

**Question: While Evergreen has stated that benzene contamination moving off-site has not impacted the air quality in surrounding buildings, they have also said that no sampling of air quality in off-site buildings has been done. Evergreen needs to collect data to ensure that benzene and other contamination has not moved offsite and made its way from contaminated soils into the basements of surrounding buildings, affecting the health of residents**

Evergreen has conducted initial assessments using existing data and conservative assumptions, which did not find any potential impacts to off-site residences' indoor air quality from the conditions in shallow groundwater moving offsite from the facility; therefore, we have no plans to test off-site buildings. However, future fate and transport evaluation will model the projected extent of groundwater contaminants, which will be used to confirm the assessment of offsite air quality effects from subsurface conditions and will be summarized future reports. Also, in general, direct sampling of indoor air is not conducted unless vapor intrusion assessment indicates potential for indoor air quality concerns. This is because there are numerous and various other potential sources for air quality.

**Question: Evergreen has stated that it has the fate and transport model, but that it has not been finalized. Can Evergreen share this information with us? It doesn't have to be final in order for the public to see it. In fact, Act 2 specifically calls for public involvement during the development of all reports, so we would appreciate the opportunity to see and make comments on the fate and transport studies and model in its draft form or formative stage.**

**Answer:** We are currently still developing the underlying flow model (this is the foundation of the model prior to inputting concentrations of contaminants of concern (COCs)). Later this summer we expect to be able to start making the model runs that will project the distance, direction and concentrations of compounds over time. Those projections must be calibrated to real site data. Incomplete models (or documents) that have not yet undergone internal review, peer review, or quality assurance/quality control measures will not be formally shared. Once the fate and transport model and associated report have been completed, the documents will be available for review. However, due to the complexity of the model for this project, Evergreen plans to review the model with the public prior to submittal, once the internal reviews are completed.

PADEP provided the following explanation of the concept of 'development' with respect to Act 2 documents and public involvement: *"Act 2 and our regulations and guidance describe several measures "to involve the public in the development and review" of reports, some of which are required. The intent of these measures is to collect comments, suggestions, concerns, and questions on the Act 2 work. The remediator's responses to this input may result in revisions to the report, and in this manner the public influences the development of the report. The public is not just on the receiving end, but it's correct that the primary public role is to comment on the work being done. Those comments can impact both the remediator's actions and also PADEP's technical review and decision to approve the report."*

**Question: At the outset of remediation activities back in the 1990s, a large number of contaminants were sampled for. Evergreen, with approval from DEP, later revised the list of "contaminants of**

**concern” down to only 30 chemical compounds and one heavy metal, lead. We need to have a full analysis explaining why this was done. Otherwise, additional samples should be collected for all of the compounds that were not included. Similar question: There are over 100 chemical compounds and metals used in oil refining, yet only around 30 contaminants have been investigated on site. Every contaminant must be accounted for!**

**Answer:** The site was tested for a complete list of metals as part of the 1992 EPA Resource Conservation and Recovery Act (RCRA) Facility Investigation, and none of these metals – with the exception of lead –were identified as contaminants of concern. The 1992 report is posted on the Evergreen website for reference. The current analyte list (21 compounds) utilized for the Act 2 program at the facility was developed after reviewing historic reports and data from the previous sampling efforts and in consideration of historic use of the site and the DEP analyte ‘short lists’ for various petroleum products. Evergreen’s current analyte list includes compounds indicative of the various petroleum products processed at the facility. In addition, both soil and groundwater samples from areas of the facility which historically stored and processed crude were sampled for a more comprehensive analyte list (48 compounds), which included other metals, VOCs, and SVOCs, as part of the Act 2 remedial investigation activities. These data have all been included in the RIRs. Other compounds have been analyzed in targeted areas based on past use, more complex forensic characterization, or other purposes. Ultimately, an Act 2 Final Report (where demonstration must be made that the selected remediation standards have been met) includes only those compounds that have been fully characterized.

**Question: What plans does HILCO have to verify that the cleanup of AOI 11 (the PRM Aquifer) does not impact the water supply in NJ? Many municipal and public water companies and farmers draw their water from this source?**

Evergreen is responsible for subsurface petroleum impacts that existed prior to the sale of the facility to PES in 2012. The investigation of that historic contamination includes AOI-11, which is the lower aquifer beneath the facility. Evergreen will continue to address those pre-2012 impacts in the lower aquifer throughout the Act 2 process and AOI 11 will be included in Evergreen’s future Cleanup Plans, which are yet to be submitted for the site.

It should be noted that the NJDEP is routinely involved with groundwater investigations of the Potomac-Raritan-Magothy aquifer (PRM) due to sources of contamination located in New Jersey that are not related to impacts in AOI 11 beneath the former refinery. There has been no demonstrated connection between groundwater impacts in AOI 11 due to past refinery operations and the PRM groundwater quality in New Jersey. However, this will be verified through future fate and transport modeling efforts.

In addition, the New Jersey Department of Environmental Protection has provided the following information: *“At this time NJDEP believes the existing hydrogeologic, geologic and water quality data indicate any contaminants that may be in the subsurface at the PES refinery in Philadelphia do not pose a threat to water supply wells in the PRM aquifer system in NJ. At this time NJDEP does not consider*

PFAS contamination at the former Philadelphia Refinery to be a threat to NJ via a flow path through the lower PRM aquifer. This is based on several lines of reasoning:

1) The lower PRM is the water table aquifer at the site and is very shallow under the Delaware River. We consider the Delaware River to be recharging this aquifer. As such, it is likely a recharge boundary to any contaminants that might be entering it on the Pa side. Studies conducted in the PRM aquifer system within New Jersey indicate that the Delaware River acts as a significant hydraulic flow boundary limiting any groundwater source area from extending to the Pennsylvania side of the Delaware River. More information is in Pope and Watt, 2005 ([https://secure-web.cisco.com/1QNK4DBcOrtQ0JjsHbI5b79X05rdft7c469uiTdKulpe4LmzQdl8DIVAwc-Qfit5xZaOSyf8SmyCazeksama0yvilb0WmR8GYHAJLHKJThyiEmd-S9Kukws7facy65mV6TVrzjNGv3EvqDHo6ts71tPnEJ9cleq8HRzRtzixilAKwb8XKUio0oRHePni3O3a9Q\\_CayKJ5wQeQO1W4tOCje24nrJ9I3RlrD\\_3WC-WwX4tiqhANiSdZlxwY6QeRnvadbOQl6Zakw7WvFnBYJUyUdw/https%3A%2F%2Fpubs.er.usqs.gov%2Fpublication%2Fsir20045101](https://secure-web.cisco.com/1QNK4DBcOrtQ0JjsHbI5b79X05rdft7c469uiTdKulpe4LmzQdl8DIVAwc-Qfit5xZaOSyf8SmyCazeksama0yvilb0WmR8GYHAJLHKJThyiEmd-S9Kukws7facy65mV6TVrzjNGv3EvqDHo6ts71tPnEJ9cleq8HRzRtzixilAKwb8XKUio0oRHePni3O3a9Q_CayKJ5wQeQO1W4tOCje24nrJ9I3RlrD_3WC-WwX4tiqhANiSdZlxwY6QeRnvadbOQl6Zakw7WvFnBYJUyUdw/https%3A%2F%2Fpubs.er.usqs.gov%2Fpublication%2Fsir20045101)) and Navoy and Carleton, 1995 ([https://secure-web.cisco.com/14SrVjTcT2kOO14dfWEDsnY2-F6ono0r1v3EBQ0zBDvYkiY7PIRyyQAGvGwEo-HCBN-Lk-2GJah\\_eUPLTO2eVp4LfsNHdLq0KltKTXRShNCxzWd7Im8uJ\\_-iKknmChzbBFz8mmsC8EJgHzGEAQO5NYVK7We9\\_p5RFVEoCDqvlfv9-6CrS1-2t4mu4XN5v1Nxoog3KVlaAWpoWfVv4r9n\\_QX\\_8luxk4zSvoKOj4x\\_ORbc9JcMPRE6aLaMGXYAk-9-Tkxj1HeibFrTB1uPpSZ30GA/https%3A%2F%2Fwww.state.nj.us%2Fdep%2Fnjqs%2Fpricelst%2Fgsreport%2Fgsr38.pdf](https://secure-web.cisco.com/14SrVjTcT2kOO14dfWEDsnY2-F6ono0r1v3EBQ0zBDvYkiY7PIRyyQAGvGwEo-HCBN-Lk-2GJah_eUPLTO2eVp4LfsNHdLq0KltKTXRShNCxzWd7Im8uJ_-iKknmChzbBFz8mmsC8EJgHzGEAQO5NYVK7We9_p5RFVEoCDqvlfv9-6CrS1-2t4mu4XN5v1Nxoog3KVlaAWpoWfVv4r9n_QX_8luxk4zSvoKOj4x_ORbc9JcMPRE6aLaMGXYAk-9-Tkxj1HeibFrTB1uPpSZ30GA/https%3A%2F%2Fwww.state.nj.us%2Fdep%2Fnjqs%2Fpricelst%2Fgsreport%2Fgsr38.pdf)).

2) That the Delaware River acts as a recharge boundary is supported by aquifer tests in NJ conducted in the lower PRM close to the river. These tests show significant leakage which would not occur if the Delaware River was not a recharge boundary.

3) NJDEP delineated well head protection areas for unconfined wells within the Potomac using the methods detailed in Spayd and Johnson, 2003, available at <https://secure-web.cisco.com/1azAbsv8HMFq0INHE6kb7P-2qon-zhCTNtpOtbPp5cpzHbNyqIhgHFwqQMNAeG5RXaLLrTkicXc-TEg6qbExHCUX6yNJ2I3BmzKv61RrqPBmvTVqgsNPcKZb6Bp-KxZv7E3EFpXppbe76BGvyvQWuNxZPSPe4qqLQQjt3W-thqf9hMBQAvqe-o9X0J3bmDtAG0ctemEGHLSGEOvynvkjXOJu3KyMhTMhXQeD1ZHqcrb0CDtxcni5O1G8K6VeMySpEf6WILwNBWPbTY5Bjn0qQ/https%3A%2F%2Fwww.state.nj.us%2Fdep%2Fnjqs%2Fpricelst%2Fofreport%2Fofr03-1.pdf>. These calculated areas represent the source areas to wells based on three time of travel intervals of 2, 5 and 12 years. The delineated source areas indicate that no wells completed within the Potomac Formation in NJ have well head protection areas which extend into Pennsylvania.

4) Reported water quality data ([https://secure-web.cisco.com/17\\_sq7vCSGdmSn5p4EO7KLILD3G3QIM6urSdbDChJyvcaN\\_-mNiUOLS-w9wTQpzoJlfeLqzqnliaoZik\\_WFqDcD\\_dDEgq9HusX3Fii9608-74LtQiHsYzT8dMW\\_BpF96-K2aXrGt7zOTkzP7zQnhfFicYQO1ALaSuDI3T3KRsoAISnpAk1zsi9I9-IXCKJXicMuBlidT7KbGy9OEa9w\\_dAjRmhUEglexfL2lhmlHISnz96BWN6t4qMe0f7CF7VrRQn-adZaoJwzLi2uV3TfA/https%3A%2F%2Fwww9.state.nj.us%2FDEP\\_WaterWatch\\_public%2F](https://secure-web.cisco.com/17_sq7vCSGdmSn5p4EO7KLILD3G3QIM6urSdbDChJyvcaN_-mNiUOLS-w9wTQpzoJlfeLqzqnliaoZik_WFqDcD_dDEgq9HusX3Fii9608-74LtQiHsYzT8dMW_BpF96-K2aXrGt7zOTkzP7zQnhfFicYQO1ALaSuDI3T3KRsoAISnpAk1zsi9I9-IXCKJXicMuBlidT7KbGy9OEa9w_dAjRmhUEglexfL2lhmlHISnz96BWN6t4qMe0f7CF7VrRQn-adZaoJwzLi2uV3TfA/https%3A%2F%2Fwww9.state.nj.us%2FDEP_WaterWatch_public%2F)) indicate no contamination is present in supply wells for the National Park Water Department, which are the closest NJ supply wells to the Philadelphia Energy Solutions refinery. The refinery has been in operation for more

*than 100 years and it appears that no measurable contamination has migrated to these wells. All public supply wells in New Jersey are required to monitor and report water quality data quarterly therefore any potential contaminants would be identified.”*

**Question: How long will it take for the cleanup?**

Evergreen’s cleanup, when talking about subsurface remediation (extraction of petroleum and impacted groundwater from the subsurface), has been ongoing for quite some time and is expected to continue for several years until removal of petroleum and impacted groundwater is no longer necessary). The need for any additional remediation systems to address pre-2012 impacts will be detailed in future Act 2 Cleanup Plan(s). However, some subsurface cleanup activities (soil removal) may be necessary as Hilco Redevelopment Partners' development occurs. In other words, if impacted soils are encountered during site work that cannot remain onsite per conditions of Hilco’s Soil Management Plan, they will be excavated and removed for offsite disposal by Evergreen. The timing of that would follow Hilco Redevelopment Partners' schedule for development of different areas of the site.

**Question: You still have those pollution Underground I still smell odors outside of my house**

Evergreen is responsible for investigation and cleanup of subsurface conditions present at the property before the sale to PES in 2012. Part of Evergreen's investigation involves defining the extent of contamination in soil and groundwater and determining if the impacts present a risk to people onsite and those located near to the site. Evergreen operates remediation systems at the facility to control groundwater contamination as well as control vapors in sewers near and through the facility. Based on the completed investigations, the pre-2012 environmental impacts to soil and groundwater have not shown to cause impact to indoor or outdoor air in residential areas offsite. Therefore, odors are not expected to be from those subsurface conditions.

**Question: Who is responsible to collect, sample, and treat stormwater? Does the ACT 2 closure include PFAS concerns to reduce future liabilities? We are treating impacted PFAS stormwater at a site in the NE. The owner in this case is risk adverse and we are treating to non-detect levels.**

Stormwater will continue to be managed by the current owners/operators of the property, not Evergreen. PFAS compounds are not currently part of Evergreen’s Act 2 program at the facility; however, Evergreen is developing a PFAS sampling program for subsurface conditions, not stormwater.

**Question: Did Evergreen involve any neighborhood organizations in the process of deciding which community engagement consulting firm to hire? Thank you.**

**Answer:** Evergreen did not directly involve neighborhood organizations in the process of deciding which community engagement consulting firm to hire. Evergreen drafted a Community Outreach

Plan based on feedback from members of the public and from regulatory agencies in spring of 2020. Evergreen also researched firms that had a successful engagement history on complex environmental sites nearby, including the Lower Darby Creek Superfund Site. Evergreen selected the firm that it believed was most qualified to assist in carrying out the Community Outreach Plan and further develop and manage future outreach and engagement efforts. Hummingbird Firm was identified as the most qualified for several reasons. These include Hummingbird Firm's:

- Extensive experience working with the U.S. Environmental Protection Agency, specifically on environmental cleanup projects
- Combination of technical expertise, legal background, and environmental science and engineering backgrounds
- Unbiased third-party position which is often effective in resolving issues and effectively addressing the concerns of those involved and/or impacted
- Experience working with nearby communities
- Extensive experience working on contaminated waste sites around the country and supporting communities at these sites through the design and implementation of public outreach and engagement programs
- Experience working with residents in contaminated communities to identify and understand their issues of concern regarding human health and the environment and developing information and risk communication programs designed to respond to these needs.

**Question: What projects has Hummingbird have worked on in South Philly? Hummingbird.. Darby is not in South Philly can you be more specific?**

**Answer to Q10:** It is more accurate to say that the projects that we have worked on and communities that we have worked with are in Southwest Philadelphia. For the past 7 years, Marion Cox on our team has worked with several Philadelphia communities at the Lower Darby Creek Area Superfund Site. More specifically, the Lower Darby Creek Area Superfund Site [LDCA] is composed of 3 separate landfills that span a large geographic area.

- 1) Clearview Landfill is the largest landfill that is a component part of the LDCA site. This is the landfill that Marion has worked on for 7+ years. The "community" or neighborhood most closely associated with the Clearview Landfill is the "Eastwick" community.
- 2) Folcroft Landfill is currently in the remedial investigation stage so there have been very few public meetings. Marion assisted EPA in planning for and facilitating the only public meeting held to date regarding the Folcroft landfill in November 2018. Marion provides on-going assistance to EPA in its public outreach and engagement activities at this site as EPA moves from the site investigation into the remedial design phase. The neighborhoods and communities that are most directly affected by this landfill include: The Boroughs of Darby, Folcroft, and Glenolden and Darby Township
- 3) Norwood Landfill is the 3rd landfill that is a component of the LDCA Superfund site and is located in lower Norwood, Delaware County Pennsylvania. EPA has been conducting investigations at this Landfill, and the neighborhoods located close to this landfill, for several

years. The neighborhood most directly linked to the Norwood Landfill site is the Winona Homes neighborhood. Marion has worked with residents from this neighborhood as well as Norwood Borough officials.