pepco
A PHI Company

701 Ninth Street, NW
Washington, DC 20068
Mail Stop EP6220
202-331-6640

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7009 0960 0000 6472 6772

CDR Randall Brown
United States Coast Guard Sector Baltimore
2401 Hawkins Point Road
Baltimore, Maryland 21226-1797

March 21, 2011

Dear CDR Brown,

Potomac Electric Power Company (Pepco) has enclosed the incident report for the Potomac River Switchyard (Station C) mineral oil spill, which occurred on January 23, 2011.

We thank you for your patience with respect to your receipt of this report. Please do not hesitate to call me if you should have additional questions regarding this incident.

Sincerely,

S H. Harmon

Shirley H. Harmon
Manager, Environmental Compliance and Performance Assessment

Enclosure

cc:
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INCIDENT REPORT – Pepco POTOMAC RIVER SUBSTATION

1) Description of the vehicle or facility from which oil was discharged (i.e., pipeline, tank, well, etc). If oil was discharged from more than one source, please identify each source.
The facility is the Pepco substation located on North Royal Street in Alexandria, Virginia. Oil was discharged from one source, No. 9 Transformer at the substation.

2) Type of oil(s) discharged.
Non-toxic, non-PCB mineral oil is the transformer's insulating fluid. See Attachment A for the Material Safety Data Sheet (MSDS) and Attachment B for the insulating fluid analytical report.

3) Quantity of oil discharged from the facility or vehicle.
Approximately 17,000 gallons of mineral oil were released from the transformer into the secondary containment system. Of that amount, approximately 4,500 gallons were released to the Potomac River.

4) Time and date of discharge.
Sunday, January 23, 2011 at approximately 1 AM, oil was found to be leaking from the transformer into the transformer retention dike and emergency containment reservoir that comprise the secondary containment system.

5) Location of discharge, including county and state.
1300K North Royal Street, City of Alexandria, VA.

6) Did the oil enter into any water? (**YES** OR NO)
Did the oil enter any sewer? (**YES** OR NO)
   a) If YES, describe the first water reached and the location of this water.
   The Potomac River, located directly adjacent to the GenOn Potomac River power plant. See Attachment C for diagram.

   b) State the quantity of oil entering the water described above in 6(a).
   Approximately 4,500 gallons.

c) State the quantity of oil reaching the shoreline of the water described above in 6(a) which did not enter the water.
Less than 4,500 gallons.

d) Was the water described above in 6(a), at the time of the spill, a tributary of, or physically connected to a navigable waterway. (**YES** OR NO)

e) If the answer to 6(d) is YES, describe or name the waterways to which the waters in 6(a) connect or flow.
The Potomac River which connects to the Chesapeake Bay.

f) If the answer to 6(d) is NO, does the water described above in 6(a) periodically connect with or flow into any hydrological creek or system? If YES, describe the flow and connection.
Not applicable.

7) a) Did you observe the oil cause a film, sheen, discoloration or iridescent appearance on the adjoining shorelines of, or surface of, any water described in 6(a), (e), or (f)? (**YES** OR NO)
If YES, describe.
Oil sheen was observed on the surface of the Potomac River and shoreline.

b) To your knowledge, did any other person observe the oil cause a film, sheen discoloration or iridescent appearance on the adjoining shorelines of, or surface of, any water described in 6(a), (e), or (f)? (**YES** OR NO)
If YES, describe.
Multiple persons observed the oil sheen on the Potomac River during response operations and after response operations were completed, including the Oil Spill Response Organizations (Triumvirate Environmental and Clean Harbors), Pepco and GenOn personnel as well as personnel from the federal, state and local agencies.

8) a) Did you observe the oil cause any sludge or emulsion to be deposited on the adjoining shorelines of, or beneath the surface of, the waters described above 6(a), (e), or (f)? (**YES** OR NO)

If YES, describe.

Some residual product may have impacted the shoreline via storm water culvert. However, there was no direct impact due to tidal action. Some emulsified oily debris was observed in the area of the discharge of the storm water culvert into the river, and along the shoreline immediately upstream and downstream of the cooling water intake system at the GenOn power plant. The cooling water intake system is located approximately 900 feet downstream of the discharge point.

9) Describe any observed damage to animal life or vegetation.

Three deceased oiled birds were found in the vicinity of the release. Of the 1,032 birds observed in the days immediately following the release, only 2 birds demonstrated behaviors of potential oiling. Less than 5 dead fish were observed from the Mount Vernon Trail, in the vicinity of the release. These few dead fish may not have been impacted by the oil spill incident since they were not coated in oil and were identified as catfish which are bottom feeders. See Attachment D for the final report from Tri-State Bird Rescue & Research.

10) Time and date of discovery that the discharge was entering the waterways.

On January 23, 2011, at approximately 1:00 AM, the No. 9 transformer at Pepco's Potomac River Substation experienced an electric fault. A major alarm was activated at the Substation which in turn activated a remote alarm at Pepco's Control Center facility, notifying the personnel of a system failure.

Within the hour, Pepco maintenance personnel arrived at the Substation to assess the situation and investigate the cause of the alarm. They discovered a coupling failure of the transformer's cooler pipe which allowed oil to leak from the transformer. Pepco immediately closed a flapper valve to stop the transformer from leaking into the transformer retention dike. This action took place at approximately 2:00 AM.

Once the release was stopped, Pepco personnel checked the area for evidence of release. Pepco discovered that oil from the broken cooler pipe had discharged on the

ground outside the transformer retention dike. Employees promptly responded by initiating cleanup of the oil spill to the ground

At approximately 10:00 AM, Pepco personnel discovered that a portion of the mineral oil held by the emergency containment reservoir had overflowed to a storm water trench that leads to the Potomac River and had reached the river.

11) List the federal and state agencies, if any, to which the owner or operator reported the discharge. Show the agency, its location, the date and time of notification and the official contacted.

AGENCY	LOCATION	DATE & TIME NOTIFIED	OFFICIAL CONTACTED
National Response Center	N/A	1238 hrs, 1/23/11	Incident #965468
US Coast Guard Sector Baltimore	Baltimore, MD	1150 hrs, 1/23/11	Eric Garza
District of Columbia Department of the Environment	Washington, DC	1737 hrs, 1/23/11	Jacob Zangrilli
Maryland Department of the Environment	Baltimore, MD	0958 hrs, 1/28/11	Alan Williams
Virginia Emergency Management Administration	Richmond, VA	1310 hrs, 1/23/11	UNKNOWN
US Fish and Wildlife	Richmond, VA	1/25/2011	Dan Rolince
National Park Service	Arlington, VA	1/25/2011	Patrick Sheridan, Georgeann Smale

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12) Describe steps taken to contain and clean up the spilled oil and mitigate environmental damage.

- Transformer valve was closed to stop the leak. Initiated cleanup of ground outside of transformer retention dike.
- Oil that was captured in the emergency containment reservoir was pumped and collected by tanker truck and taken to a properly permitted oil reclamation facility in Ohio.
- As soon as oil was detected in the Potomac River, absorbent booms were placed on the River to aid in containment and recovery.
- Spill Response Contractors (Triumvirate Environmental, Clean Harbors and Clean Ventures) were called to assist in the removal and recovery of the oil from the river as well as removal of contaminated soil from just outside of the bermed transformer area.
- Sweeps, another type of oil-absorbing material, were placed into the river to soak up oil. In addition, a hard boom was installed in the cove-like area in front of Marina Towers to prevent oil from spreading further into the river. Sweeps and booms were deployed within this boomed area.
- Vacuum tankers were used to skim and remove oil from the river.
- After response operations ceased, daily inspections and assessments were conducted for 2 weeks to monitor and respond, as necessary, to sheen on the river.

13) List the state and local officials who were on-scene at the spill during or after clean up.

	LOCAL / STATE OFFICIALS ON-SCENE DURING OR AFTER SPILL
1	City of Alexandria Fire Department
2	City of Alexandria Department of Environmental Quality
3	City of Alexandria LEPC
4	Virginia Department of Environmental Quality
5	Virginia Department of Emergency Management
6	District of Columbia Department of the Environment
7	Maryland Department of the Environment Emergency Response

14) Describe in detail what actually caused the discharge.

Non-toxic, non-PCB mineral oil was accidentally released from an electric transformer after a cooler pipe coupling failed. One of the four cooler pipes on No. 9 Transformer

separated at the flange and oil began leaking from the bottom of the cooler and flowed into the transformer retention dike. The oil in the retention dike flowed into the emergency containment reservoir via underground pipe. The liquid level in the emergency containment reservoir rose to the height of the 8-inch diameter overflow pipe on the east wall located near the top of the reservoir. The overflow pipe connects to a storm water concrete ditch and culvert, which leads to GenOn's NPDES storm water Outfall 006. At the time of the incident, the sump pump had been set to manual operation and according to procedure, did not operate. It appears that storm water runoff had collected in the emergency containment reservoir displacing some volume, thereby allowing the oil to flow into the 8-inch diameter overflow pipe to which sump pump discharges.

a) If this discharge was caused by the actions of a third party (for instance, as the results of an accident of vandalism), describe in detail what measures were in place to prevent such an incident.

N/A

b) If the discharge was caused by vandalism, list any law enforcement agencies, if any, to which the owner or operator reported the vandalism. List the agency, the official contacted, and the date of notification.

N/A

15) Describe action taken or proposed to prevent a recurrence of this type of spill.

- Pepco is evaluating additional controls, including an oil sensor for the emergency containment reservoir and/or an oil stop valve in the storm water concrete ditch and culvert. Pepco is also evaluating changes to the operating procedure for the sump pump and the float activation settings.
- Pepco is monitoring and recording the amount of storm water that it pumps from the emergency containment reservoir to more closely monitor the emergency containment reservoir liquid level and to assist in developing an appropriate pumping schedule.
- Pepco identified the failure of a press fitted flange located between the cooler pump and transformer tank. The flange was replaced and retrofitted. Pepco has identified other transformers with a similar configuration and retrofits are being scheduled to ensure that

a similar failure to No. 9 Transformer does not occur elsewhere within the electrical system.

- Pepco hired an independent engineering company to perform a structural inspection of the secondary containment reservoir. The scope of the inspection included measuring the dimensions, mapping cracks, distresses, points of infiltration, leakage into soil and groundwater. The engineering company's investigation concluded that the structural integrity and permeability of the reservoir was not a contributing factor to the discharge of oil.
- Pepco is conducting a comprehensive review of the Potomac River Substation SPCC plan and is making changes that include a more robust emergency notification procedure.

16) List the names and addresses of persons believed to have knowledge of the facts surrounding this incident.
Pepco Field Operations & Restoration and Pepco Electric Maintenance personnel were first responders. They can be reached by contacting the Manager, Environmental Compliance & Performance Assessments, (202) 331-6640.

17) Name and address of the owner of the vehicle or facility describe above in (1).
Pepco
701 9th Street, NW, Washington, DC 20068

18) Name and address of the operator of the vehicle or facility described above in (1) and, if different from (17) above, describe the relationship between the owner and operator (i.e., employee, subcontractor, lessee, etc.).
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19) Does the facility have a National Pollution Discharge Elimination System (NPDES) Permit or permit application? (YES OR **NO**) The Pepco Potomac River Substation does not have a NPDES Permit. However, GenOn Potomac River Generating Station does operate under a NPDES Permit.
If YES, provide the Permit number or when the application was filed.

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20) Please specify which, if any, applicable water quality standards, (e.g., NPDES) which the discharge may have violated.
None known at this time

21) Does the facility currently have a Resource Conservation and Recovery Act (RCRA) permit or is the facility under Interim Status? (YES OR **NO**)

22) Does the facility have a Spill Prevention Control and Countermeasure (SPCC) Plan certified and implemented in accordance with 40 CFR Part 112? (**YES** OR NO)

23) Does the facility have a Facility Response Plan (FRP) prepared in accordance with 40 CFR Part 112 (Proposed Rule of February 17, 1993)? (YES OR **NO**)

24) List the type of oil and total storage capacities at the facility for any oil related products. Describe the storage tanks at the facility, (e.g., above ground, underground, etc)
The oil used in all of the electrical equipment (transformers, oil circuit breakers, regulators, bushings, etc.) located at the facility is non-PCB mineral oil. For a list of equipment and storage capacity, see Attachment E.

25) Provide any other information you wish to bring to the attention of the federal government.
Pepco is working cooperatively with the District of Columbia Department of the Environment to complete surface water and river sediment sampling plans for impacted areas of the river shoreline. Pepco worked with the Virginia Department of Environmental Quality on a soil sampling plan in the substation yard outside the transformer retention dike and samples were taken on March 8, 2011. The results of these sampling plans will help determine whether additional corrective measures are needed.