Response to Community Questions

Stellantis Detroit Assembly Complex, Detroit, Michigan

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) held a community update meeting on January 27, 2022, to discuss the air sampling done in the area around the Stellantis Detroit Assembly Complex in Detroit Michigan. During the meeting, EGLE, the Michigan Department of Health and Human Services (MDHHS), and the Unites States Environmental Protection Agency (US EPA) provided information and answered questions related to the sampling, the findings, and potential health impacts related to the compounds found during the sampling.

More information about the Stellantis Detroit Assembly Complex and other Stellantis facilities can be found at Michigan.gov/EGLEStellantis.

Violations and Enforcement

1. Can enforcement actions be completed when the results of the air sampling and health assessment have not been finalized?

   Yes. Escalated enforcement action against Stellantis began on November 18, 2021. This action was in response to odor violations and permit violations cited in September, October, and November 2021. The escalated enforcement process can begin even if we are determining health risks. We continue to conduct our investigation and respond to complaints.

   MDHHS will continue to evaluate potential health risks within the community.

2. When were the violations discovered?

   The violation notices for odors were issued in September and November of 2021. The violation for the improper ducting of the prime ambient flash zone to the abatement equipment was discovered in October 2021.

3. When do odors trigger a violation?

   EGLE's Air Quality inspectors are responsible for odor investigations and determining if odors are of significant frequency, duration, and intensity to violate Michigan's Air Pollution Control Rule 901. All inspectors receive formal training in the identification and evaluation of odors. Inspectors also follow specific AQD complaint investigation procedures when conducting an odor investigation in order to

evaluate compliance with odors observed from regulated industry. Inspectors evaluated compliance with odors observed near the Stellantis facility utilizing these procedures and training.

4. How will Stellantis be held accountable for the odors and for not installing their equipment correctly?

   We are holding the company accountable. EGLE escalated enforcement against Stellantis on November 18, 2021. Finalizing the enforcement action can take some time, but this does not mean the company continues to violate rules or permit conditions. Additionally, we continue to conduct inspections and respond to complaints. If warranted, we will issue additional Violation Notices. If we identify new violations, they will be addressed in the ongoing enforcement action.

   The enforcement action will be in the form of a consent order. A consent order is a legally binding agreement between EGLE and Stellantis meant to protect the public from future violations and get the company into compliance as soon as possible. The Consent Oder will contain a monetary fine, a compliance plan, and penalties for future violations of the consent order, and may include a Supplemental Environmental Project.

5. When will the results of the enforcement process be shared with the public?

   An Enforcement Notice was issued on November 18, 2021, to start the escalated enforcement action. The enforcement action will address the violations cited by EGLE, including odor violations and not installing pollution control equipment required by the air permit. We are holding frequent meetings with Stellantis to finalize the terms of the proposed Consent Order.

   The public will have an opportunity to view a proposed Consent Order and submit comments before it is finalized. At this time, we do not have a specific date for finalizing the action, but we are working diligently to finalize the proposed Consent Order. Further information about the public's involvement will be provided at that time.

   After the public comment period is complete and the Consent Order is signed, Stellantis will be legally bound to the Consent Order and pay a fine for the violations cited by EGLE. The State will have oversight and will require Stellantis to meet the Consent Order. EGLE can issue additional fines if the requirements are not followed.

6. How much will Stellantis be fined for these violations?

   EGLE uses the US EPA's Clean Air Act Stationary Source Civil Penalty Policy and Michigan's statutory penalty authorities in Part 55 of the Natural Resources and Environmental Protection Act to calculate the fine. This policy lays out what the fine amount should be for each violation, and then those amounts are added up. The policy considers several factors, including actual or possible harm caused by the violation(s), the length of time of the violation(s), the sensitivity to the environment, importance to achieving the goals of the Clean Air Act and Michigan's Air Pollution Control Rules, the history of noncompliance, violator negligence or willful actions, cooperation to correct the violations, and the size of the violator. The fine amount will part of the proposed Consent Order and shared with the public before it is finalized.

AIR PERMITTING AND CUMULATIVE EFFECTS

7. Is MDHHS or EGLE considering the cumulative health effects from other polluting facilities in the area?

   The National Ambient Air Quality Standards (NAAQS) are health protective standards set by the US EPA and take a cumulative approach to individual pollutants, such as nitrogen oxides (NOx), by combining the emissions from the source, background levels, and nearby sources. A NAAQS evaluation was done with a computer model for both NOx and particulate matter less than 2.5 microns (PM2.5) during the review of the air permit applications. The computer model predicts what impacts future pollutants will have based on a worse-case scenario. This modeling included emissions from both Mack and the Jefferson North Assembly Plant (JNAP) for each pollutant. The results of the modeling analyses showed that there are no expected violations of any national standard for these pollutants.

   Additionally, in regard to the emissions of cumene and ethylbenzene, a modeling analysis was done for these pollutants looking at all sources of these specific compounds from both the JNAP and Mack facilities. The modeling analysis showed that each compound was well below its respective health-based screening level.

8. Can the Stellantis air permit be amended as part of the enforcement action?

   The Stellantis air permit will likely be revised at some point in the near future, however this is likely to happen after the enforcement process. Stellantis will be required to amend their permit if they want to propose certain changes to their process. The rules are very specific about what type of activities require changes to the permit. Any future permit application will be posted on our website for public review. A public comment period and public hearing will be planned once a draft permit has been written, following technical review.

9. What are the permit requirements related to odor and air quality?

   Each permit contains a condition prohibiting the operation of a process that causes an “unreasonable interference with the comfortable enjoyment of life and property” (General Condition 6). This condition stems from Michigan Air Pollution Control Rule 901. If someone is experiencing odors, they should contact the local Air Quality Division district office to report the odors. You can find the district office contact information here: AQD District Contact Information.

   In the Stellantis permit, the use of an air pollution control device, like a regenerative thermal oxidizer (RTO), helps to reduce the emissions going to the outdoor air. This control device can also reduce the potential for odors. The permit contains requirements for the inclusion of these types of controls, as well as a requirement to install and operate the control devices properly.

10. Do the permit limits consider the proximity of the emission points to the community?

    During the evaluation of a permit application, the proposed emissions from a process or facility are evaluated for compliance with applicable health-based standards. These can be the national standards, called the NAAQS, or other rules for specific pollutants, or they can be the health-based standards set by EGLE for emissions of toxic air contaminants, or TACs. The evaluation uses a computer program called dispersion modeling to look at the proposed emissions, and considers other things, like weather data, to ensure any emissions reaching the ground will not exceed health-based standards. The computer model

puts imaginary receptors along the property boundary extending into the areas around the facility in every direction. The goal is to find where the maximum impact area is and then to ensure even the maximum impact area is less than health-based standards.

AIR EMISSIONS AND ODORS

11. How far away were odors from Stellantis observed?

    Odor investigations leading to violation notices involved odors observed as far as 1500 feet downwind of Stellantis (9/3/2021 odor investigation) and as far away as 4000 feet downwind of Stellantis (12/27/2021 odor investigation).

12. Who completed the 3rd party odor study?

    The 3rd party odor evaluation was conducted by RWDI Air Inc., out of Ontario, Canada.

13. Can you provide the base line of pollution giving the 20-year average of Mack Engine and JNAP with the projected totals for a year's production of the new Mack and current JNAP operations?

    Every year, Stellantis is required to report their actual emissions from each facility, along with other reporting related to their permits. Average emissions from the MACK and JNAP plants, as well as the Warren Truck Assembly Plant, have been compiled for the 20-year period from 1999 to 2018 and are detailed below.

    Emissions from an engine plant are different than the emissions from an automotive assembly plant. The air quality rules and regulations for these source types are different and result in different pollutant emission limits. During the most recent permit application review, the more rigorous Nonattainment New Source Review (NANSR/NNSR) regulations were used. These regulations allow for industrial growth in an area while ensuring work continues to bring the area back into attainment. For ozone, the review focuses on its precursors or the pollutants, which when mixed together in the air, create ozone. These pollutants are nitrogen oxides (NOx) and volatile organic compounds (VOC).

    With the precursors for ozone in mind, the average actual NOx and VOC emissions, each separately, are identified below:

Facility	20-year average (1999-2018) NOx emissions, in tons per year (TPY)	20-year average (1999-2018) VOC emissions, in TPY	Actual VOC Emissions from November 2020 to September 2021
Jefferson North Assembly Plant	46.85	659.7	NA
Mack Engine Plant	12.38	3.35	NA
Mack Assembly Plant	NA	NA	85.4

AIR SAMPLING OR MONITORING

14. What factors are considered when any of the agencies are conducting air sampling or monitoring?

    In order to get samples providing as much information as possible, we look at production scheduling, weather forecasts, permit limits, emission points, areas of non-compliance, location of complaints, and various other things. This helps to have the most relevant information related to emissions from the source and how their activities may be contributing to odors within the community. Another important part of sampling is to look at areas which are upwind and downwind of the suspected source of emissions.

    Most air sampling of this type is setup to collect a sample for 24 hours. These sampling events are designed to collect during the evening, nighttime hours, and during daily commutes. Grab samples, which are quick, instantaneous samples, are used to determine compounds present during an odor event. Grab samples may also be used to determine future sampling needs.

15. Were vehicles being produced at Stellantis while the mobile sampling was taking place?

    Vehicles were being produced during air sampling on November 16, 17, 22 and December 8 and 17, 2021. District staff at EGLE can confirm the plant was operating during sampling times, without letting the plant know when sampling is occurring.

16. What long-term and regular monitoring is going to be done to determine what is being emitted and to measure levels of each of these compounds at the stack?

    EGLE will continue to observe stack testing, review testing reports and emission reports, and conduct site inspections. Stack testing is a specific type of testing done to make sure emission limits in the permit are being met as required. Stack testing is different than the sampling and monitoring we discussed at the January 27, 2022, Community Update Meeting. Although details of the Consent Order agreement are still being worked out, there will likely be additional testing for new odor abatement equipment, as well as monitoring and recordkeeping, to ensure the additional emission reduction measures are installed, maintained, and operated in a satisfactory manner.

17. Do you have any plans to start monitoring between the plant and the closest residence on the west side of the plant?

    EGLE AQD is considering future ambient (outdoor) air monitoring around the facility as part of the enforcement process. There may be opportunities for additional monitoring and/or testing after further review of the company's odor mitigation plan.

18. Why is Stellantis monitoring on the north side when the people live on the west side?

    When a permanent air monitoring site like the one at Stellantis, is established, many criteria must be met. It has to be away from buildings and trees, among other things. Stellantis does not have adequate space on the west side of the facility for a permanent monitor to be installed. The main wind direction is also considered, which is most typically from the southwest. The monitoring station is in the northeast corner of the property, which is considered downwind of the facility. This location meets all of the criteria.

EPA and MDHHS have conducted additional monitoring and sampling in the community west of Stellantis. We consider those results to be more representative for the people who live there."

19. Are these types of odors typically greater in colder or warmer weather?

    Odors are expected to be lower in cold weather and may be greater in warm weather. Weather is a consideration of any future air sampling.

20. What is the range of the ambient air monitor?

    An ambient air monitor is designed to measure specific pollutants in the outdoor, or ambient, air. The measuring devices are set up to gather samples in the area where people would be breathing. The range depends on what pollutant is being measured. Some pollutants travel great distances and can be the same over a vast region, for example SE Michigan. Other pollutants, such as VOCs, may be localized. An air monitor will sample the air that is above it during the sampling event, and depending on the wind speed and wind direction, pollutants can come from a variety of locations. Some VOCs are commonly found in vehicle exhaust and from a variety of industrial sources, so it may be difficult to know where a specific chemical is coming from. How representative the data is dependent on the pollutant of interest and the weather conditions at the time of sampling. VOCs tend to vaporize quickly if the temperature is warm enough. EGLE would not expect to see these chemicals far away from the facility.

NEXT STEPS

21. Is additional air sampling or monitoring being planned?

    An additional sampling event is being planned. Specifics of the plan have not been finalized. Results and an evaluation of any future sampling will be shared at Michigan.gov/EGLEStellantis.

22. What mechanisms is EGLE going to put in place to discover and address issues like this faster and handled in a way that prioritizes public health?

    A company's compliance with their permit conditions and other applicable rules and regulations is one of EGLE's highest priorities. It is rare for a facility to not install new process equipment or control equipment properly. Typically, mechanical, and other related pre-operation inspections done by outside or company contractors would help identify if a deficiency has occurred. EGLE is looking at our current processes to see if improvements may be made to identify potential problems earlier. EGLE will continue to respond to complaints, conduct inspections, and observe stack tests when new process equipment is installed and/or process equipment modifications happen.