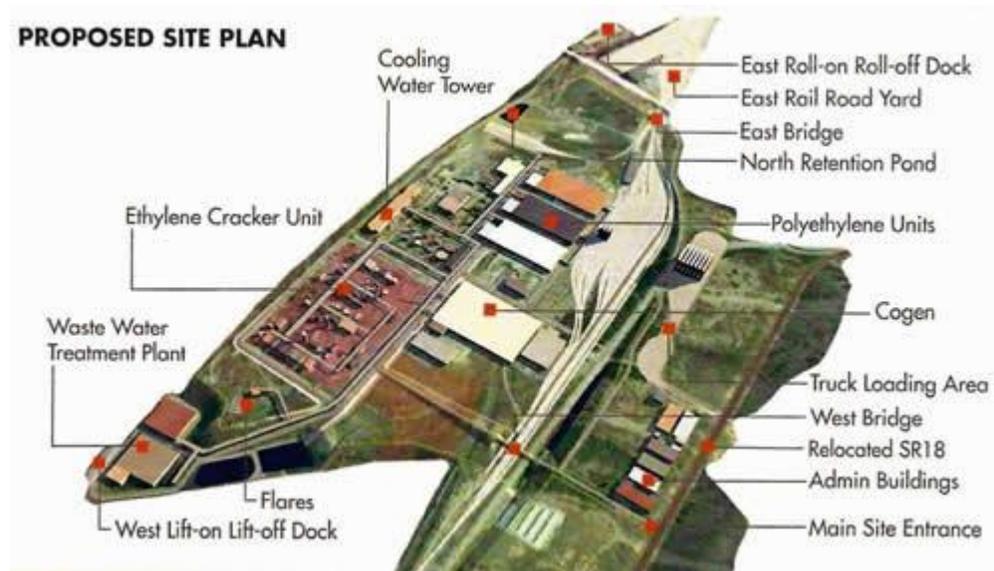




## Proposed Cracker Plant Impacts on Allegheny County

A new large-scale petrochemical facility is currently in the works in Beaver County. The facility, known as a “cracker plant,” will break ethane into smaller components which can be used to produce plastics. The facility will be built in Potter Township, Beaver County, near the northwest border of Allegheny County. ACHD has completed an assessment of the potential air quality impact of the new facility, and how it might affect air pollution levels in Allegheny County.



The proposed cracker plant site has historically been used for industry. It was previously the site of Horsehead Corporation’s Monaca Zinc Smelter Plant, which began operating in the 1930s. The connected G.F. Wheaton Power Plant was closed on September 11, 2011, and all other remaining air pollution sources, including the smelter, ceased operations by April 26, 2014.

The proposed cracker plant intends to convert ethane, a component of natural gas, into ethylene. The facility will heat ethane in the presence of steam until it “cracks” into two new components: hydrogen and ethylene. The ethylene will then be used to manufacture polyethylene at the new facility. Polyethylene is the most common type of plastic used today. It can be found in common, everyday products such as plastic bags and water bottles.

To determine the potential environmental impact, ACHD ran a computer model to see how pollutants from the facility will move through the air, where they will go, and what pollutant levels we might see in Allegheny County. The pollutants modeled included: benzene, toluene, hexane, formaldehyde, and ammonia. All of these substances are considered “hazardous air pollutants,” which are pollutants known to cause cancer and other serious health impacts. ACHD modeled these potential pollutant levels at nearly 8,000 locations within Allegheny County.

ACHD staff then took the modeled annual averages for each pollutant and compared it to health-based value of potential risk. These values estimate the level of pollution a person can be exposed to on a continuous basis, without risk of substantial harm. In every case, ACHD found that pollution levels were well below the health-based risk value.

Pollutant	Annual Max	RfC	Reference
Benzene	0.00056	30	IRIS
Toluene	0.00005	5,000	IRIS
Hexane	0.00898	700	IRIS
Formaldehyde	0.00062	9	CA EPA
Ammonia	0.07004	500	IRIS

*This table shows the average annual concentrations for each pollutant compared to the health-based risk value, also known as a Reference Concentration (RfC), for each pollutant. An RfC is an estimate of the level of pollution a person can be exposed to on a continuous basis without risk of negative effects during their lifetime. In other words, if the maximum annual pollution level is at or below the RfC for the individual pollutant, no additional assessment of health effects would be required. As seen above, the annual maximum concentration for each pollutant is far less than the RfC. The "Reference" column refers to where the RfC value was found: IRIS (Integrated Risk Information System - <https://www.epa.gov/iris>) and CA EPA (California Environmental Protection Agency - <https://calepa.ca.gov/>)*

The proposed facility will be under the jurisdiction of the Pennsylvania Department of Environmental Protection (DEP) and their Air Quality program. It will be permitted, monitored, and inspected by DEP staff. ACHD believes that potential pollution levels in Allegheny County will be minimal, and pose little to no threat to the health of Allegheny County residents. However, ACHD will continue to evaluate the facility whenever new information is available or operational changes occur that result in the potential for increased emissions.