



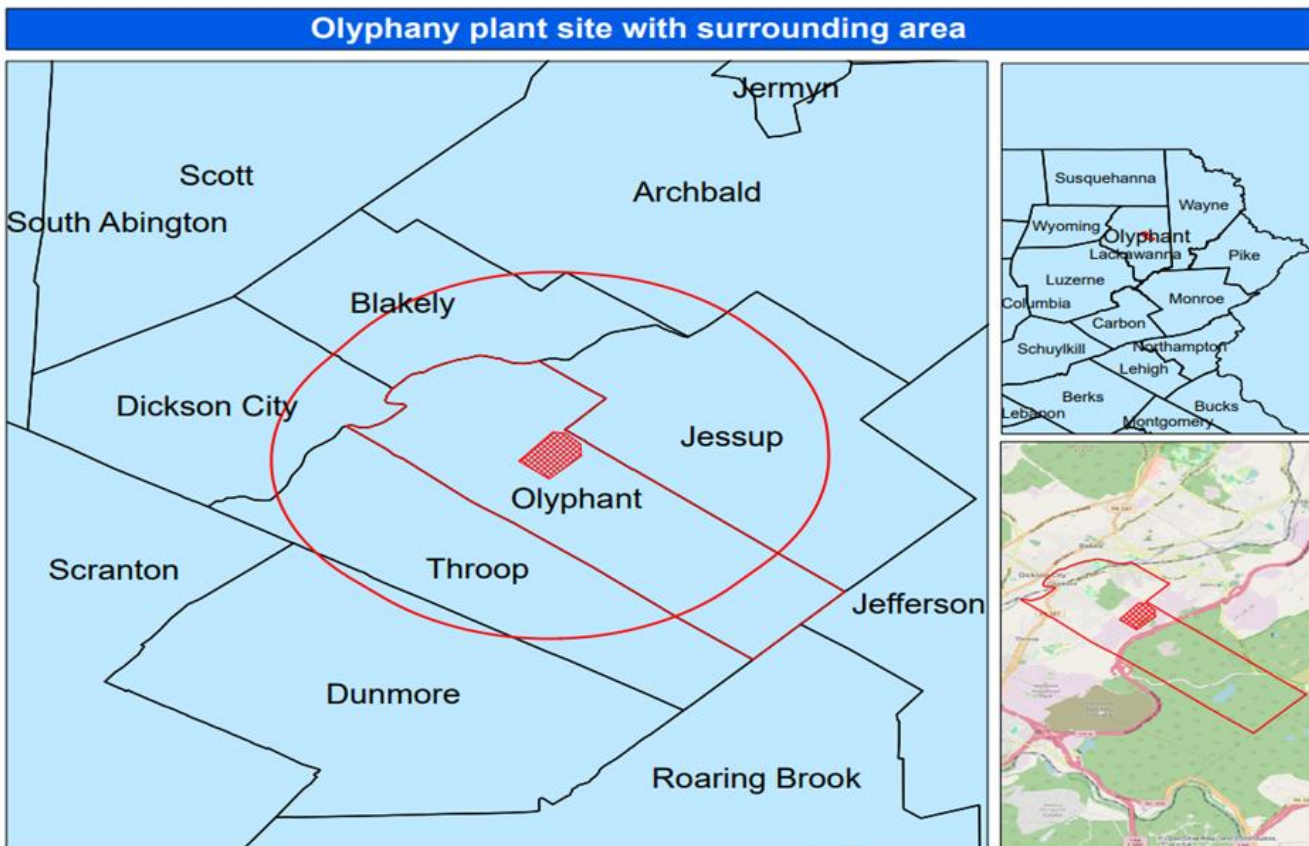
COMMUNITY CONCERNS ASSOCIATED WITH FORMER WARNER-ELEKTRA-ATLANTIC DISTRIBUTING CORP. (WEA) MANUFACTURING SITE

WHAT WERE THE COMMUNITY’S CONCERNS?

The Lackawanna Citizen’s Overwatch Project and the community it represents reached out to the Pennsylvania Department of Health (DOH) for assistance in understanding the potential health impacts on the surrounding community associated with the former WEA Manufacturing site. The WEA Manufacturing site is a former industrial site located near residential areas in Olyphant Borough, Lackawanna County (Figure 1). The request for information included an understanding of chemicals and the exposure pathways associated with the former manufacturing site and an assessment of potential links to cancer.

In response to the concerns raised by the community, DOH reviewed all data available to us, including data from the Pennsylvania Department of Environmental Protection (PA DEP), the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the Pennsylvania Cancer Registry.

Figure 1: Former WEA manufacturing site (red rectangle) along with the surrounding communities.





WHAT INFORMATION WAS EVALUATED?

DOH staff reviewed available reports from OSHA and PA DEP. No information was directly provided by OSHA; however, information was available on the OSHA website. This information was not helpful in assessing potential workplace exposures as no chemicals were detected in this report. PA DEP provided information on their inspections and reports that they generated for this site from 1978 to present. Although DEP had information on the levels of chemicals stored in underground drums, the information was not reliable because the technology used to record levels was not sensitive enough to detect chemicals at lower levels. Neither DEP nor OSHA had information on protective measures taken by employees to prevent exposure to these chemicals. DEP had some information on the level of chemicals in the soil and gas in the basement of the facility. Although these levels indicated higher levels of chloroform, they were below non-residential standards.

However, because the site is no longer in operation and historical records are poor, DOH staff could not identify individual employee exposure data. This means that DOH does not have a comprehensive list of chemicals that were used on the site, how they were used, or the chemicals employees came in contact with that may be harmful to health. DOH also could not, for example, collect available air sampling or monitoring data from the site where employees were working; conduct personal badge sampling; or review records or information regarding the length of time and frequency employees were exposed, the types of job tasks (e.g., the exposure of someone manufacturing a product and the person packaging finished products are different), the personal protective equipment that was used, or other administrative and engineering controls to reduce exposure to harmful substances

WHAT DID DOH DO TO ASSESS THE CANCER CONCERNS RAISED BY THE COMMUNITY?

Without individual employee exposure data, DOH staff were unable to accurately assess the potential for health effects associated with occupational exposures. DOH staff were also unable to calculate cancer and non-cancer health risks for employee and community exposures.

While individual health risks could not be assessed, DOH was able to assess cancer rates at a population level to determine if rates were higher among communities surrounding the former WEA manufacturing site.

WHAT METHODS WERE USED IN THE CANCER ASSESSMENTS?

DOH conducted a cancer assessment using cancer incidence data from the Pennsylvania Cancer Registry for the years 1985 to 2022, along with population estimates from the U.S. Census Bureau. We included 23 common individual types of malignant tumors, and a separate assessment of all cancer types grouped together in the analysis. Specific coding used for the analysis can be found here: [Cancer County State and MCD ICD-O codes.xlsx](#).



The study area included Olyphant Borough and four adjacent municipalities based on their proximity to the historical industrial site in Lackawanna County which included Blakely, Dickson City, Jessup, and Throop. A two-mile radius around the site was drawn using Google Maps as a reference to define the geographic scope, which closely aligned with these municipal boundaries. DOH selected this area because it is where people were most likely to be exposed.

Cancer cases were grouped into four time periods (1985–1994, 1995–2004, 2005–2014, and 2015–2022) to evaluate trends in cancer incidence over time.

Then we compared the study area to the rest of Lackawanna County (comparison group 1). We also looked beyond the county to the five surrounding counties (Luzerne, Monroe, Susquehanna, Wayne, and Wyoming) as comparison group 2. Using two separate comparison groups helps to provide a more comprehensive cancer risk assessment in case comparison group 1 included more people who were exposed than anticipated.

The main method used in this assessment is the standard incidence ratio (SIR) calculation. The SIR compares the observed number of cancer cases in the study area population to the number of cancer cases that might be expected based on a reference population (comparison group 1 or comparison group 2). The SIR calculation accounts for the age of patients, which is a major cancer risk factor. However, it does not consider other known cancer risk factors (e.g., genetics including family history, race/ethnicity, smoking, alcohol use, diet, viral infection). The SIR calculations were also evaluated by sex (male, female).

WHAT ARE THE MAIN FINDINGS FROM THE ASSESSMENT?

This assessment did not show consistent change (increase or decrease) in cancer rates in the study area compared to either the rest of Lackawanna County (comparison group 1) or the rest of Lackawanna County and the surrounding counties (comparison group 2). This does not mean that there were no exposures at the site or in the surrounding municipalities, but none were identified based on the information available to DOH. Over the four time periods evaluated (1985–1994, 1995–2004, 2005–2014, and 2015–2022), there were no consistent patterns, either increasing or decreasing, in the SIRs for the 23 common cancer types examined within the study area.

There were no instances in which both males and females together experienced an increase in new cancer cases for the type of cancer where sex is not a risk factor for the cancer type in question. If a shared environmental exposure was contributing to cancer risk, there should be the same patterns of new cancer cases across both sexes and potentially across multiple cancer types. The absence of such patterns suggests that the observed increase in new cases is more likely due to other factors than a common environmental exposure.

WHAT ARE THE LIMITATIONS OF THE CANCER ASSESSMENT?

This assessment has several limitations. The SIR calculations rely on community cancer data and do not take into consideration individual risk factors. The Pennsylvania Cancer Registry does not collect information on most of these risk factors. Because of limited information on these risk factors, the assessment could not look



at the link between the specific type of cancer and environmental exposures. Also, some cancers appear or are diagnosed long after an exposure. During this time period, residents may have moved in or out of the community, making it difficult to identify an actual exposure that may have caused their cancer.

This assessment only looks at newly diagnosed cancers in the area surrounding the closed WEA manufacturing site. This does not evaluate cancer among all employees with work-related exposures. A workplace cancer risk assessment requires more detailed, individual-level chemical exposure data, which is not available due to the site's closure.

WHERE CAN TOXICOLOGICAL INFORMATION BE FOUND FOR SELECT CHEMICALS?

The Lackawanna Citizen's Overwatch Project requested toxicological information on select chemicals of interest. The Agency for Toxic Substances and Disease Registry (ATSDR) provides toxicological profiles for many chemicals which can be found here: [A-Z Index of Tox Profiles | Toxicological Profiles | ATSDR](#). These ToxFAQs are educational documents produced by the ATSDR and can be used as a resource to better understand the toxicity of certain chemicals.

In response to the request to provide information on certain chemicals, exposure pathways, and potential health risks, please see the information below:

- [ATSDR Trichloroethylene ToxFAQs](#)
- [ATSDR Sulfur Trioxide and Sulfuric Acid ToxFAQs](#)
- [ATSDR Tetrachloroethylene ToxFAQs](#)
- [ATSDR Nickel ToxFAQs](#)
- [ATSDR Lead ToxFAQs](#)
- [ATSDR Cobalt ToxFAQs](#)
- [ATSDR Cadmium ToxFAQs](#)
- [Vinyl Chloride - ToxFAQs](#)
- [bis-2-ethylhexyl-phthalate.pdf](#)

WHERE CAN I DIRECT MY QUESTIONS OR COMMENTS ABOUT THIS ASSESSMENT?

Contact DOH Bureau of Epidemiology, Division of Environmental Health Epidemiology at dehe@pa.gov or (717) 787-3350.