



Testimony on Philadelphia Energy Solutions Refinery Site and Clean-Up Effort
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Pennsylvania Senate Environmental Resources & Energy Committee

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The University of the Sciences in Philadelphia
Rosenberger Hall, Room 102
600 S 43rd St
Philadelphia, PA 19104

Chairman Yaw, Chair Comitta, and honorable members of the committee, thank you for allowing me the opportunity to deliver testimony today.

1. Personal Background

My name is Christopher Ahlers. I have been employed as a Staff Attorney with Clean Air Council for over six years. I am admitted to practice law in New York and in Pennsylvania for Clean Air Council. I have been practicing law for over 27 years. I have spent more than half this time in the field of environmental law -- as an attorney in corporate law firms, as a law professor, and now for Clean Air Council at its main office in Philadelphia. My curriculum vitae is attached.

Clean Air Council is a member-supported, non-profit environmental health organization. It has been working to protect everyone's right to a clean environment for over 50 years.

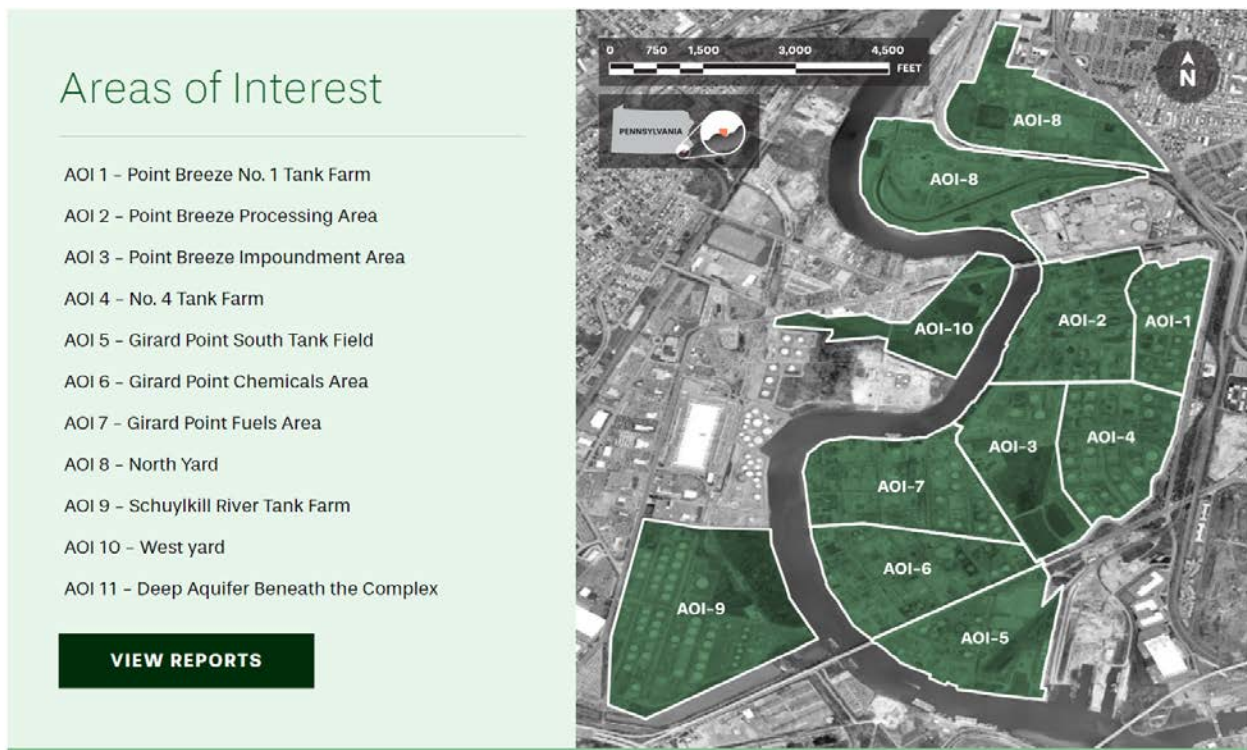
During the past two years, I have reviewed the remedial investigation reports prepared by Sunoco and its consultants and submitted three sets of comments to the Department of Environmental Protection ("Department"). This work forms the basis for my testimony today. I am attaching our three sets of comments to my written statement.

2. Background on Remedial Investigation

Although there have been investigations of contamination at the refinery for decades, this matter really became public only about three years ago, when it was determined that Sunoco and its consultants did not provide meaningful public notice of the opportunity for public comment on remediation reports.

The reports were prepared by Sunoco and its consultants. This includes Evergreen Resources Group, LLC, the entity that is nominally handling the investigation. It also includes other consultants such as GHD. (Technically, Sunoco is the responsible party under federal and state environmental laws, and it may not contract around statutory liability. Therefore, it is fair to say that Evergreen is an agent or consultant to Sunoco).

Out of convenience, the Department of Environmental Protection has artificially divided the surface area of the refinery into ten areas, known as Areas of Interest (AOI). For example, the Schuylkill River Tank Farm is designated as AOI-9. An eleventh Area of Interest was designated for the deep aquifer (that is, the lower aquifer, located around 80-100 feet below the surface), across all Areas of Interest.



See <https://phillyrefinerycleanup.info/>.

3. Failed Notice (Reopened Reports)

Following the sale of the property to Sunoco to Philadelphia Energy Solutions in 2012, there were two rounds of reports. The first round of reports occurred around 2013 and the second round of reports occurred around 2016-2017. Notices were drafted in a manner that did not make clear the opportunity to submit comments and did not provide specific contact information for the submission of comments.

Because of the lack of any meaningful public comment period, the Department reopened the public comment period for twenty remedial investigation reports and a human health risk assessment for lead, even for reports previously approved. This reopened public comment ended on January 14, 2021, when the Council submitted its first round of comments.

4. Site-Specific Standard for Lead in Surface Soil (Reopened Reports)

With respect to soil contamination, the biggest problem with the reports has been the assumption that a weak standard for lead would apply to surface soils -- that is, soils up to two feet below the surface of the ground. In 2015, the Department approved a site-specific standard for lead in surface soils of 2240 mg/kg. This is more than two times the statewide health standard for lead in surface soils (1000 mg/kg). Although Act 2 allows a responsible party to develop a site-specific standard that is less stringent than this statewide health standard, such a standard must be based on a risk assessment that is sound. Here, it was not.

Using the Environmental Protection Agency's Adult Lead Model, Evergreen's application assumed a target blood lead level of 10 ug/dL in a fetus -- which was twice as high as the reference value used by the Centers for Disease Control and Prevention for case management for children exposed to lead (5 ug/dL) -- even in 2015 when the application was submitted and when the Department approved the standard. If Evergreen had used the 5 ug/dL reference value, the site-specific standard would have been only a little higher than 1000 mg/kg, and less than 1100 mg/kg.

This error enabled Evergreen to provide a distorted picture of the nature and extent of contamination of the facility. By characterizing the contamination according to a standard of 2240 mg/kg rather than 1000 mg/kg, Evergreen has conveyed a very different picture of the soil contamination. To illustrate, under the weaker standard there would only be 11 soil samples higher than the 2240 mg/kg standard in AOI-5 in a 2017 report (exceedances), whereas there would be 57 exceedances under a 1000 mg/kg standard. Similarly, there would only be 11 exceedances of the 2240 mg/kg standard in AOI-9 in a 2015 report, whereas there would be 55 exceedances under a 1000 mg/kg standard.

Getting the wrong standard not only limits the identification of locations of contamination that must be addressed -- it also hides information that might justify additional sampling in neighboring areas. This is a problem that exists throughout the twenty remedial investigation reports and it still has not been corrected, even today.

5. Statewide Health Standard for Lead in Surface Soil (Department of Environmental Protection Proposed Rulemaking)

Evergreen's error was repeated by the Department when it proposed an Act 2 rulemaking for cleanup standards in February 2020. The Department proposed to increase the statewide health standard for lead in surface soil from 1000 mg/kg to 2500 mg/kg, using the target blood lead level used by Evergreen. The Council submitted the attached comments on the Department's proposal in April 2020.

Among its comments, the Council noted that the Department was relying on the Cleanup Standards Science Advisory Board for the proposed increase in the standard. The Council also noted that the Board consists almost entirely of representatives of business and industry, with the exception of an EPA representative and an academic working in a field totally unrelated to contaminated sites.

Among the members of that Board is a representative for GHD, a consultant that has prepared remedial investigation reports for Evergreen for the Philadelphia refinery.

After receiving extensive negative comments from the public on this proposal, the Department ultimately decided to withdraw it. The final-form rulemaking was recently approved by the Independent Regulatory Review Commission, and it is expected to be finalized soon.

Nevertheless, the Department is reviewing the lead standard and is contemplating a separate rulemaking to amend the statewide health standard. The Department published an Advance Notice of Proposed Rulemaking this month, requesting information on the selection of a model, the use of parameters, and the consideration of some sort of averaging that could weaken the standard. This is important to the remedial investigation for the refinery because different assumptions about the appropriate blood lead level in a fetus would affect both the statewide health standard and a site-specific standard. In a very real sense, both standards are closely related.

They are also related in a practical sense. I noted that GHD, a consultant to Evergreen working on the remedial investigation, is a member of the Cleanup Standards Science Advisory Board. According to recent minutes of that Board, a representative of GHD recently volunteered to manage two working groups relating to the lead standard.

6. Fragmentation of Remedial Investigation of Deep Aquifer (Reopened Reports)

In addition, Evergreen also conducted a flawed investigation of the deep aquifer, located some 80-100 feet below the surface of the ground. (In contrast, the upper aquifer or water table refers to groundwater not as far below the ground).

Previously, the Department had approved two rounds of reports relating to AOI-11 (the deep aquifer) in 2011 and 2013. In the reports, Sunoco's consultant included a Fate and Transport Analysis. This is an analysis of where and how contaminants are moving in the aquifer, including off-site. Such an analysis is a part of a remedial investigation and it is expected by the Department in a remedial investigation report, according to its own guidance document. Both reports were disapproved and there has not been an addendum report addressing a Fate and Transport Analysis across all areas. Subsequent reports for individual areas have included a discussion of sampling in the deep aquifer, but they have not included a sufficient Fate and Transport Analysis as contemplated by the program.

During the past few years, Sunoco persuaded the Department to divert a Fate and Transport analysis into a stand-alone Fate and Transport Remedial Investigation Report due on December 31, 2021. (Indications are that this deadline will be postponed to next year). This is a problem that undermines the ability of the public to comment on reports. This is an example of segmenting an environmental project that would not otherwise survive scrutiny into smaller pieces more likely to avoid scrutiny.

Stated differently, Evergreen asks the Department to act as if the collection of individual samples of groundwater at different locations is separate from the modeling and analysis relating to that sampling. Approving the first part of the analysis outside the context of the second analysis would make it difficult for people in the community to question the second part of the analysis. The objection would be made that the first part of the analysis was approved a long time ago and may not be reopened.

Stated a third way, this is an example of whipsawing the public. It is unreasonable as a matter of law and it is vulnerable to a legal challenge. Sunoco and Evergreen have had at least eight years since the time of the disapproval of the two reports for the deep aquifer, to develop a Fate and Transport analysis. They have had enough time to do run modeling at the same time that they generate data for the modeling. They would deny the public the ability to review the data and the modeling holistically. This undermines transparency.

7. Flawed Groundwater Investigation of Deep Aquifer (Reopened Reports)

There are a number of other technical flaws in Evergreen's investigation of the deep aquifer. These flaws are set forth in detail in Comment 7 on pages 47-86 of the Council's comments in January 2021.

8. Flawed Investigation of Offsite Impacts (September 2021 Addendum Reports)

In disapproving past reports for AOI-4 and AOI-9, the Department directed Sunoco to undertake an investigation of potential offsite impacts from contamination in these areas. While Evergreen has nominally undertaken to do such an investigation, its efforts have been insufficient. The details are set forth in the Council's comments on two addendum reports submitted in October 2021, and attached to this statement.

For AOI-4, Evergreen has ignored the Department's direction to investigate contamination to the east of monitoring well S-369 in the northeast corner of AOI-4. In addition, while it has installed five wells to the southeast of AOI-4, it has not provided a reasoned explanation for limiting its sampling to those locations in the manner that it has done.

For AOI-9, Evergreen has installed four wells offsite and just west of the Area of Interest, including one a further distance to the west. Again, has not provided a reasoned explanation for limiting its sampling to those locations in the manner that it has done.

Thank you for the opportunity to present my written statement today.