United States Environmental Protection Agency
Region X
POLLUTION REPORT

Date: Thursday, November 13, 2008
From: Andrew Smith

Subject: Initial and Final POLREP
Seattle City Light Mercury Response
3912 156th St. SE, Bothell, WA
Latitude: 47.8547000
Longitude: -122.1797000

POLREP No.:	1	**Site #:**	
Reporting Period:	11/04/2008	**D.O. #:**	
Start Date:	11/4/2008	**Response Authority:**	CERCLA
Mob Date:	11/5/2008	**Response Type:**	Emergency
Demob Date:	11/5/2008	**NPL Status:**	
Completion Date:		**Incident Category:**	Removal Assessment
CERCLIS ID #:		**Contract #**	
RCRIS ID #:			

Current Activities

On November 4, EPA was contacted by Washington Department of Ecology, to join them in investigating a reported release of 20 pounds of mercury at Seattle City Light (SCL) Bothell Electrical Substation from six and a half weeks previous. The release had not been reported by SCL to the National Response Center. Under the Emergency Preparedness and Community Right to Know Act, the reportable quantity for mercury is one pound.

The incident came to Washington Department of Ecology's attention when they were contacted by KIRO-7 TV investigative reporter, Chris Halsne. KIRO had been tipped off by an anonymous SCL employee.

The next day, on November 5, OSC Smith, two START contractors, and Ecology were joined by Lawrence Garcia, an environmental affairs staff with SCL.

The release occurred on Friday, September 19, when the substation was testing a new connection to city water for the fire suppression system. The substation was preparing to switch over from an on-site water tower that was the source of water for a fire suppression system. The additional pressure ruptured an antiquated mercury manometer used for measuring water level in the water tower. The mercury and water flooded the control room and poured down conduit openings in the floor to the basement.

Initial responders were seven workers on site. The workers used mops, buckets, and squeegees to remove the water. They poured the collected water from buckets into a sink on the main floor where the control room is located. Water in the basement was directed into a drain at the bottom landing of an outside stairwell. Note that neither of these drains is connected to a municipal sewage system.

That same day, SCL brought on, NRC Environmental Services to begin cleanup.

October 1st, SCL brought RGA Environmental to conduct ambient air monitoring and wipe samples for mercury.

October 23rd, an initial NRC report (# 592523) came into EPA. The caller was anonymous, left no phone number to call back, nor an address or name of where the release occurred.

November 4th, Ecology made a call to NRC on November 4 (NRC # 889139).

The amount of mercury estimated to have been released was 20 pounds. However, the basis for that estimate has not been made clear. Mercury is very dense such that 2.2 tablespoons of mercury weighs one pound. So 2.8 cups of mercury was released assuming the manometer did indeed contained 20 pounds of mercury.

As authorized under section 104(b) of the Comprehensive Emergency Response, Compensation, and

Liability Act (CERCLA; aka, Superfund), EPA was investigating whether there was an imminent and substantial danger to public health or welfare due to release of mercury into the environment. As 6 ½ weeks had passed since the release and most had been cleaned up, there was little to go on other than explanations provided by SCL and readings from the portable Lumex mercury analyzer.

EPA considered three possible paths for mercury into the environment: 1) The mercury-contaminated water that was mopped up and poured into a sink on the main floor. This sink drains to a septic system on site. 2) The mercury-contaminated water in the basement was directed into a floor drain located in the bottom landing of an outside stairwell. This drain leads to a retention pond that is on site; and 3) mercury which may have been tracked off site by workers involved in the initial response.

The main floor sink had been removed by the time EPA arrived. EPA was told the P-trap under the sink contained some mercury. This is as expected because mercury has a specific gravity of 13.6 which means the density is 13.6 greater than water. For context, lead has a specific gravity of 11.35 such that lead would float in mercury. The advantage here is that any mercury in the water poured into the sink would quickly settle into the bottom of the P-trap.

The floor drain in the outside stairwell landing also has a P-trap. Mercury had been removed and the Lumex detected mercury vapor concentrations in the drain to be below the commercial re-occupancy level of 3 micrograms per cubic meter of mercury vapor in air. The drainage outfall into the retention pond was also screened with the Lumex and no levels of mercury above background were observed.

Ecology under their Hazardous Waste and Toxics Reduction Program has requested SCL to take mitigation action to keep mercury out of the septic system and retention pond.

An additional concern is workers may have practiced poor decontamination and tracked contamination outside, to their cars, and even to their homes. The SCL, Local 77 Union, and the Health Department are aware of possible cross contamination. The state and local authorities can decide how they want to address this concern.

KIRO-7 TV interviewed OSC Smith on November 5 and the investigative report was aired on November 11.

Planned Removal Actions
None.

Next Steps
None.

response.epa.gov/Bothellsubstation