle.gov)

Hanson, Brett; SCL Engineer and originator of 0735.50 (brett.hanson@seattle.gov)