

Trichlorethylene (TCE) Release

Diamond Chrome Plating

604 S. Michigan Avenue, Howell, Michigan

Response to Questions from November 21, 2019 Public Meeting

The questions and answers contained in this document represent the questions that were asked during the Diamond Chrome Plating (DCP) Public Meeting, hosted by the Department of Environment, Great Lakes, and Energy (EGLE), the Department of Health and Human Services (DHHS) and Livingston County Health Department.

In this document, you will find questions answered by category or topic. These have been grouped together for your convenience. Additionally, many questions covered the same concept and were paraphrased into one question to make finding answers to your questions easier. The number of questions asked per category or topic is included in parenthesis after the topic name.

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COMMUNITY INVOLVEMENT (3 Questions)

1. What homes were given letters and how many blocks away were they from Grand River Avenue?
Homes within about a five-block radius of DCP were given information regarding the public meeting.
2. EGLE will hold DCP accountable through fines, penalties, and future oversight but DCP has dealt with the consequences and continued to operate. How can community members’ voices be heard during the decision-making process?

EGLE strives to be transparent and open in decisions affecting the public health and the environment. There are a variety of ways for the public to be involved and to participate in decision making. Some of these include attending public meetings and providing comments on proposed permits and rules. The best way to be notified is to access the EGLE Calendar at Michigan.gov/ENVcalendar and to sign up for notifications by clicking on the red envelope on any EGLE webpage or visit Michigan.gov/EGLEconnect.

3. As a community, are there any legal actions we can take to shut the company down?

The Federal Clean Air Act defines the responsibilities of the EPA as protecting and improving the nation's air quality. The last major changes are referenced as the Clean Air Act Amendments of 1990. The Federal Clean Air Act was incorporated into the United States Code as Title 42, Chapter 85. Amongst its provisions, the Federal Clean Air Act allows citizens to file a citizen suit under 42 U.S.C. § 7604.

Citizens may sometimes have legal options under local law where nuisance provisions may be available. Visit www.cityofhowell.org/residents/city_ordinances_charter/index.php to reference the City of Howell's ordinances, including *Chapter 652 - Nuisance*.

DCP OPERATION (9 Questions)

4. How does a vapor degreaser work?

A vapor degreaser is a special kind of still. A vapor degreaser heats a cleaning fluid, such as a solvent. Metal parts are lowered into a tank containing vapors from boiling solvent, and a lid is closed above them. The hot vapors condense on the relatively cool parts. The droplets wash the parts as they run off and return to the boiling solvent below. A cold refrigerated layer of air above the parts is used as a barrier to minimize the amount of vapors being released.

5. Do we know how long DCP has been using this degreaser? Is this a new degreasing process?

The current vapor degreaser was installed as new on November 20, 2018, replacing a previous vapor degreaser. There were at least three (3) vapor degreasers before that.

6. How long has DCP been using TCE at their facility?

Although the use of TCE may go back further, EGLE's earliest documentation of TCE being used at the facility is in a 1981 Air Quality Division inspection report.

7. When was pollution control equipment in the plant last updated to EPA standard (year)?

The current vapor degreaser was installed as new on November 20, 2018, replacing a previous vapor degreaser. The unit was equipped with air pollution control equipment to comply with a federal standard. The equipment is routinely inspected to determine compliance with all state and federal air pollution requirements.

8. How many days/hours per week was the degreaser running?

Diamond Chrome's vapor degreaser is a batch process, which means the degreaser was not operated on a specific schedule (i.e., once per day), but rather on an as needed basis. The metal parts are placed in a basket and the basket is lowered into the vapor layer for a specific amount of time depending on the amount of surface area to be cleaned. The degreaser previously was placed in one of three modes, either idle mode, working mode or chill mode.

- Idle mode is a "standby mode" during which time the vapor degreaser was covered, and degreasing solvent was heated, and the chiller maintained a chilled air blanket designed to keep the heated vapor within the degreaser unit.
- Working mode is like idling mode but the unit is cleaning parts and is covered with a working mode cover.
- Chill mode is like idle mode, in that the unit is covered and the chiller maintains a chilled air blanket but the degreasing solvent within the degreaser unit is unheated.

Typical operation consisted of the degreaser being placed in idle mode for most of the day and operating in working mode for a few hours a day for a few days a week. The unit was placed into chill mode when not in idle or working mode.

9. Does DCP have an air permit? If no, why not?

DCP has several air permits for different processes within the plant. However, the vapor degreaser has operated under an exemption from the permit process. The exemption allowed the degreaser to release emissions into the general in-plant environment without obtaining an air permit. While the vapor degreaser was exempt from requirements to obtain an air permit, it was included in EGLE's Air Quality Division's (AQD) inspections to determine compliance with applicable state and federal air pollution rules and regulations.

10. When was the last time the unit was tested?

The rules and regulations associated with vapor degreaser like the one used at DCP do not have specific requirements for testing of the unit. Instead, there are several requirements to monitor the operation of the unit. Proper operation of the unit ensures emissions are minimized. Monitoring records and frequent inspections aid in determining compliance with the rules and regulations. The rules and regulations do not require testing.

11. Are there other chemicals DCP is using that we should be concerned with?

Industrial facilities use a variety of materials and DCP is no exception. EGLE will continue to monitor the activities at DCP. DCP is required under the Federal Emergency Planning & Community Right-to-Know Act to report what materials used and stored on site to the Livingston County Local Emergency and Planning Committee. If a resident would like specific information, they should contact the county and submit a Freedom of Information Act request.

12. When will DCP re-open?

When the public health order was given to cease release of TCE, DCP stopped using their degreaser. Other operations in the facility, not using TCE, were continued.

COMPLIANCE/ESCALATED ENFORCEMENT (5 Questions)

13. EGLE states "It's been a struggle" to get DCP within compliance. Which enforcement authority is responsible or has control?

As a regulatory branch of state government, EGLE staff continue to engage in efforts to resolve identified compliance issues and to ensure corrective actions are taken to achieve, maintain and document compliance with federal and state rules and requirements.

In addition, EGLE is actively engaged in monitoring compliance with the terms of a consent decree (First Amended Consent Decree), a legally enforceable settlement document entered by EGLE and DCP. EGLE is working diligently to resolve cited violations, to monitor and evaluate compliance measures required under terms of the consent decree, and to ensure that appropriate compliance actions are implemented.

14. How many times can a company be in violation before they are shut down? They have a history of PFOS contamination and now TCE.

EGLE entered into a Judicial Consent Decree in 2006 that was modified in 2015 and is called the [First Amended Consent Decree](#) and is still in force. DCP's violations are related to water quality, air permit issues, prior releases to soil and groundwater and compliance with management of its wastes. EGLE is in the process of establishing an enforceable document that would require monitoring and treatment for PFOS in its wastewater. DCP already has treatment in place for PFOS discharged to both the sanitary sewer and directly to the river.

Air Inspections and Violations

15. How many total violations have been issued to DCP?

Since 1975, the AQD has issued approximately 20 violations to DCP.

16. With all these violations, how often do these inspections occur? Does the frequency increase as a result of this?

Since 2014, the AQD has been to this facility 19 times, including inspections, stack tests, and other compliance checks. Inspections typically increase at a facility that has ongoing compliance concerns.

17. How do we guarantee this won't be an issue in the future and how will we know DCP is actually in compliance? What will be done in the future to deter DCP from continuing to violate state/federal rules?

DCP is inspected on a routine basis to determine compliance. Most of these inspections are done unannounced. The company removed TCE from the degreaser, and this was verified by AQD. In the future, the company will have to provide documentation and demonstrate that any new process meets all applicable state and federal regulations and does not adversely impact public health.

TESTING AND SAMPLING FOR AIR, SOIL, AND WATER (15 Questions)

18. Can you post levels and locations of the air testing on the [Michigan.gov/DiamondChrome](https://www.michigan.gov/DiamondChrome) website?

Yes, the locations and test results collected prior to the public meeting as well as other results have been posted. Any new information will be posted as it becomes available. Additionally, outdoor (ambient) air results from DCP's volatilization to indoor air pathway (vapor intrusion) evaluation will be posted on the website.

19. How long have you been testing?

Testing for environmental contamination has been ongoing since 2001. At this time EGLE discovered elevated concentrations of hexavalent chromium (a chemical used to apply a chrome layer) in storm sewers emptying into the Marion-Genoa drain. This contamination was traced back to DCP. EGLE staff continued to investigate contamination issues tied to DCP. Indoor air testing began in 2019 after contamination investigations identified locations of vapor sources that may pose risk to businesses and residences.

20. When was the last air test done for TCE in downtown Howell?

The air sampling that was conducted by EPA was focused around the DCP facility. Sampling locations closest to downtown were located at Sibley & Center Streets and Sibley & Lincoln. Both sites were non-detect for TCE during the Friday November 22 testing.

21. In the best-case scenario, can the emission level be reduced to zero? So not to affect home value?

It is unlikely that TCE emissions will be zero because the laboratory detection limit is greater than zero. The goal is to reduce TCE emissions to levels below a public health concern. On November 18, 2019 DCP stopped degreasing parts with TCE and as November 25, 2019, DCP has eliminated the use of TCE in its vapor degreaser.

22. Why wasn't the public notified earlier when the testing was done in March and August of 2019? (7)

In March 2019, while conducting indoor air sampling during a vapor intrusion investigation, elevated levels of TCE were observed. Air purifying units were installed at three residences based on this investigation. No information was available at the time to indicate other residences might be affected. However, based on the sampling results, EGLE required DCP to continue to investigate the source of the TCE. Evaluating the origin of TCE in a home must account for: consumer products that may contain TCE; storage of solvents and cleaners; possible transport of vapors through subsurface utility lines and sumps; and seasonal variation of sub-surface soil gas migration patterns.

Another round of testing for TCE was done in August 2019. Results indicated current DCP plant operations and not just historical contamination, may be a source of TCE venting to the outdoor air. EGLE continued to investigate and in November 2019 EGLE collected ambient (outdoor) air samples to attempt to explain detections of TCE in the ambient air observed at a nearby dry-cleaning clean-up site. Since EGLE suspected DCP might be the primary source of the TCE, sampling devices were placed between the dry-cleaning site and the DCP plant with the wind blowing from the direction of DCP. The sample results indicated TCE in the ambient air was at concentrations above public health concerns. Once this information was received EGLE, the Michigan Department of Health and Human Services (DHHS) and the Livingston County Health Department took steps to notify the public of the potential concerns with TCE.

23. You found TCE in and around the facility, did we find it in other locations?

Yes. After the degreaser at DCP was not being used, the levels of TCE in ambient (outdoor) air were very low but were detected. One sample that was collected over 24 hours near the SE corner of the facility near the train tracks detected TCE after the degreaser was no longer in use. In addition to 24-hour sampling, EPA conducted some shorter-term grab samples. Some of the shorter-term grab samples detected TCE near the facility on different dates. Some air grab samples near a storm sewer north of the facility and south of the facility detected TCE. The storm sewer issue is being investigated by the City of Howell and EGLE's staff.

Additionally, in an area near Sibley and Michigan Avenues, historic dry-cleaner releases of tetrachloroethylene, known as PCE, have occurred. These releases happened before PCE was regulated. Over time, bacteria in soils and groundwater break down PCE and turn it into TCE and other chlorinated solvents, such as vinyl chloride. EGLE has installed two mitigation systems to remove vapors from under buildings affected by PCE contamination. To monitor PCE and TCE in the outdoor air, EGLE collects samples from the mitigation systems on a routine basis. To date, monitoring results have not indicated releases of TCE to the ambient air due to the operation of the mitigation systems which would present a public health risk.

24. If the SUMMA canister testing happened after the degreaser was shut off, where did the TCE come from? In the best-case scenario, can the emission level be reduced to zero, so not to affect home value?

The investigation is still ongoing. EGLE will continue to monitor sources of historical contamination to ensure levels are protective of human health. The levels observed are not expected to get to zero. Allowed sources of emissions, such as those from industrial processes are reviewed to ensure public health is protected, while still allowing for economic growth and stability.

25. Do you know about 55-gallon drums buried in lot north of DCP property?

There are no known 55-gallon drums buried at DCP's north parcel. EGLE staff conducted oversight of DCP's construction of monitor wells on its north vacant lot. DCP placed soils dug up during the monitor well installations into 55-gallon drums which were visible from the street.

Soil and Groundwater Testing:

26. Why are we only focusing on the ambient air TCE plume? What about the groundwater and soil plume (including heavy metals, hex chrome, chlorinates, PFAS)?

The purpose of the public meeting was to ensure the public was aware of the public health order related to TCE emissions and what those emissions may mean for residents. DCP has a long history of releases of hazardous substances into the environment which is why EGLE chose to create a path to compliance by entering into a consent decree with DCP. The consent decree includes financial penalties for failing to resolve compliance issues (including soil and groundwater contamination) or meeting contaminant investigation and cleanup milestones.

27. Mile radius for soil/ground water contamination? How far away did you test?

DCP has spent several years investigating the extent of its soil and groundwater contamination. Soils contamination is largely confined to the DCP property south of Livingston Street. Groundwater contamination extends further to the south of DCP and ends north of Mason Road. However, contaminated groundwater infiltrates into portions of the City of Howell storm water and sanitary sewer systems in areas that have not been lined or patched. DCP has installed controls and treatment of its stormwater and is required to monitor the success of its controls.

Ambient (Outdoor) Air Testing:**28. Have we tested the air before August? What makes you decide to test the air?**

Yes. Limited sampling (grab samples) of ambient air was done to evaluate emissions of two mitigation systems installed in June 2019. These samples were taken near a known source of dry-cleaning solvent contamination. This solvent is called tetrachloroethylene (PCE). When PCE breaks down, it will form TCE and other chlorinated solvents. The grab samples showed unexpected levels of TCE, but not levels expected to cause harm to public health.

In this case, when the results from additional grab samples were taken again in early November 2019 indicated further action and more thorough sampling may be necessary. EGLE staff conferred with staff from MDHHS and it was determined further sampling was warranted. EGLE and EPA collaborated to create a sampling plan in Howell around DCP in order to determine concentrations of TCE in the ambient (outdoor) air.

29. Do we have a mile radius of air exposure? How far away did you test?

Sample results and mapped locations can be found at Michigan.gov/DiamondChrome under “What is EGLE doing?”

30. Will DCP have a permanent air monitoring unit outside of the facility with readings being reported on the webpage?

Now that DCP has removed all the TCE from the facility, it is not anticipated that they will conduct additional or permanent air monitoring at or near their facility.

31. How long do the summa canister units stay in place?

The summa canister sampling is conducted for a 24-hour time period. The canisters are emptied in the lab and are under a negative pressure so when they are opened outdoor air is drawn in. A clean specialized regulator is attached to the canister which allows for a slow sampling to occur over 24 hours. On a sample day, the regulator is attached to the top of the canister, the canister is secured to a sign or utility pole, and the regulators turned on to start sampling the air. Staff return the following day to turn the regulator off and send the canisters and regulators to the laboratory for analysis.

32. How will this continued monitoring occur?

The United States Environmental Protection Agency (EPA) provided resources and assistance to EGLE to conduct ambient air sampling at 15 sampling locations. At the same time, EGLE sampled at 5 locations. The sampling used summa canisters designed to draw in outdoor air for 24 hours at each location. This sampling was done shortly after DCP stopped using their TCE vapor degreaser.

EGLE, EPA and DCP have conducted additional ambient air sampling before and after TCE was removed from the degreaser. The results to date did not detect TCE in the neighborhood above health concerns. DHHS, LCHD and EGLE are evaluating the existing sampling results to determine the level of ambient air monitoring necessary to ensure the public is not exposed to elevated levels of TCE. Sampling results can be found at Michigan.gov/DiamondChrome.

VAPOR INTRUSION (3 Questions)

33. How can I find our more information about Vapor Intrusion?

Resources for the public, related to vapor intrusion can be found at Michigan.gov/vaporintrusion.

34. Per EGLE, TCE was found on the street in front of Snedikor's at 14 times the acceptable level? Will EGLE be testing homes between DCP and Snedikor's?

TCE was detected three blocks south of the Snedikor's facility at concentrations 10 to 11 times acceptable levels. EGLE, DHHS and the LCHD are evaluating all pertinent data for the purpose of determining future monitoring to ensure the public is not exposed to unacceptable concentrations of TCE.

35. How do I get my air checked? How do I get my soil checked? How do I get my water checked?

EGLE staff are available to answer specific questions regarding the location of contaminants in your area and upcoming sampling work to be performed by DCP or EGLE. If an individual homeowner wishes to perform environmental testing on their property outside of what is identified by DCP or EGLE, they may consider contacting a consultant.

REMEDIATION (3 Questions)

36. Is there a bigger remedial plan?

EGLE requested DCP to conduct a timely evaluation of its TCE release and to continue monitoring potential impacts in structures within 100 feet of known vapor sources. To date data collected indicates the TCE vapors do not appear to be entering nearby homes or business at concentrations of concern. As more information becomes available, EGLE continues to evaluate available options to address DCP's TCE release in partnership with DHHS and LCHD. As part of this ongoing evaluation, you may be asked for permission to enter your home, to evaluate if TCE or other chemical vapors may have reached your property. This will help to understand what actions, if any, should be taken to address this matter.

37. Is it true DCP had wash water contamination in 2015?

DCP sends its process wastewater (wastewater from manufacturing processes) to an on-site wastewater pretreatment system and then discharges it to the City of Howell sanitary sewer for further treatment at the City of Howell Wastewater Treatment Plant (HWWTP). The HWWTP discharges to a nearby tributary of the South Branch of the Shiawassee River. The City of Howell and EGLE require DCP to only discharge wastewater to the sanitary sewer which meets specific limits. In 2015, DCP was in noncompliance with phosphorus one day in the spring and ammonia-nitrogen limits one day in the fall. Corrective action was taken, and the facility returned to compliance.

DCP also discharges contaminated storm water runoff and groundwater to a city storm sewer discharging directly to the same nearby tributary of the South Branch of the Shiawassee River. EGLE has issued a National Pollution Discharge Elimination System (NPDES) permit with limits for pollutants of concern such as hexavalent chromium and total chromium. DCP installed a treatment system to meet NPDES limits. Compliance with this permit is part of the first amended consent decree. In 2015, DCP violated effluent limits for hexavalent chromium in December due to unexpectedly high concentrations of the pollutant and insufficient treatment.

If there are questions about wastewater compliance, please contact the City of Howell or Ms. Carla Davidson at davidsonc@michigan.gov or 517-243-1249.

38. What mitigation is currently being used to remediate this plume?

DCP has installed three groundwater extraction wells, which once fully operational, this component of the proposed remedy will pump contaminated water through its on-site wastewater treatment plant prior to permitted discharge to the City of Howell wastewater treatment plant. The permitted treated wastewater discharge requires periodic monitoring to ensure compliance with permit requirements.

DRINKING WATER CONCERNS (5 Questions)**39. Is TCE in our drinking water?**

The drinking water for the City of Howell is pumped from a series of deep wells located southwest of the city about four miles away from the groundwater contamination at DCP. These wells are routinely tested for many potential contaminants in the water, including TCE which has been “not detected”.

40. Is there any threat to the well-head of the city? Does this affect Thompson Lake?

Due to the distance between DCP and the wells for the City of Howell, there is no threat for TCE contamination to enter the wells. Further, the City of Howell actively participates in [EGLE's Wellhead Protection Program](#), which helps to protect the groundwater resource by restricting certain types of development, identifying and limiting possible contamination sources, and property owner education.

The contaminated groundwater plume located near DCP has been extensively studied and moves to the Southwest, away from Thompson Lake.

41. Does the municipal water company test for TCE?

Yes. The City of Howell is required to test for many possible contaminants in the drinking water. TCE is tested for every three years and has always been “not detected”. The most recent results were from June 2018 from the water treatment plant and June 2019 for the “back-up well” which is maintained for emergency use only and is the closest to DCP.

42. Should we be concerned about private well water safety?

There are a few private wells located along Mason Road and Michigan Avenue which are sampled annually for several potential contaminants, including TCE. These well results have been “not detected”. All other private wells are located a greater distance away and are not considered to be at risk. You can contact Livingston County Health Department, Environmental Health Division if you should have specific questions about your private well water quality. 517-546-9858

43. If there is contaminated groundwater, could it make its way into the municipal water system

No. Water lines are typically above the water table, made of materials that do not allow infiltration and are always under positive pressure. These factors prevent contamination from entering the system.

WORKER SAFETY (1 Question)**44. Is there an employee health service that is needed to ensure they [DCP] follow proper chemical regulations?**

Worker health and safety are handled by the Michigan Occupational Health and Safety Administration (MIOSHA). If you have concerns about this, please contact MIOSHA at 800-866-4671.

OTHER (3 Questions)

45. Why is a DCP representative not a part of the panel answering questions tonight?

DCP was invited to attend the meeting. The intent of the meeting was to remain focused on getting test results, resources and next steps out to the public so community members could ask questions of agency staff.

46. How long were we exposed to TCE?

It is impossible to know how long any person may have been exposed to TCE. Anyone exposed to chemical vapors can be at risk. As with most chemicals, the risk of health problems depends on how much of the chemical you breathed in, how long you were breathing it, and how your body reacts to it.

If you are concerned that you may have health problems related to possible exposure to TCE, talk to your health care provider.

47. Who is paying for the co-pay for a doctor visit?

There is no available funding to cover co-pays.

Michigan's Environmental Justice Policy promotes the fair, non-discriminatory treatment and meaningful involvement of Michigan's residents regarding the development, implementation, and enforcement of environmental laws, regulations, and policies by this state. Fair, non-discriminatory treatment intends that no group of people, including racial, ethnic, or low-income populations, will bear a disproportionately greater burden resulting from environmental laws, regulations, policies, and decision-making.

Meaningful involvement of residents ensures an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health.