U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Keizer Mercury Spill - Removal Polrep
Initial Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: **POLREP #1**
Initial POLREP
Keizer Mercury Spill

Salem, OR
Latitude: 44.9874315 Longitude: -123.0252341

To:
From: Jeffrey Fowlow, On-Scene Coordinator
Date: 8/15/2016
Reporting Period: 8/12/2016 - 8/14/2016

1. Introduction

1.1 Background

Site Number:		**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:		**Operable Unit:**	
Mobilization Date:	8/12/2016	**Start Date:**	8/12/2016
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
CERCLA

1.1.2 Site Description
The site is located in an apartment complex in a residential area nearby to commercial businesses and busy thoroughfares that carry motor vehicle, bicycle, and pedestrian traffic.

1.1.2.1 Location
The incident occurred at Wyatt Lee apartment community located on Manbrin Drive NE, Keizer, Marion County, State of Oregon 97303.

1.1.2.2 Description of Threat
Liquid elemental mercury has been spilled on private property. The affected spill area was uncontrolled and was accessible by a diverse tenant community as well as by visitors. These populations were at risk of exposure to elemental liquid mercury by dermal contact or accidental ingestion and were at risk of exposure to elemental mercury vapor by inhalation.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results
Elemental mercury was identified on-scene using three different techniques:

- Liquid elemental mercury was identified by visual observation – an approximately 15-foot long by 3-foot wide area of asphalt pavement was contaminated with beads and globules of highly reflective liquid which was consistent with liquid elemental mercury.
- A Jerome 431-X Mercury Vapor Analyzer (gold-foil conductance technology) detected 0.064 mg/m3 (64,000 ng/m3) of mercury vapor directly above the beads.
- An Ohio Lumex RA-915+ Portable Mercury Vapor Analyzer (using differential atomic absorption spectrometry technology) detected 15,000 ng/m3 of mercury vapor approximately 1 foot away from the beads.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA began scene operations on August 12th, 2016 upon arrival. Initial assessment of the mercury contamination continued through the evening and resumed the following morning.

START contractors used specialized mercury detection equipment to identify the areas where mercury contamination was present. START contractors also screened apartments associated with the garages where the mercury had been spilled as well as the apartments across the common thoroughfare from the garage area.

A Hazmat cleanup contractor arrived on scene on Saturday morning, August 13th, 2016 on behalf of the owner/management company for the apartment complex. A specialized mercury vacuum was used by the cleanup contractor to remove the visible mercury liquid and employed proven mercury decontamination techniques in an attempt to clear the affected areas of mercury contamination. The cleanup contractor demobilized at the end of the day on Saturday due to limitations with funding from property management/owner.

2.1.2 Response Actions to Date

Activities during reporting period August 12-14, 2016:

- Mobilized to the scene on August 12th, 2016 and secured the scene with visible warning tape.
- Identified spilled material as elemental liquid mercury.
- Identified mercury vapor in the ambient air at the scene (greater than 10,000 ng/m3 mercury vapor in ambient air).
- Assessed individual apartment units (ambient indoor air, entrance way floor materials, resident's shoes, outdoor shoe mats, outdoor steps) for mercury contamination. A total of 8 apartment units were screened and all were <200 ng/m3. These units were located in the area of the spill and have associated garage units where the spill occurred. Other apartment units screened are immediately across the access road to the apartment complex.
- Assessed three vehicles for mercury contamination on tires, interior carpets and seats, and interior ambient air with all results less than 1,000 ng/m3.
- Assessed asphalt pavement in the vicinity of the spill to determine the spill extent and to assess whether significant amounts of mercury had been tracked away from the spill area (area both less than and greater than 10,000 ng/m3 mercury vapor.
- Assessed concrete pavement and interior air of five detached garages. Ambient concentrations in garages ranged from less than 1,000 ng/m3 mercury vapor to greater than 10,000 ng/m3 mercury vapor.
- Removed visible mercury beads using vacuum (power mercury vacuum and manually with tape) and sorbent (mercury absorbent powder.
- Treated surfaces exhibiting high mercury with: "Hg CS-102" solution, ambient heating, and ventilation.
- Assessed the home and property of the former tenant. With the consent of the former tenant, contaminated items were removed for disposal.
- Collected sediment samples from the storm water catch basin nearest the spill site and the next catch basin downstream. Both samples were screened using the Lumex. The sample nearest the spill site showed concentrations of 47,000ng/m3, whereas the next sample downstream showed concentrations of 120 ng/m3.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

PRPs to be determined.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
Plastic Drum	PPE and Cleanup Materials	1	TBD	TBD	TBD
8 oz glass jar	Liquid elemental mercury	3	TBD	TBD	TBD

2.2 Planning Section

2.2.1 Anticipated Activities

Continue removal in areas of known mercury contamination:

- Two garages.
- Asphalt parking area near garages.
- Contaminated sediment in storm water catch basin.

Remove all mercury and mercury contamination to acceptable concentrations.

2.2.1.1 Planned Response Activities

Treatment of visible mercury and adjacent areas with mercury-absorbing powder.

Removal of all visible mercury beads using a mercury vacuum.

Treatment of all areas (with Hg-CS102 spray and manual wipe-down) that had mercury beads and/or exhibited mercury vapor of 6,000 ng/m3 or greater.

Application of heat and ventilation treatment techniques to all area that continue to exhibit mercury vapor of 6,000 ng/m3 or greater.

Assess storm-drain pathways for mercury contamination.

2.2.1.2 Next Steps

Complete removal of free elemental mercury and mercury-contaminated debris from site. Dispose of all wastes at an appropriate facility.

2.2.2 Issues

Identification of any additional apartments or other areas that might need assessment for mercury contamination in relation to the spill that occurred.

The current hazmat removal contractor is in negotiations with the PRPs. If contractual terms and conditions are not agreed, EPA may have to assume responsibility to conduct and/or complete the cleanup.

2.3 Logistics Section

Oregon State Hazmat Team 13 assets were deployed to the scene and were later demobilized from on August 12, 2016 as authorized by the on-scene coordinators.

EPA Region 10 Portland and Seattle assets were deployed to the scene on August 12, 2016 and will remain on-scene until demobilized by the EPA OSC.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

Initially Oregon State Hazmat Team 13 on August 12th, 2016, then transitioned to EPA on August 13th, 2016.

2.5.2 Liaison Officer

2.5.3 Information Officer

Initially Oregon State Hazmat Team 13 on August 12th, 2016, then transitioned to EPA on August 13th, 2016.

3. Participating Entities

3.1 Unified Command

Unified Command (UC) operated on the evening of August 12th, 2016 from approximately 19:15 to 23:00 hours (all times Pacific time zone). Unified Command consisted of three entities: the Hazmat Team 13 Incident Commander (IC), the EPA Federal OSC, and a PRP (property management company) representative.

UC was reduced to two entities at approximately 23:00 hours on August 12th, 2016 when Hazmat Team 13 (including the IC) departed the scene.

3.2 Cooperating Agencies

The Cities of Salem and Keizer (code enforcement and environmental staff) provided planning and technical support.

4. Personnel On Site

Oregon State Hazmat Team 13 – approximately 8-12 responders

City of Keizer Public Works

EPA - 2 OSCs

START - 3 personnel

Apartment Representative - 1

NRCES - 2 supervisors and 4 technicians

5. Definition of Terms

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (and as amended), commonly referred to as “Superfund”
EPA – U.S. Environmental Protection Agency (Region 10)
IC – Incident Commander
OSC – On-Scene Coordinator
PRP – Potentially Responsible Party (under CERCLA law)
ng/m3 – nanograms per cubic meter (at this site, nanograms [mass] of mercury vapor per cubic meter [volume] of air)
NRCES – National Response Corporation Environmental Services (do not confuse with the United States Coast Guard National Response Center)
START – Superfund Technical Assessment Response Team (EPA science and technology support contractor)
UC – Unified Command
ug/m3 - micrograms per cubic meter (at this site, micrograms [mass] of mercury vapor per cubic meter [volume] of air)

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.