

**STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY**

**IN THE MATTER OF THE DENIAL OF CONTESTED CASE HEARING
REQUEST AND ISSUANCE OF AIR EMISSIONS PERMIT
NO. 12300341-101 FOR WATER GREMLIN COMPANY
CITY OF WHITE BEAR LAKE, RAMSEY COUNTY, MINNESOTA**

**FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER**

FINDINGS OF FACT

Based on Minnesota Pollution Control Agency (MPCA) staff review, public comments and information received during the comment period, and other information in the record of the Agency, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order:

I. Facility Description and Overview

1. Okabe Holdings USA, Inc. (Owner) and Water Gremlin Company (Owner and Operator) (Permittee(s)) own and operate a lead metal products fabrication facility (Facility) located at 4400 Otter Lake Rd, White Bear Township, Ramsey County, Minnesota. The Facility produces battery terminal posts for automotive, marine, and other consumer, commercial, governmental, and military vehicles and equipment. Other fabricated products include lead and tin sinker weights for recreational fishing applications, and lead components for governmental, commercial, recreational, and personal ammunition. Following fabrication, some battery terminal posts are treated with a coating to protect the products from corrosion or to improve fit with other components.
2. The air emission units at the Facility include battery terminal post coating units (coaters), die casting units, lead and tin melt pots, coining units, abrasive blasting units, makeup air units, space heaters, an emergency generator, and a soil vapor extraction unit.
3. The major pollutants of concern include volatile organic compounds (VOC), *trans*-1,2-dichloroethylene (t-DCE), lead, particulate matter (PM), particulate matter with aerodynamic diameter less than 10 micrometers (PM₁₀), particulate matter with aerodynamic diameter less than 2.5 micrometers (PM_{2.5}), and nitrogen oxides (NO_x).
4. Since 2000, the Permittee has operated pursuant to a state individual, non-expiring air emissions permit issued by the MPCA, and two major amendments issued in 2002 and 2006.
5. This permit action for a major amendment is the result of more than four years of permit development, following an enforcement action that prompted significant changes at the Facility.

II. Permitting History: 2000 – 2006

6. State and federal law set emission thresholds for various pollutants, including VOC and hazardous air pollutant (HAP) emissions, that trigger the need for an air quality operating permit. Minn. R. 7007.0150-.0250; 42 U.S.C. § 7401, et seq. If a facility's potential to emit (PTE) of any regulated pollutant is greater than or equal to the federal Title V, Part 70 major source threshold, the facility will be considered a major source and will require a Title V, Part 70 permit to operate, and may be subject to stringent operating requirements and extensive regulations under the National Emission Standards for Hazardous Air Pollutants (NESHAP). 42 U.S.C. § 7661c; Minn. R. 7007.0200. For VOC, the federal Title V, Part 70 threshold is 100 tons per year, and for HAP, the federal Title V, Part 70 threshold is 10 tons per year. Any facility emitting greater than or equal to that amount must obtain a Part 70 permit.
7. To avoid the need to obtain a Title V, Part 70 permit and corresponding requirements, a facility may agree to enforceable operating conditions to limit its emissions. Limiting emissions in this manner is referred to as making a facility a "synthetic minor" and the permit is referred to as a "synthetic minor permit." Acceptable synthetic minor limits must include specific emission limits as well as operational or production limits to restrict emissions below the federal threshold. Minn. R. 7007.0150-.0250.
8. Until January 2019, the Permittee used a solvent, trichloroethylene (TCE) in its operations. At the time, TCE was the largest HAP emitted from the Facility.
9. Because TCE is designated as a VOC and a HAP and can cause significant health effects, the Facility is subject to both state and federal regulations under Minn. R. 7007, et seq. and the Clean Air Act, 42 U.S.C. § 7401, et seq.
10. With its initial permit, the Permittee agreed to limit its emissions below the federal threshold and applied to the MPCA for a synthetic minor permit. Specifically, the Permittee agreed that emissions from all battery terminal post coating machines would be routed to a pollution control device, a catalytic oxidation system, which would control at least 95 percent of TCE emissions from the Permittee's coating process. Based on the information and assurances provided by the Permittee, the MPCA issued the Permittee a synthetic minor permit, air emissions permit No. 12300341-001 (Permit 001), on July 20, 2000. Permit 001 was a non-expiring air emissions permit.
11. On July 19, 2001, the Permittee submitted to the MPCA an air permit application to replace its control equipment, a catalytic oxidation system, with a new control equipment unit, a fluidized bed organics recovery system (identified in the permit as "CE003"). The Permittee represented to the MPCA that the reason for the replacement was because the catalytic oxidation system was not working as planned. The Permittee also represented the new CE003 would provide a minimum control of 95 percent, which would limit the Facility's HAP emissions to less than 9.5 tons per year.
12. On March 18, 2002, the MPCA issued air emissions Permit No. 12300341-002 (Permit 002) to the Permittee, which allowed construction and operation of CE003, and required a VOC and HAP performance test within 30 days of permit issuance to measure control efficiency of CE003.
13. Permit 002 required operation of CE003 at all times during which the associated emission units were in operation and that CE003 maintain a minimum 95 percent control efficiency.
14. On April 10, 2002, the Permittee conducted a VOC performance test on CE003, which demonstrated an average VOC removal efficiency of 98.9 percent. The permit did not require additional performance tests on CE003. Compliant operating parameters determined during the performance test, were incorporated in Permit 002, as well as recordkeeping and monitoring requirements.

15. Following the VOC performance test, from May to August 2002, the Permittee reported issues with CE003 but represented that it had identified the root cause of the issues and had repaired and rebuilt CE003.
16. On August 28, 2002, the Permittee sent the MPCA a letter from the manufacturer of CE003, which attributed the root cause of the breakdowns to significant internal condensation in the region between the top of the heated section tube sheet and the seal zone tube sheet. This caused areas of corrosion and erosion allowing an oil breach and required parts to be replaced. On February 14, 2003, the Permittee represented that CE003 had been rebuilt and was up and running. The MPCA, therefore, did not require an additional VOC performance test.
17. On March 29, 2006, the Permittee submitted an air permit application to revise current permit requirements to allow more flexibility in changing market conditions, remove obsolete permit requirements, and include pre-approved future coaters to be installed without further MPCA authorization required.
18. On September 22, 2006, the MPCA issued air emissions permit No. 12300341-003 (Permit 003) to the Permittee. As with previous permits, Permit 003 required that the Permittee comply with permit conditions related to VOC and HAP emissions, so that the Facility's emissions were limited and the Facility is not considered a major source under the Part 70 permit program. To limit VOC and HAP emissions, the Permittee was required to operate CE003 at all times the associated emission units were in operation, and to maintain at least a 95 percent control efficiency. The MPCA relied on the 2002 VOC performance test and the Permittee's maintenance and rebuilding as the justification for CE003's capability to operate above the required 95 percent control efficiency and included operating and recordkeeping requirements for CE003 in Permit 003.
19. Between July 2010 through December 2018, CE003 experienced multiple breakdowns.
20. The Permittee did not seek another major amendment to air emissions permit until October 2018, when it requested to replace CE003 with a new fluidized activated carbon bed for its coating process. This permit action also addresses required changes to the Facility resulting from an enforcement action initiated in 2018.

III. Stipulation Agreement and Administrative Orders: 2018 – 2020

21. Prior to 2018, MPCA had not initiated an enforcement action against Water Gremlin on air quality matters. On January 7, 2004, February 13, 2012, and February 7, 2017, the MPCA conducted inspections at the Permittee's Facility. Those inspections did not result in enforcement actions taken by the Agency.
22. On July 23, 2018, the Permittee submitted a shutdown/breakdown notification stating that CE003 was begin taken offline and that it was operating at a reduced rate of six coating machines during this shutdown period.
23. The permit required that CE003 is operated at all times the associated emission units were in operation.
24. On July 30, 2018, the Permittee submitted an Environmental Audit Program Report Inventory Submittal (Environmental Audit Report) to the MPCA, disclosing several violations of Permit 003.
25. On September 20, 2018, the Permittee met with the MPCA to discuss the Environmental Audit Report. During the meeting the MPCA was informed that CE003 was shut down on July 22, 2018. The Permittee stated it would replace the equipment promptly. The Environmental Audit Report stated that the audit was conducted on June 28, 2018, and that CE003 was not in operation at that time. During the September 20, 2018 meeting, the Permittee stated that it had continued to operate associated emission units since CE003 was shut down on July 22, 2018 at an unknown reduced rate even though they understood that this was prohibited by Permit 003. The Permittee

did not keep records on which days CE003 was not operating. The Permittee did not provide emissions calculations at this meeting and the MPCA demanded the Permittee provide additional information.

26. On October 23, 2018, the Permittee submitted a major air permit amendment application to replace CE003 with a new fluidized activated carbon bed to control TCE emissions. The Permittee indicated its intention to limit VOC and HAP emissions so it would remain a synthetic minor source under Part 70.
27. In November and December 2018, through meetings and information requests, MPCA discovered as part of its enforcement investigation that CE003 had not been maintaining 95 percent control since at least 2009, and that the Facility had emitted more than 100 tons of TCE for calendar year 2018 through November 20, 2018. The Permittee's emissions exceeded the federal threshold, qualified it as a major source, prohibited the Permittee from operating without a Title V, Part 70 permit, and subjected the Permittee to the additional Part 70 requirements such as 40 CFR Part 63, Subpart Mmmm: Surface Coating of Miscellaneous Metal Parts and Products (NESHAP Mmmm).
28. On January 11, 2019, the Permittee submitted calculations to MPCA that showed an increase in VOC/HAP emissions from coating machine operation since July 2018. This documentation contradicted the Permittee's previous representations to MPCA that it had reduced coating operations.
29. The Permittee also submitted the monthly emissions calculation for December 2018 required by the NESHAP Mmmm, revealing that the Permittee was exceeding the federal coating HAP content limit of 2.06 pounds organic HAP per gallon coating solids.
30. On January 14, 2019, the MPCA held a teleconference with the Permittee to discuss voluntary cessation of the coating operations. The Permittee agreed and voluntarily ceased operations the same day.
31. In January and February 2019, the MPCA and Permittee met numerous times to discuss potential safe coating operations and the circumstances they could be conducted prior to installation of new control equipment.
32. TCE exposure can cause health effects, including effects in the developing fetus from both acute and chronic exposure. The Minnesota Department of Health (MDH) develops Health-Based Values (HBVs), which are action values developed using available toxicity guidance. HBVs are intentionally very protective and are used to set limits on facility emissions to protect the surrounding community. The MDH-developed HBV for TCE is 2 micrograms per cubic meter.
33. MPCA conducted modeling to determine the impact TCE emissions may have had on the local community.
34. Modeling conducted by MPCA showed that Water Gremlin's TCE emissions exposed neighborhoods surrounding its facility to TCE levels well above MDH's health-based value.
35. On February 8, 2019, the Permittee amended its air permit application, switching the solvent in the application from TCE to an alternative product called FluoSolv WS, which includes *trans*-1,2-Dichloroethene (t-DCE) as its main ingredient.
36. On March 1, 2019, the MPCA and Water Gremlin entered into a Stipulation Agreement (2019 Stipulation Agreement) resulting in one of the largest civil penalties in MPCA enforcement history.
37. The 2019 Stipulation Agreement allowed Water Gremlin to switch from TCE to the t-DCE product, FluoSolv WS. The Agreement provided for an operating scenario which included strict limits on Water Gremlin's t-DCE usage including preventing the company from using excessive quantities during the first few months while the new equipment was being installed and becoming operational. Water Gremlin was also required to monitor the air and reduce its t-DCE usage when concentrations measured in outdoor air exceeded an action level established in the agreement.

38. The 2019 Stipulation Agreement also required Water Gremlin to conduct a remedial investigation and sample soil, groundwater, and soil vapor at its Facility.
39. On June 20, 2019, Water Gremlin received sampling results of its remedial investigation. The results showed that Water Gremlin's Facility released t-DCE to the soil vapor beneath its plant, which was not a release allowed under Water Gremlin's permit or the 2019 Stipulation Agreement. The presence of t-DCE concentrations in the soil vapor was alarming because Water Gremlin had only been using t-DCE for three months and all emission in the coating room were required to be emitted through the stack from a totally enclosed room. The emissions should not have been released to the soil vapor.
40. MPCA determined that Water Gremlin did not have control over the active release of t-DCE, and this created a public health concern.
41. On August 22, 2019, the MPCA issued an Administrative Order to the Permittee to immediately cease all solvent-based coating operations. The Permittee was prohibited from continuing its solvent-based coating operations until corrective measures to prevent additional t-DCE emissions below the Facility were approved by the MPCA.
42. On January 17, 2020, the MPCA issued an Administrative Order that allowed Water Gremlin to resume operations under extensive and stringent conditions. Water Gremlin was required to seal the floors in its coating rooms with a vapor intrusion coating system to prevent vapors from releasing beneath the building. The Order also required Water Gremlin to do more testing of the indoor air and sub-slab to evaluate releases from coaters, and to test the effectiveness of the coating room's enclosure. The Order required additional testing and verification measures to ensure total enclosure integrity, including a performance test, pressure monitors, and alarms for when negative pressure is lost.
43. As a result of the developments taking place at the facility, Water Gremlin submitted several supplements to its air permit application.

IV. Community Involvement and Public Interest

44. Due to a high level of sustained community interest, the MPCA provided for enhanced community and stakeholder involvement during the entire permit development process.
45. In reaction to the public disclosure about the 2019 Stipulation Agreement, members of the public residing in the neighborhood around the Water Gremlin Facility formed the White Bear Area Neighborhood Concerned Citizens Group (NCCG).
46. The MPCA air quality, hazardous waste and remediation staff and leadership, as well as the MDH, began meeting regularly with the NCCG in March 2019 to provide information about the enforcement action, discuss health concerns, and to educate the community and answer questions about the regulatory process for the Facility. The MPCA attended biweekly and then monthly meetings with the NCCG since March 2019.
47. The NCCG meeting agendas covered a range of information, including public compliance and enforcement updates, permit development updates, discussion on technical issues, and health updates. In the meetings, the NCCG consistently emphasized the need for a stringent permit that prevented additional exposure and protected the community.
48. In addition to community interest and involvement, the 2019 enforcement action prompted significant legislative interest and oversight.
49. The NCCG worked with legislators to enact a partial ban on the use of TCE. In May 2020, Governor Tim Walz, signed into law, the "White Bear Area Neighborhood Concerned Citizen Group Ban TCE Act," codified at Minn. Stat. § 116.385. The law bans owners and operators of facilities required

to have an air emissions permit by the MPCA from using TCE. The ban prohibits TCE use in any manufacturing, processing, or cleaning process, unless specifically exempted. The cessation of use is required to be enforced in the air emissions permit for the facility or in an enforceable agreement with the MPCA.

50. In response to legislative requests and public concerns, the Office of the Legislative Auditor (OLA) conducted a special review of the MPCA's regulatory oversight of the Water Gremlin Facility, including review of its air quality permitting and enforcement activities.
51. In February 2021, the OLA published a report, concluding that the 2002 permit amendment (Permit 002) did not place adequate controls on Water Gremlin's use of TCE and resulting emissions. The report identified several issues with MPCA's regulatory oversight, including timely review of emission inventory information and insufficient verification of pollution control equipment efficiency.
52. In its response to the OLA report, the MPCA agreed that prior permits issued to Water Gremlin contained inadequacies that made it possible for Water Gremlin's emissions to go undiscovered for years. The MPCA explained in its response that self-reporting obligations of a permitted party, like Water Gremlin, are the cornerstone for determining compliance. The expectation is for permittees to submit accurate and complete information, and Water Gremlin failed to accurately report its TCE emissions. The MPCA stated it was committed to engaging with the local community and developing a permit that will address community concerns and incorporate all necessary permit requirements to ensure that the Permittee remains compliant.

V. MPCA's Permitting Process and Development of Water Gremlin's Permit

53. Permitting actions at MPCA begin with the development and submittal of a permit application, which includes providing specific information on forms developed and required by MPCA based on state and federal permitting requirements and guidance.
54. MPCA's permitting forms include a "submittal certification," which states: "I certify under penalty of law that the enclosed documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete."
55. Such certification of accuracy is consistent with MPCA's regulations for air emissions permit applications, which mandate that all applications include a certification by the Responsible Official that "based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." Minn. R. 7007.0500, subp. 3; Minn. R. 7007.0100, subp. 21 (definition of "responsible official").
56. MPCA issues permits for the project as described in the permit application, including proposed operating plans. However, as part of the permit development process, MPCA may require permittees to submit updates to their applications so that the final proposal conforms with all permitting rules and includes permit conditions that MPCA determines are adequate to protect human health and the environment.
57. The Permittee submitted an application for a major amendment on October 23, 2018.
58. The MPCA and Permittee engaged in an iterative process over a time-period spanning more than four years that involved detailed review by MPCA staff of technical information provided by the Permittee, follow-up questions and information requests, review of supplemental information provided by the Permittee, review of amendments to the permit application, coordination with

the MDH, and numerous meetings with the Permittee to discuss MPCA's development of the permit.

59. During this time-period, the Permittee was subject to enforcement actions involving multiple MPCA regulatory programs. As a result of these enforcement actions, the Permittee was required to complete corrective actions that modified its processes at its facility to ensure that the Permittee could comply with state and federal laws and operate in a manner that was protective of human health and the environment.
60. The 2019 Stipulation Agreement and 2020 Administrative Order required the Permittee to supplement its permit application so that the submittal reflected required changes at the Facility.
61. In addition, as part of its permit development process, MPCA identified the following issues with the prior and existing versions of Water Gremlin's air emissions permit that it would address in this permit action:
 - a. Deficiencies in regulation of PM, PM₁₀, PM_{2.5}, and lead;
 - b. Deficiencies in performance testing of control equipment required to comply with enforceable emission limits; and
 - c. Deficiencies with the minimum records retention period for Permittees.
62. The MPCA has a combined operating and construction-permitting program under Minnesota Rules Chapter 7007. These rules mandate certain conditions that must be included in every permit, and also provide that MPCA has discretion to include conditions that the Agency determines to be necessary to protect human health and the environment.
63. To assess and estimate the potential human health risks from air pollution emission by the Facility, and specifically to ascertain the impact of t-DCE and lead emissions, an Air Emission Risk Analysis (AERA) was completed based on inhalation air guidance values developed by the MDH. The AERA for Water Gremlin consisted of a Risk Assessment Spreadsheet (RASS) informed by emission limits proposed by the facility and dispersion coefficients estimated through dispersion modeling.
64. In May 2020, the MDH developed risk assessment advice (RAA) for t-DCE that identified a sub-chronic inhalation RAA of 200 ug/m³ and a chronic inhalation RAA of 20 ug/m³. MPCA applied this RAA to establish a t-DCE emissions limit of 38.7 tons per year for the Water Gremlin facility.
65. In February and March 2022, the MPCA analyzed the ambient impacts of the limit using ambient monitoring data collected at the Facility.
66. This ambient air quality impact analysis revealed the RASS was underpredicting actual impacts on ambient air from Water Gremlin's t-DCE emissions.
67. Consequently, ambient monitoring data was used to set the t-DCE emissions limit, not the RASS. Based on ambient monitoring data, MPCA found the emissions limit for t-DCE protective of human health was 32.6 tons per year, which is 16 percent lower than what the RASS predicted as protective.
68. Based on site-specific analysis of air impacts and considering current ambient monitoring data, the permit establishes new limits on t-DCE and lead. The limits are protective of each chronic inhalation health-based air guidance value. These limits are included in the permit, along with corresponding verification and audit requirements to ensure the limit is not exceeded.
69. Throughout the permit development process, the Permittee made numerous changes to its project proposal, submitting 10 permit applications and numerous modeling iterations to change how it intended to operate.
70. Changes to the permit significantly delayed the permit development process because most permit changes required Water Gremlin to submit updated modeling iterations, and all permit changes required MPCA to re-review the technical information, including calculations, program applicability, modeling parameters, and applicable permit requirements.

71. For example, in late 2020, MPCA identified deficiencies with Water Gremlin's proposal, including that its proposed permitted allowable emissions and Facility configuration resulted in modeled exceedances of all NAAQS evaluated. Compliance with NAAQS is an applicable requirement under Minnesota Permitting rules, and in order to issue a permit, the MPCA must ensure that the permit provides for compliance with all applicable requirements (Minn. R. 7007.0100, subp. 7 & 7007.1000, subp. 1(E)). This required Water Gremlin to revise its modeling input, based on potential Facility changes, and remodel.
72. From March 2021 to August 2022, Water Gremlin submitted 14 different modeling iterations based on changes that Water Gremlin made to the Facility proposal, such as emissions source inventory, dispersion characteristics, and emission rates after planned installation of control equipment. It was particularly challenging for the Permittee to model compliance with the PM_{2.5} 24-hour NAAQS and the ingestion health benchmark for lead, which required facility-wide changes to stack parameters, installation of control equipment, and limiting of process throughput. Modeling for the NO₂ 1-hour NAAQS also caused delays because the Permittee choose meteorological stations and background concentrations for its model with which MPCA disagreed, requiring multiple meetings and additional consideration from MPCA. MPCA required that each modeling iteration be documented in a modeling report that characterized the pollution sources at the facility, so that MPCA could determine if the revised modeling resulted in changes in the working draft permit. Each updated report required MPCA to review and make all corresponding changes to the working draft permit. These modeling iterations delayed issuing the permit because of the extra review and redrafting required.
73. In addition, Water Gremlin delayed in submitting key provisions that would have allowed MPCA to process the permit more quickly. Water Gremlin's modeling iterations included changes at the Facility, such as installation of pollution control equipment or modifications to stack height or flow rate, that had not been physically installed or implemented at the property. Therefore, beginning in March 2021, the MPCA requested that Water Gremlin propose a plan to ensure that the Facility would install and implement its modifications by the date of permit issuance, so that the Facility reflected the modeled scenario that demonstrated compliance with NAAQS. The Permittee is not obligated to comply with the permit emission limits until the permit is issued, so delaying permit issuance results in potential delays of NAAQS compliance.
74. Water Gremlin failed to submit a plan in a timely manner and MPCA did not have assurance that Water Gremlin would comply with this request. Therefore, in order to move forward with processing the permit, and satisfying a required precondition for issuing the permit, MPCA developed permit conditions, over the course of several months, that required Water Gremlin to conduct source-oriented ambient monitoring of PM_{2.5}, and required Water Gremlin to reduce actual emissions in the event the ambient monitors measured exceedances. This iteration of the permit required the monitoring to stay in place until Water Gremlin completed the installation of control equipment that aligned with the modeling scenario demonstrating compliance with the NAAQS.
75. MPCA would have avoided this work if Water Gremlin had submitted its own plan in a timely matter. In January 2022, Water Gremlin finally committed to completing installation of the required controls and stack modifications needed to support a compliant model by the date of permit issuance. As a result, MPCA revised the working draft permit again to remove the provisions for ambient monitoring for NAAQS compliance.
76. Permit issuance was further delayed in 2022 when the Permittee made last minute proposals to increase its emission limit based on a less protective health-based air guidance value for t-DCE.
77. On April 4, 2022, MPCA provided the Permittee a copy of the preliminary draft permit that it intended to place on public notice. This draft included an annual limit for 32.6 tons per year t-

DCE, as well as requirements to monitoring t-DCE emissions using a continuous emissions monitoring system (CEMS), ambient air monitoring around the facility, and additional reporting and recordkeeping requirements. The draft also included all assumed modeling conditions, including control equipment, emission limits on PM₁₀, PM_{2.5}, and lead, lead throughput limits, and heating capacity limits.

78. On April 20, 2022, the MPCA published a notice for a public meeting and public comment period for the permit to begin on May 24, 2022. On April 22, 2022, after MPCA already notified the public that the permit would be open for public comment in May, Water Gremlin submitted a Technical Memorandum on the toxicity value for inhalation of t-DCE as part of its comments on the preliminary draft permit. In this technical memorandum, Water Gremlin proposed alternative chronic and sub-chronic inhalation health-based air guidance values that are double those advised by MDH. Water Gremlin based its proposed revisions on U.S. EPA'S October 2020 Provisional Peer-Reviewed Toxicity Values ("PPRTV") for t-DCE.
79. On May 5, 2022, Water Gremlin communicated to MPCA that it would revise its modeling again and that it was expecting the revised model to significantly affect permit conditions.
80. To address these potential changes and review the Technical Memorandum submitted by the Permittee, MPCA issued a notice of cancellation of the planned public meeting on May 11, 2022, and subsequently rescheduled the public meeting venue for July 28, 2022, with plans to place the draft permit on public notice by July 20, 2022.
81. MPCA communicated this revised schedule for public notice to Water Gremlin on May 19, 2022, and at this time Water Gremlin had not yet provided a timeline for submitting its final model and permit updates. To avoid a second postponement, on June 9, 2022, MPCA communicated to Water Gremlin that it would have until July 1, 2022 to submit a final certified permit application, compliant final modeling results for PM₁₀, PM_{2.5}, NO₂ and lead, and any final comments on the April 2022 preliminary draft permit. MPCA informed Water Gremlin that if it did not meet this deadline, the draft permit would include requirements to monitor ambient concentrations of PM_{2.5} around the Facility, including a contingency plan in the event measured concentrations of PM_{2.5} exceed the corresponding NAAQS.
82. The MPCA and the MDH reviewed the Technical Memorandum submitted by Water Gremlin and determined that revising the health-based air guidance value was not appropriate. The MDH toxicity values are based on the best supported research for each chemical under consideration. The MDH considered the EPA PPRTV proposed by Water Gremlin and confirmed that it did not provide sufficient basis to change its risk assessment advice values for t-DCE.
83. Before the deadline on July 1, 2022, the Permittee proposed a t-DCE reduction schedule that provided enforceable reductions of t-DCE over the course of the five-year permit term. The schedule was also conditioned on the removal of the CEMS and a reduced ambient air monitoring network.
84. The conditions placed on the reduction schedule by the Permittee were not acceptable to MPCA. The schedule would have allowed the Facility to emit above what MDH and MPCA determined to be protective for at least two years. In addition, the CEMS and ambient air monitoring network are critical components in ensuring accurate and reliable recordkeeping when operating close to the t-DCE emission limit.
85. The Permittee submitted a final conforming permit application to the MPCA on July 1, 2022. This application did not contain the t-DCE reduction schedule proposal described above.
86. Based on its review of the application and supplemented materials, MPCA staff developed a draft permit, and pursuant to Minn. R. 7007.0850, the MPCA prepared a technical support document (TSD), setting forth the legal and factual basis for the draft permit conditions.

VI. Description of the Permit Action

87. This permit action for a major amendment makes changes to the permit due to (1) the establishment and change to federally enforceable emission caps to avoid major source status, (2) significant amendments to existing monitoring, reporting and recordkeeping requirements in the permit, and (3) establishment of permit conditions based on a case-by-case determination of emission limitations based on source-specific ambient impact analysis for criteria pollutants and air toxics, are authorized by this permit action for a major amendment.
88. This permit action includes authorization for the following changes and activities, and related requirements:
- a. Compliance demonstration requirements from the 2019 Stipulation Agreement and 2020 Administrative Order that were deemed technically appropriate and necessary to ensure continued compliance with the permit limitations as required under Minn. R. 7007.0800.
 - b. Addition of several emission units at the Facility were previously identified as insignificant activities under Minn. R. 7007.1300, subp. 3(F) (formerly Minn. R. 7007.1300, subp 3(I)), including die casting units, natural gas-fired heating equipment, distillation equipment, cooling towers, as well as lead processing units that no longer qualify as insignificant activities under Minnesota Rules.
 - c. Addition of emissions and operation limits to ensure the Facility remains in compliance with all applicable PM₁₀, PM_{2.5}, NO₂, and lead NAAQS, below the health benchmark lead, and below the t-DCE RAA, including stack testing for these sources. The Facility's t-DCE emissions are limited to less than or equal to 32.6 tons per year based on a 365-day rolling sum.
 - d. A robust compliance verification system for VOC/t-DCE. This system is described in detail in Section 3.3.8 of the TSD. Compliance of the limit is verified daily by calculating this 365-day rolling sum based on daily records of t-DCE emissions. As a primary compliance demonstration method, the Permittee is required to track t-DCE emissions by weighing t-DCE-containing materials daily and calculating emissions using these records on a daily basis. Daily tracking is performed manually by the Permittee, and to ensure that the Permittee is complying with the daily manual tracking requirement, the proposed permit includes two audit methods:
 - i. Addition of a CEMS in the battery terminal post coater stack to monitor t-DCE/VOC. Permanent operation and maintenance of a VOC CEMS, recordkeeping of CEMS results, and CEMS correlation validation is required by the permit as an audit of the main compliance demonstration method.
 - ii. Quarterly usage audit based on t-DCE containing material inventory on site. Tracking this data will provide information for a database that compares the emissions calculated from daily records to the emission calculations based on the audit of inventory and purchases of t-DCE to assess its use in future permits.
 - e. The permit includes the addition of the sub-slab depressurization and soil vapor extraction system with associated granular activated carbon canister control equipment to capture existing (and future) sub-slab solvent vapor contamination identified during the remedial investigation.
 - f. Addition of ambient monitors for VOCs that must be operated for at least two years following permit issuance to ensure t-DCE emissions remain below health-based air guidance values at all times. MPCA developed conditions in which the Facility may discontinue ambient air monitoring around the Facility. These conditions were developed based on EPA's Ambient Air Monitoring Network Assessment Guidance and MPCA's

Development of an air quality monitor siting plan for determination of compliance best practices.

- g. Recurring testing and inspections to verify coating rooms are operating as total enclosures and to avoid sub-slab contamination due to vapor intrusion or spills.
- h. This permit prohibits the use of TCE in any Facility operations, and changes the allowable VOC-based coating solvent formula to less than or equal to 90 percent by weight VOC. This permit specifically authorizes VOC coatings containing t-DCE.
- i. Incorporation of minor amendment authorizing operation of EQUI 82, EQUI 219, and EQUI 220, and authorization to install additional UV coaters. Air Quality Permit No. 12300341-004 authorized construction and operation of a battery terminal post coater (EQUI 82) utilizing a non-t-DCE, very low VOC, UV-cured coating technology. The minor amendment has been incorporated into this permit.
- j. The permit allows for the conversion of t-DCE VOC coaters to use water-based or UV coating, and conversion of water-based coaters to UV coaters, or vice versa. The permit allows conversion of dip/drip water-based coaters to water-based spray application methods, and vice versa. The permit prohibits the conversion of water-based or UV coaters to t-DCE VOC coaters, the addition of more t-DCE VOC coaters, or the increase in capacity of existing t-DCE VOC coaters without a major amendment.
- k. Due to past compliance issues with the method in Permit No. 12300341-003, and to increase the accuracy of VOC emissions accounting, this permit modifies VOC emissions calculation procedure and increases recordkeeping requirements.
- l. Authorization to dismantlement and removal of Fluidized Bed Solvent Recovery (carbon adsorption) unit installed in December 2018 to solve efficiency issues identified in the Environmental Audit, but later abandoned by the Permittee as a feasible control device in its operations. The carbon adsorption unit has been removed from the permit.
- m. Removal of permit provisions from prior versions of the permit that pre-authorized installation and operation of additional VOC battery terminal post coaters without prior authorization from the MPCA.
- n. An expiration date of five years from the issuance date.

VII. Public Notice and Comment Process

89. The MPCA complied with public notice requirements in Minn. R. 7007.0850 for issuing this permit.

A. First Public Notice

90. On July 20, 2022, the MPCA issued a public notice for the MPCA's preliminary determination and intent to issue the draft air Permit No. 12300341-101 (July 2022 Proposed Draft Permit) and notice of a public informational meeting to be held on July 28, 2022, at Century College, 3300 Century Ave N, White Bear Lake, MN 55110.

91. The MPCA distributed the public notice by publishing in the Saint Paul Pioneer Press and White Bear/Vadnais Heights Press newspaper publications. The public notice was also posted on the MPCA's website for public notices at <http://www.pca.state.mn.us/get-engaged/public-comments>. The notice was also sent via email and U.S. mail to an interested persons list.

92. The public notice issued on July 20, 2022, announced a 31-day comment period, and included information required by Minn. R. 7007.0850. The public notice included information that the public comment period began on July 20, 2022 and ended at 4:30 p.m. on August 20, 2022. The public notice included information about the Facility and the Permittee, a description of the

activities being permitted, and MPCA contact information, as well as information about the comment and contested case hearing process, how comments should be submitted, and details for the public meetings.

93. On July 20, 2022, the draft air permit and appendices, draft TSD and attachments, and public notice documents were available for review on the MPCA website for public notices at <http://www.pca.state.mn.us/index.php/public-notices/list.html>.
94. The public informational meeting was held on July 28, 2022. Representatives from the MPCA, MDH, and Ramsey County attended this meeting.
95. The public comment period ended on August 20, 2022. During the 31-day comment period, the MPCA received 26 timely comments and one timely request for a contested case hearing.
96. The MPCA reviewed and considered the comments and contested case hearing request received during the 31-day comment period and prepared responses. The comments, contested case hearing request, and the MPCA's Responses to Comments are in Attachments 11 and 12 to the TSD, and are hereby incorporated by reference to these Findings. The MPCA made changes to the draft permit based on MPCA's consideration of comments.
97. Based on comments received and identification of deficiencies on the July 2022 Proposed Draft Permit, MPCA added or changed necessary emission limits and recordkeeping requirements, and made changes to correct errors and omissions, clarify or remove some permit conditions, and added equipment descriptions Water Gremlin omitted from previous submittals to the Agency. MPCA explained the reasons for the changes in response to comments and in revisions to the TSD. Many of the changes were in response to stakeholders with opposing views and comments, so MPCA deemed it necessary and in the public interest to provide the public and the permittee an additional opportunity to comment.
98. The request for a contested case hearing was determined to be moot because the MPCA issued a revised proposed draft permit that it placed on public notice for a second time.

B. Second Public Notice

99. On February 1, 2023, the MPCA issued a public notice for the MPCA's preliminary determination to issue the draft air Permit No. 12300341-101 (February 2023 Proposed Draft Permit) for a second time. The notice also included notice of a virtual public informational meeting to be held on February 9, 2023 via WebEx.
100. The MPCA distributed the public notice by publishing in the Saint Paul Pioneer Press and White Bear/Vadnais Heights Press newspaper publications. The public notice was also posted on the MPCA's website for public notices at <http://www.pca.state.mn.us/get-engaged/public-comments>. The notice was also sent via email and U.S. mail to an interested persons list.
101. The public notice issued on February 1, 2023, announced a 30-day comment period, and included information required by Minn. R. 7007.0850. The public notice included information that the public comment period began on February 1, 2023 and ended at 4:30 p.m. on March 3, 2023. The public notice included information about the Facility and the Permittee, a description of the activities being permitted, and MPCA contact information, as well as information about the comment and contested case hearing process, how comments should be submitted, and details for the public meetings.
102. On February 1, 2023, the February 2023 Proposed Draft Permit and appendices, draft TSD and attachments, and public notice documents were available for review on the MPCA website for public notices at <http://www.pca.state.mn.us/index.php/public-notices/list.html>.
103. The virtual public informational meeting was held on February 9, 2023, via WebEx. Representatives from the MPCA and the MDH attended this meeting.

104. The public comment period ended on March 3, 2023. During the 30-day comment period, the MPCA received 42 timely comments and one timely request for a contested case hearing.
105. The MPCA reviewed and considered the comments and contested case hearing request received during the 30-day comment period and prepared responses. The comments, contested case hearing request, and the MPCA's Responses to Comments are in Attachment 13 to the TSD, and are hereby incorporated by reference to these Findings. The MPCA made changes to the draft permit based on MPCA's consideration of comments. These changes are described in more detail below.
106. The MPCA met all applicable public notice requirements for the issuance of an air emissions permit.

VIII. Public Comments

107. MPCA received 26 comments to the June 2022 Proposed Draft Permit and one contested case hearing request. MPCA reviewed and considered the comments received during the 31-day comment period and prepared responses. The MPCA made changes to the draft permit based on MPCA's consideration of comments. The comments to the June 2022 Proposed Draft Permit and the MPCA's responses to comments are in Attachments 11 and 12 to the TSD and are hereby incorporated by reference to these Findings.
108. Commentors to the February 2023 Proposed Draft Permit included 42 commentors, including members of the public from the residential area surrounding the Water Gremlin Facility. The MPCA reviewed and considered the comments received during the 30-day comment period and prepared responses. The comments and the MPCA's Responses to Comments are in Attachment 13 to the TSD and are hereby incorporated by reference to these Findings. Selected comments and the MPCA's responses are summarized below.
109. Comments included concern that the ambient air monitoring around the Facility would be discontinued, and concern that not enough checks and balances are in place to ensure that the Permittee accurately self-reports its emissions. The MPCA responded that the permit does not provide for automatic end to ambient monitoring and that specific criteria must also be met before ambient monitoring can end. In addition, daily checks on self-reporting of t-DCE usage from coating operations, like CEMS monitoring, are required. See TSD at section 3.9.2.
110. Commentors were also concerned about poor air quality in the residential area surrounding the Facility. The MPCA explains in its response to comments and in Section 3.3 of the TSD, that the permit contains enforceable limits on all forms of particulate matter, VOC/t-DCE, and lead, and that the limits ensure compliance with all applicable ambient air quality standards and health benchmarks established by the MDH. These standards and benchmarks are established at levels that are likely to pose little or no risk to human health.
111. Commentors are concerned about the Permittee's self-reporting and expressed a lack of trust with the Permittee's reporting accuracy. The MPCA responded that the permit includes a three-prong approach to validating VOC usage records, including VOC solvent inventory audits, CEMS readings/audits, and ambient monitoring. The MPCA believes that taken together, the recordkeeping and monitoring will ensure that reporting conducted by the Permittee is reliable, and if there are any issues MPCA will have timely notice.
112. The permit requires the Permittee to retain records for five years, which some commentors did not think was enough time. MPCA agreed with this comment and to address those concerns, changed the record retention period to 10 years. Based on the Permittee's compliance history and conclusions in the report issued by the OLA on the MPCA's handling of the Water Gremlin

permit and enforcement action, MPCA agreed that an increased retention period was appropriate.

113. Commenters on the draft proposed permit also included the Permittee, who submitted comments on technical and substantive issues, as well as a petition for a contested case hearing.
114. The Permittee provided line-by-line comments to the February 2023 Draft Proposed Permit that identified suggested changes to specific language in the permit itself. MPCA made some changes and declined to make others. For example, the MPCA agreed to remove reference to NESHAP HHHHHH as the Facility is not subject to that standard but retained the requirement that coatings may not contain HAPs. MPCA also corrected typos and fixed emission limits so they are consistent with the model as identified by the Permittee. The MPCA responded to and addressed these comments in TSD Attachment 13.a.
115. The Permittee also submitted a separate comment letter that outlined several additional issues. These comments largely repeated comments and objections raised in Water Gremlin's comments to the July 2022 Draft Proposed Permit. The comments included the Permittee's disagreement with the 32.6 tons per year limit in the permit for t-DCE emissions and the MPCA's reliance on the MDH's RAA for t-DCE to establish this limit. The Permittee provided substantial comments on this topic, including the Permittee's opinion that MPCA applied incorrect analysis regarding the risk assessment, risk factors, and safety margins used to derive the limit.
116. The MPCA responded to these comments in detail when they were first posed in the comments to the July 2022 Proposed Draft Permit and responded again in its response to comments on the February 2023 Proposed Draft Permit. See TSD Attachments 11-13. The MPCA did not make changes to the permit limits or conditions based on these comments. As the MPCA explains in its response to comments, the MPCA relied on and agrees with MDH's RAA and set the t-DCE limit in the permit following a weight-of-the-evidence approach that compared the AERA results and t-DCE ambient air quality impact analysis. This approach is also discussed in TSD Section 3.3.2, 3.6, 3.6.2 and subsections, and TSD Attachments 1, 1.a, 10, 11, and 12.
117. In its comments, the Permittee proposed a t-DCE reduction schedule as an alternative to the t-DCE limit established by the MPCA. The Permittee claims its proposed schedule would result in lower overall t-DCE emissions throughout the life of the permit. The proposal included a higher t-DCE limit during the first two to three years of the permit term and followed by a lower limit when the Permittee transitioned the coaters using t-DCE to UV coaters that do not use t-DCE-containing solvents. MPCA reviewed and considered this proposal when it was originally offered in June and July 2022. However, the Permittee conditioned the proposal on eliminating certain permit requirements, such as CEMS. These conditions were unacceptable to MPCA, and the proposal was not included in the final certified permit application, so the proposal was not incorporated into the permit draft.
118. The permittee raised this issue again in its comments to the July 2022 and the February 2023 Proposed Draft Permits. The Permittee commented that MPCA rejected the proposal without a proper factual basis. The MPCA explained in its response to comments that the proposal provided to the MPCA prior to permit issuance was conditioned on MPCA removing the CEMS requirements from the permit, and this was not acceptable to the MPCA. The final conforming certified permit application that the Permittee submitted to the MPCA on July 1, 2022, did not contain a project proposal for coater transitions as described by Water Gremlin in its comments. Therefore, Water Gremlin did not present the project according to the certification requirements and assurances that are required under Minnesota Rules. Instead, MPCA acted on the project before it, which is reflected in the February 2023 Proposed Draft Permit. Even if Water Gremlin had submitted a certified permit application with the alternative reduction schedule described in its comments, the scheduled it proposed would have allowed the Permittee to exceed the annual limit of 32.6

tons per year t-DCE for two or three years, which the MPCA has determine is not acceptable for reasons it discusses in its rationale for setting the annual t-DCE limit. See TSD at section 3.6.2.

119. The Permittee's comments also addressed the monitoring requirements in the February 2023 Proposed Draft Permit. The Permittee disagrees that CEMS monitoring, ambient air monitoring, and daily verifications should be included in the permit.

- a. The Permittee commented that CEMS monitoring does not provide a legitimate purpose. The Permittee believes that the MPCA and the public can rely on usage tracking, audits, and inspections just like for any other emitting facility. The MPCA did not agree to remove CEMS from the permit requirements. CEMS are necessary because the MPCA anticipates that the Permittee will operate close to the 32.6 tons per year t-DCE limit established in the permit, and the Facility has the capacity (based on installed equipment) to exceed that limit. The Permittee's compliance history shows that it has failed to accurately record and report its air emissions, and CEMS is a reliable and accurate monitoring tool that will provide a way to verify that the t-DCE emissions reflect the usage that the Permittee is required to report manually. See TSD at section 3.3.8.
- b. The Permittee also commented that it should not have to maintain ambient air monitors at its Facility because the coating usage and recordkeeping and inventory tracking serves as appropriate compliance mechanisms. The MPCA did not change this requirement in response to the Permittee's comments. Usage and inventory tracking are surrogates for actual measurement of t-DCE concentrations in ambient air in the absence of an ambient monitoring network. The MPCA determined that ambient monitoring is necessary for at least 24 months to evaluate air quality impacts of the Permittee's operations under the conditions of the air permit and can be discontinued if certain conditions are met. See TSD at Section 3.9.3.
- c. The Permittee commented that daily monitoring of t-DCE is unnecessary and information about daily emission is irrelevant because the permit limit is based on protecting from chronic exposure as opposed to acute or sub-chronic exposure. The MPCA disagrees with this comment and believes that daily verification and compliance demonstration is a critical variable to ensure that the Permittee is below its annual emission limits for t-DCE. The MPCA determined that based on the Permittee's operations, there is a narrow margin of compliance with the annual t-DCE emission limit for the first few years of the permit term that with daily verification, the Permittee will know if the limit is being exceeded in a timely manner and can take prompt corrective action. See TSD at section 3.3.8.

120. The MPCA prepared written responses to the comment letters received during the public comment period. The comment letters, and the MPCA's Response to Comments, which include significantly more detailed responses, are in Attachments 13 of the TSD and are hereby incorporated into and made a part of these findings.

EVALUATION OF THE PETITION FOR A CONTESTED CASE HEARING

I. Standard

121. During the public notice period for the February 2023 Proposed Draft Permit, Water Gremlin submitted a timely contested case hearing.

122. The decision on whether to grant the petition is governed by Minn. R. 7000.1900, subp. 1, which states:

The Commissioner must grant the petition to hold a contested case hearing or order upon its own motion that a contested case hearing be held if the Commissioner finds that:

- A. There is a material issue of fact in dispute concerning the matter pending before the Commissioner.
 - B. The Commissioner has the jurisdiction to make a determination on the disputed material issue of fact.
 - C. There is a reasonable basis underlying the disputed material issue of fact or facts such that the holding of a contested case hearing would allow the introduction of information that would aid the Commissioner in resolving the disputed facts in making a final decision on the matter.
123. To satisfy the first criterion, Minn. R. 7000.1900, subp. 1(A), the petitioner must show there is a material issue of fact in dispute as opposed to a disputed issue of law or policy. *In re Little Rock Creek*, No. A16-0123, 2016 WL 6923602 (Minn. Ct. App. Nov. 28, 2016). A fact is material if its resolution will affect the outcome of the case. *O'Malley v. Ulland Brothers*, 549 N.W.2d 889, 892 (Minn. 1996).
124. To satisfy the second criterion, Minn. R. 7000.1900, subp. 1(B), the petitioner must show that MPCA has jurisdiction or authority to make a determination on the disputed issues of material fact. "Agencies are not permitted to act outside the jurisdictional boundaries of their enabling act." *Cable Communications Board v. Nor-West Cable*, 356 N.W.2d 658, 668 (Minn. 1984). Therefore, each issue in the contested case petition has to be such that it is within MPCA's authority to resolve.
125. To satisfy the third criterion, "[t]he petitioners for a contested case hearing have the burden of demonstrating the existence of material facts that would aid the [Agency] in making a decision before they are entitled to a contested case hearing." *Matter of Solid Waste Permit for the NSP Red Wing Ash Disposal Facility*, 421 N.W.2d 398, 404 (Minn. Ct. App. 1988) (affirming MPCA's denial of a contested case hearing because challenger failed to raise material issues in its petition) (emphasis added). To meet this criterion, the Minnesota Supreme Court has made clear that "[i]t is simply not enough to raise questions or pose alternatives without some showing that evidence can be produced which is contrary to the action proposed by the [Agency]." *In the Matter of Amendment No. 4 to Air Emission Facility Permit*, 454 N.W.2d 427, 430 (Minn. 1990) (reversing and affirming agency's order denying contested case hearing).
126. Moreover, agencies have broad discretion to determine whether holding a contested case hearing will aid the Commissioner in decision-making, and courts defer to the agency's decision. *In re NorthMet*, 959 N.W.2d 731, 745 (Minn. 2021); see also *In re Heron Lake BioEnergy, LLC*, No. AOS-1162, 2006 WL 1806160, at *3 (Minn. App. July 3, 2006) (affirming MPCA's denial of a contested case where MPCA addressed concerns raised by challenger in its order denying contested case).
127. Ultimately, "the petitioner bears the burden of showing entitlement to the requested [contested case] hearing." *In re Northmet*, 959 N.W.2d at 745; *In re Reissuance of NPDESISDS Permit to U.S. Steel Corp.*, No. A18-2094, 2021 WL 2645505, *3 (Minn. Ct. App. June 28, 2021).

II. Water Gremlin has not met its burden to show it is entitled to a contested case hearing.

128. Water Gremlin argues it is entitled to a contested case hearing and raises a host of purported claims. But all of its arguments boil down to two main issues: (1) what level of exposure to t-DCE is safe and protective of human health; and (2) how much t-DCE can Water Gremlin emit and stay under that protective level.

129. The first issue is a quintessential policy argument. In this case, the Minnesota Department of Health evaluated studies, conducted extensive analysis, considered sensitive individuals including children, pregnant women, and individuals compromised with pre-existing diseases, and made a policy decision setting the protective level of t-DCE exposure. MDH determined that the long term or chronic exposure limit that would be protective of human health was 20 µg/m³.
130. Water Gremlin disagrees with the protective level set by MDH and argues human health could be protected at a higher limit. Water Gremlin's petition does not introduce new studies or information that MDH and MPCA did not consider but rather argues for a different interpretation of the same data already analyzed. Moreover, MPCA and MDH have fully considered Water Gremlin's position and explained in detail why they disagree. On that first issue, Water Gremlin's petition does not present a material issue of fact, nor will holding a contested case hearing aid the Commissioner.
131. The second issue regarding how much t-DCE Water Gremlin can emit safely and be under the protective limit was determined by MPCA using Water Gremlin's own data collected at its facility. Because Water Gremlin had unlawfully discharged TCE into the community for decades, MPCA required Water Gremlin to collect ambient air monitoring data at five locations at its facility which is bordered by areas zoned for residential living. Water Gremlin's own data which was collected based on Water Gremlin's actual t-DCE usage and manufacturing processes showed that to remain under the 20 µg/m³ protective level, the maximum amount of t-DCE Water Gremlin could use safely was 32.6 tons per year.
132. Water Gremlin argues MPCA should have limited its analysis to theoretical modeling and not used Water Gremlin's actual data in determining the permitted limit or should have interpreted the data in a less protective manner. Water Gremlin's arguments to impeach its own data and interpretations of that data do not warrant a contested case hearing, nor will holding a contested case hearing aid the Commissioner.
133. MPCA addresses Water Gremlin's arguments in more detail below. In general, Water Gremlin does not raise material issues of fact but rather offers contrary opinions or interpretations of methodologies and data. MPCA evaluated Water Gremlin's arguments but ultimately found them unpersuasive and determined that a contested case hearing would not aid the Commissioner.

A. Water Gremlin's policy arguments and general disagreement with MDH's analysis of relevant studies does not raise material issues of disputed facts nor warrant a contested case hearing.

i. Water Gremlin's opinion of MDH's Risk Assessment Advice used to support MPCA's permitting does not raise a material issue of fact.

134. Water Gremlin argues that MDH's RAA is not valid because MDH conducted route-to-route (RTR) extrapolation. (Petition at 10.) Notably, such an argument does not raise a question of fact at all. Regardless, it is uncontested – and Water Gremlin concedes – that RTR extrapolation is a scientifically recognized methodology and used even by EPA to develop limits. (*Id.* at 11.) As discussed below, MDH explained in detail the basis for its assessment and for relying on certain studies more than others, and MPCA found MDH's analysis persuasive and supported by substantial evidence.
135. Water Gremlin also argues because EPA had not yet done an RTR extrapolation of t-DCE, that it is "strongly indicative that EPA did not believe one could be reliably performed." (Petition at 12.) Water Gremlin's speculations about EPA are of no value and certainly do not justify holding a contested case hearing. This is particularly true, here, where MDH conducted its analysis and use

of the improved study model data “in consultation with the U.S. EPA.” (MDH Health Assessment Series I Trans-1,2 Dichloroethylene in Air and Health at 6.)

136. Water Gremlin argues that even if RTR extrapolation were reliable, MDH did not follow MPCA’s AERA guidance in determining its RAA. (Petition at 15.) First, MDH is not limited by MPCA’s guidance in determining MDH’s Health-Based Values and Risk Assessment Advice. Second, guidance is just that, guidance. Not just MDH, but even MPCA is not bound to follow guidance when circumstances and information suggest doing so would not be in the best interest of public health or safety.
137. MPCA extensively explained the basis for its technical analysis. MDH thoroughly explained how it uses toxicology studies and risk assessment to develop air guidance values. MDH follows basic scientific principles to create and revise as needed the RAA for t-DCE and other chemicals released into the environment. In Attachment 8 of the TSD, MDH described in detail its process to develop its RAA and the basis for using RTR extrapolation.
138. Specifically, MDH described how risk assessment is a science-based tool used to evaluate the potential effects of a chemical on human health. Risk assessment uses not only the best available scientific information but also professional judgment and policy, to estimate risks in a standardized way to help make informed decisions about managing or reducing risks. Water Gremlin’s petition does not raise questions of fact but rather argues its expert will offer a different opinion regarding the underlying studies that it contends will better serve public health. (Petition at 11-12.) Water Gremlin’s policy position also happens to allow it to emit more tons per year.
139. MDH acknowledged that in 2020 MDH conducted a re-evaluation of t-DCE toxicity studies that could be used to develop an air guidance value. MDH made clear that while no new studies were identified, an improvement in the modeling of the data in the study used to derive its early 2019 RAA was discovered. Therefore, MDH, in consultation with the U.S. EPA, decided to use the improved study model data.
140. Using those data, MDH updated its chronic inhalation RAA for t-DCE to 20 µg/m³. MDH also developed a sub-chronic inhalation value for t-DCE of 200 µg/m³. A sub-chronic duration is defined as a repeated exposure for greater than 30 days and up to 10 percent of an average human lifespan (eight years). The 2020 RAA values are based on the amount of t-DCE where an immune system effect was observed in a sub-chronic animal study. It is expected that a small risk of immune system effects may exist for people exposed to t-DCE repeatedly, and MDH discussed that the RAA is much lower than that observed in the animal study to reflect uncertainties in the data and the desire to develop a safe exposure level for a human population, including vulnerable subgroups.
141. MDH also addressed why RTR extrapolation was used and is appropriate, noting specifically that the study it gave significant weight to include a direct measure of immune function. MDH noted that RTR extrapolation is appropriate in situations where inhalation data is deemed inadequate to generate a health protective value and MDH may then use oral toxicity data and RTR extrapolation (page 10, MDH SONAR 2001). As outlined in US Environmental Protection Agency Guidance (USEPA 1994), RTR extrapolation methodology can be used for determining an air value for a chemical when the available inhalation database is not adequate and portal of entry (effects are on the respiratory system) or first-pass effects (significant metabolism occurs in the liver) are not a concern. MDH confirmed that t-DCE is not expected to have portal of entry or first-pass effects.
142. In addition, MDH explained that the World Health Organization (WHO) guidance for assessing immunotoxicity describes why the immune system presents a readily accessible toxicological target regardless of the route of exposure and why a gold standard for measuring immune system status is to evaluate the host response to a foreign challenge (WHO 2012). Significantly, the oral

study used by MDH as the basis of the RAA, Shopp et al. 1985, does include a direct measure of immune function; a challenge to the immune system by sheep red blood cells, unlike the other study Kelly 1998, which did not. MDH emphasized that the immune system is particularly vulnerable to chemical exposure during development, and function declines with age, resulting in increased risk of adverse health outcomes from chemical exposure at the extremes of age. Water Gremlin does not contest this.

143. MDH concluded that it had utilized a standard RTR approach on a well-conducted study, that includes a direct measure of immune function, in deriving their health-protective sub-chronic and chronic RAA values of 200 and 20 $\mu\text{g}/\text{m}^3$. MDH made clear that its values are designed to protect the most sensitive individuals in a population (including but not limited to children, pregnant women and their fetuses, individuals compromised by pre-existing diseases, and elderly persons).
144. MDH again reiterated in its May 3, 2023 memorandum its support for using RTR extrapolation in this specific situation.
145. Water Gremlin also suggests that its unlawful emitting of TCE for decades should have no bearing on its permit limit for t-DCE because “the health effects of a chronic TCE exposure followed by t-DCE exposure are unknown at this time.” (Petition at 17.) Water Gremlin’s argument misses the point. Any lack of information supports a more conservative approach in permitting to protect public health, especially since information is lacking regarding possible health effects from breathing t-DCE over long periods and no studies have been conducted to assess possible cancer risk. MPCA has the authority and obligation to issue permits that *prevent* the exposure to air pollution that may be harmful to the public or interfere unreasonably with the use of other’s property. See Minn. Stat. 116.07, Subd. 4a; Minn. Stat. 116.06, Subds. 2, 4.
146. Here, MDH appropriately considered the available data and unavailable data, evaluated studies including related to the EPA Integrated Risk Information System (IRIS), EPA PPRTV, and California EPA, and ultimately set its protective limit at 20.0 $\mu\text{g}/\text{m}^3$. MPCA agrees with MDH’s analysis because it is reasonable and supported by substantial evidence. MDH extensively evaluated the available studies, justified the basis for its decision, acknowledged where evidence was lacking, considered Water Gremlin’s arguments, and reached a result that will protect all Minnesotans.

ii. Water Gremlin’s preference for a different health protective value, a PPRTV screening value for Superfund sites, does not raise a material issue of fact.

147. It is uncontested MDH considered and rejected the PPRTV 2020 screening level that Water Gremlin asserts is superior. Water Gremlin disagrees with MDH’s assessment of various studies and suggests more weight should have been given to other studies, but such arguments do not raise any material issues of fact. Moreover, holding a contested case would not assist MPCA as it has evaluated both MDH’s and Water Gremlin’s health values and found MDH’s protective and supported by substantial evidence.
148. First, Water Gremlin repeatedly and inaccurately asserts in its petition that EPA established a PPRTV for t-DCE in 2020. (See, e.g., Petition at 12.) Instead, EPA established a t-DCE *screening level* provisional reference concentration (p-RfC) value, which has a limited use for screening at Superfund sites due to higher levels of uncertainty and other limitations than true PPRTV values. EPA notes that “Screening values are derived when the data do not meet all requirements for deriving a provisional toxicity value” and there “is more uncertainty associated with these screening values.”¹ Of particular importance is that a screening level PPRTV is used to assist with

¹ <https://www.epa.gov/pprtv/basic-information-about-provisional-peer-reviewed-toxicity-values-pprtvs#basicinfo>

initial risk assessments at Superfund sites, which can be further restricted based on site specific information following the initial assessment. A more detailed discussion of the limitations of the screening levels generally and specifically related to t-DCE is available at EPA's website and included in Attachment 9 to the TSD. Notably, Water Gremlin's facility is not a superfund site. Moreover, MDH's analysis is not just an initial assessment, MDH considered site specific information related to Water Gremlin location in the community and its operations in developing its Risk Assessment Advice.

149. Second, MDH noted that it reviewed the PPRTV's 2020 screening level and explained why it was insufficient to change MDH's Risk Assessment Advice. (MDH July 13, 2020 Memo at 6-7.) MDH understood and explained the toxicokinetics of t-DCE and why it supported setting a chronic limit of 20.0 ug/m³. MDH also noted that the PPRTV report did not present any new studies, did not provide improvements to reported data, and relied on an unpublished study (no peer-review process) deemed insufficient because of toxicologically questionable endpoints by EPA IRIS 2010. MDH also examined the PPRTV history, identified that a screening level for t-DCE was previously removed based on the EPA IRIS 2010 comprehensive toxicological review, and questioned whether PPRTV would retain this new screening level for an extended period of time or would remove it again because it does not align with the conclusions of the EPA IRIS 2010 review which found the study underlying this new screening value, the DuPont study, was insufficient and not scientifically supported.
150. MPCA evaluated both MDH's analysis and Water Gremlin's preference for a PPRTV screening level. MPCA agrees with MDH's evaluation and disagrees that a PPRTV screening level would be the appropriate basis for protecting Minnesotans health at Water Gremlin's facility. Of particular significance is that MDH was able to demonstrate, with Shoppe et al., t-DCE's immunotoxicity effect on animals while the studies relied upon by the PPRTV (Kelly 1998) do not.
151. Water Gremlin has not met its burden to show that it is entitled to a contested case hearing on its preference for a screening level PPRTV.

B. It is uncontested Water Gremlin has used and will be permitted to use t-DCE for over 8 years which warrants the use of a chronic health value for the permit.

152. Water Gremlin has not met its burden to show it is entitled to a contested case hearing on the use of a chronic health value. There are no material facts in dispute on the length of time Water Gremlin is permitted to emit t-DCE which exceeds 8 years.
153. A chronic air guidance value is defined by MDH as a long-term exposure, specifically "repeated dosing for more than approximately 8 years (10 percent of a life span in humans)." In contrast, sub-chronic is used for shorter periods of exposure, defined as "repeated dosing for more than 30 days, up to approximately 8 years."
154. MPCA considers the past and foreseeable exposure to a specific chemical in deciding whether to use a chronic or sub-chronic air guidance value to set emission limits. Water Gremlin began using t-DCE in 2019 and has continued to do so to the present, a total of approximately 4 years. Water Gremlin's permit application requested to continue the use of t-DCE and MPCA's air permits are valid for a period of 5 years from issuance. It is undisputed that the total amount of time that Water Gremlin has used or will be permitted to use t-DCE under this permit is approximately 9 years. That alone justifies the use of the chronic health value and denial of a contested case hearing request.
155. Contrary to Water Gremlin's argument, MPCA's reason for applying a chronic t-DCE has remained consistent and been based on Water Gremlin's past and future use of t-DCE which does not have a defined, enforceable end date. In the July 2022 TSD, MPCA explained that "chronic

(long term) RAA matches planned facility operation.” See TSD at 3.6.2(4). The same is true now and Water Gremlin is being issued a permit to emit that is valid for 5 years. Moreover, if Water Gremlin ultimately chooses to reduce its emissions in the future, it can seek a permit amendment at that time.

156. Water Gremlin incorrectly asserts that individuals must be exposed to continuous t-DCE emissions in order to use a chronic health value. (Petition at 20.) First, chronic is defined as repeated exposure, not continuous exposure. Second, MPCA’s permits prevent excessive air pollution anywhere in ambient air impacted by a facility. Notably, it is uncontested that Water Gremlin is situated across the street from areas zoned as residential (immediate ambient boundary), and Water Gremlin cannot expect to be able to control or determine how long any person may or may not be present in any location outside their property. Moreover, measured air concentrations by the ambient monitors being used to determine acceptable t-DCE emission rates are representative of public exposure because the monitors are located on facility property at or near the ambient boundary. Holding a contested case, therefore, would not aid the Commissioner.
157. MPCA also considered Water Gremlin’s prior unlawful and unregulated use of TCE for decades and its impact on the community, which further supports the use of a chronic value. This is particularly true given that the Legislature passed a law, the White Bear Area Neighborhood Concerned Citizens Group Ban TCE Act, prohibiting the use of TCE and requiring that MPCA only allow companies to use replacement chemicals demonstrated to be less toxic to human health. Water Gremlin’s prior use of TCE, however, was never the sole reason for applying the chronic t-DCE in the RAA and was always just an additional factor weighing in favor of applying that protective value given the extensive community concerns about continued exposure and the fact that nearby residents were exposed to airborne concentrations of TCE above the MDH health-based value of 2 ug/m³ possibly as early as 1992. Both MPCA and MDH acknowledged there is not a conclusive interaction between TCE and t-DCE. MPCA, however, noted that it is prudent to apply the most health-protective exposure duration (chronic), particularly since the MDH Air Guidance Values for both TCE and t-DCE were developed based on the same sensitive health endpoint of impacts to the immune system, which is undisputed.
158. Water Gremlin has not raised any material issues of fact regarding chronic inhalation value, nor would holding a contested case on this issue aid the Commissioner.

C. Rounding down calculations is not required, would not be protective of human health, and is simply an attempt by Water Gremlin’s to enlarge its emissions.

159. Water Gremlin has not shown it is entitled to a contested case hearing on MPCA interpretation of its own risk assessment screening protocol. First, this argument does not raise a material issue of fact, and, second, holding a contested case hearing on MPCA’s own interpretation of its own protocol will not aid the Commissioner.
160. Water Gremlin argues that MPCA disregarded MPCA guidance and should have rounded down instead of using a more precise calculation. (Petition at 21.) This is incorrect. MPCA’s guidance unquestionably does not require rounding only to one significant digit. In fact, the guidance expressly gives MPCA wide latitude in its assessments based on MPCA’s professional judgment and analysis of multiple factors in order to (1) contain transparent calculations; (2) reflect uncertainty and variability; and (3) be protective of human health. (AERA Guidance at 35-36.)
161. MPCA guidance explicitly allows including tables showing risk calculations using “more than one significant figure to represent the calculations transparently. More than 1 significant figure needs to be used in these circumstances.” (AERA Guidance at 36.) MPCA is committed to being

transparent both to the public and to Water Gremlin regarding its calculations and using more than one significant figure is appropriate.

162. In addition, the guidance also acknowledges there may be enough information to report single pollutant risk estimates to more than 1 significant figure, such as when there is a facility specific toxicity value and nearby meteorological data. Those factors are also present here and MPCA used Water Gremlin's own data collected by the company in determining that rounding down would not be appropriate because it would underestimate concentrations at monitored locations. See TSD 3.6.2.2.
163. Finally, and most importantly, Water Gremlin's argument that MPCA should have rounded down and limited its analysis to a single significant figure would not be protective of human health. MPCA clearly applied the principles of its own guidance as well as basic scientific principles in attempting to reconcile the modeled concentrations that were determined to be protective with the actual monitored concentrations and associated emission rates. MPCA explained that given that normal modeling practice yielded underestimated concentrations at monitor locations, some sort of calibration of the model output was required to ensure protection of human health.
164. MPCA determined that even rounding of the endpoint-refined hazard index in the RASS computations to 1.00 was not sufficiently protective in this situation where modeling underestimated air concentrations compared to real time ambient air monitoring data and associated emission rates. While the issue of the appropriate number of significant digits and rounding down of the hazard index to be used in an AERA analysis may depend on specific circumstances, in the case of Water Gremlin, it is a moot point when air monitoring data shows exceedances of t-DCE air concentrations associated to emission rates that were predicted to be safe by the RASS. MPCA decided it was necessary to use the sufficient evidence provided by the air monitoring data around Water Gremlin to define an emission limit that was demonstrably protective. In sum, MPCA properly used precise calculations.
165. MPCA followed its guidance, considered Water Gremlin's position, but does not find that a contested case hearing would aid the Commissioner in further evaluating the permit limit.

D. MPCA set its permit limit based on data collected by Water Gremlin based on its actual operations in addition to theoretical modeling.

166. Water Gremlin claims that MPCA improperly added a 16 percent safety factor to its t-DCE limit. Water Gremlin, however, does not raise any material issues of disputed fact. Water Gremlin acknowledges that MPCA determined the t-DCE limit based on both modeling and ambient air data collected by Water Gremlin at its facility. (Petition at 24.) Most significantly, Water Gremlin concedes that its own data show an exceedance of MDH's RAA of 20 ug/m³ and simply tries to minimize that fact. Water Gremlin admitted the data showed exceedances for a two-month period, conceding its "ambient monitoring data showed only a brief period whereby the 365-day rolling mean concentration between approximately November 9, 2021 and January 9, 2022 (based on one monitor) was in excess of MDH's RAA of 20. " (Petition at 24.) That alone warrants denial of the contested case hearing.
167. Nor did Water Gremlin contend that it had specific evidence that it wanted to present of other sources of t-DCE around the Water Gremlin facility. Quite the contrary. Regarding any such potential sources, Water Gremlin concedes that "none are known of. " (Petition at 26.) This too supports denial of a contested case hearing.
168. Water Gremlin's argument amounts to a challenge to MPCA's use of Water Gremlin's data instead of just relying on theoretical modeling. (Petition at 24-26.) That does not present a material issue of fact, nor would holding a contested case hearing aid Commissioner on that issue.

MPCA thoroughly considered Water Gremlin's arguments and detailed why the agency was not going to ignore Water Gremlin's own collected data showing the modeling was underpredicting a safe limit for t-DCE usage at Water Gremlin.

169. MPCA has broad authority to issue permits and establish the emission limits, including for t-DCE, that are protective of human health and the environment. Minn. Stat. § 116. 07, Subd. 4a; Minn. Stat. § 116. 061; Minn. R. 7007. 0800 subp. 2(A)-2(B). The Minnesota TCE ban codified in Minn. Stat. § 116. 385, subd. 3 similarly provides MPCA with authority and discretion to ensure that facilities replacing TCE with other chemicals demonstrate that the new chemical is less toxic to human health.
170. Following basic scientific principles, MPCA analyzed the ambient air quality impacts following two separate methods to determine the emission rate that would be protective of public health under all observed or reasonably foreseeable meteorological conditions. MPCA looked at the results of the modeling and, separately, at the results of ambient monitoring and concluded the modeling results were underpredicting impacts by about 16 percent.
171. The first method was the theoretical approach where, through dispersion modeling and AERA methods, MPCA looked at the predicted concentrations at receptors located at the facility boundary and beyond and the emission rates associated with these predicted concentrations. The modeling and AERA iterations are described in detail in the TSD. See TSD at 3.6. Notably, MPCA identified certain limitations with modeling, including that modeling uses the best available meteorological data, but that local meteorological conditions around Water Gremlin during the period of observation may be different enough from the meteorological data used in the modeling to account for the discrepancy compared to the impacts shown in Water Gremlin's monitoring data.
172. MPCA also conducted an exhaustive evaluation of multiple scenarios of operation proposed by Water Gremlin since the submittal of the first application. MPCA evaluated information on the current and modified operation of their emission sources, control equipment, and their respective monitoring equipment. MPCA reviewed results of stack tests and continuous emission monitors and conducted extensive review of Water Gremlin's operation processes and practices to generate compliance data.
173. The second method was the empirical approach. In the case of Water Gremlin, MPCA had the unique opportunity to evaluate source specific data that is usually not available in processing air permits. The source specific information available on ambient air impacts was over three years of the real time data generated from five source-oriented ambient monitors measuring t-DCE and other speciated VOCs, including concurrent daily emissions data of t-DCE from Water Gremlin. MPCA had been observing the measured t-DCE ambient concentrations (expressed as 365-day rolling averages) and the concurrent emission rates (expressed as 365-day rolling sums) since 2020 to make sure any modeling predictions made to set the t-DCE limit were consistent with reality. Because such data shows reality, not just theory, ambient monitoring from source-oriented monitors, when available and collected over a sufficient period with concurrent emissions data from the regulated facility, is preferred to modeling and AERA analyses. Simply put, the ambient monitoring record is a more robust assessment of the facility's impact on ambient air and determination of the appropriate emission limit to protect MDH's t-DCE chronic RAA.
174. The monitoring data shows Water Gremlin's actual measured impacts resulting from Water Gremlin's operations under real time local meteorological conditions. Water Gremlin's own data showed that the modeling results were underpredicting the amount of t-DCE that could be used at the facility and meet the MDH health value of 20 ug/m³ by approximately 16 percent.

Considering all the evidence, both theoretical modeling and empirical data, MPCA concluded that the permit limit should be set at 32.6 tons per year.

175. In sum, Water Gremlin cannot dispute its own data and argues for a contrary interpretation of that uncontested data which would not be as protective of human health and the environment. Water Gremlin, therefore, has not shown it is entitled to a contested case hearing nor does MPCA not find holding a contested case hearing would aid the Commissioner.

E. Water Gremlin’s “proposed emissions schedule” was never included in its permit application as required and was properly rejected.

176. Minnesota Rule 7007.0500, subp. 1 requires that an “applicant must submit an application on a standard application form provided by the agency.... [And] an applicant must include all information needed to determine the applicability of, or to impose, any applicable requirement.” Water Gremlin submitted 10 applications, none of which have contained its “proposed emissions schedule.” It is uncontested that Water Gremlin submitted its initial application in 2018 and its final certified permit application on July 1, 2022. Water Gremlin had years to develop an alternative proposed emissions schedule but never included a proposed emissions schedule in its application. To the contrary, its final application states that Water Gremlin proposed to emit 76 tons per year. That alone warrants denial of the contested case hearing.

177. Water Gremlin also continues to change what it contends its proposal was. In their post-application August 19, 2022 letter, Water Gremlin contends that its proposal was “structured to provide for emissions of 38.7 tpy *in year one* of the permit (consistent with MDH RAA guidance), and 36.5 tpy *in years two and three* of the permit, followed by reduced emissions of 19.4 tpy *in years 4 and 5.*” In its August 19, 2022 and March 3, 2023 contested case hearing requests, however, Water Gremlin claims its proposal was to limit emissions to 38.7 and 36.5 for a total of two years, not three: “Water Gremlin’s proffered emission schedule was structured to provide for emissions of 38.7 tpy and 36.5 tpy *respectively for the first two years* of the permit (but still within MDH RAA guidance), followed by reduced emissions below the proposed permit limit for the remaining years.” Water Gremlin’s amorphous “proposal” reenforces the reason for the requirement that applications be written and complete and further supports MPCA’s denial of the contested case hearing.

178. In addition, it is uncontested that Water Gremlin’s proposed emissions of 38.7 tons per year and 36.5 tons per year would exceed MDH’s health value for at least the first two years, and possibly three years, depending on which version of its proposal is being considered. Moreover, Water Gremlin’s assertion that comparing the sum of emissions over the 5-year permit term is more protective of health than annually remaining below the average air concentration of 20 ug/m³ set by MDH is not a question of material fact but a policy argument. That too warrants denial of the contested case.

179. Finally, Water Gremlin’s “proposed emissions schedule” was conditioned on the elimination of monitoring. MPCA determined that the CEMS was an important condition of the permit and also rejected the proposal on that basis. MPCA has broad discretion to determine permit conditions, and MPCA’s decision to require a CEMS is not a material issue of fact but a policy decision on what the Agency has determined would make for a protective permit.

180. Water Gremlin has not raised material issues of fact regarding its proposed emissions schedule and holding a contested case hearing on Water Gremlin’s policy arguments would not aid the Commissioner.

F. Water Gremlin seriously violated its previous permit and monitoring provides important, independent information in real time that is required to ensure the public remains protected.

181. Water Gremlin argues that it is entitled to a contested case hearing because there is no scientific justification for additional monitoring and disputes whether “in-stack monitoring provides any *useful* information.” Water Gremlin’s argument that such information is not justified or useful does not raise a material issue of fact, it simply represents Water Gremlin’s opinion.
182. Nor will a contested case hearing aid the Commissioner because MPCA made clear that the independent CEMS data collected at the stack is necessary to verify the daily data in real time. This was important for multiple reasons, including Water Gremlin’s significant past violations, which included previously by-passing the stack.
183. MPCA considers the combined t-DCE data collected because of the enforcement actions of 2019 as the most reliable set of data to use as the basis of the permit. This is because the combination of these parameters represents, in real time, the amount of t-DCE released into the area around Water Gremlin and its corresponding impact on ambient air quality. This data set includes the reports of measured t-DCE containing material usage in the coating rooms, the concurrent readings of Total Hydrocarbon Concentration from the CEMS operating at the coating rooms’ stack, and the concurrent measurement of t-DCE emissions in ambient air. MPCA concluded using records of t-DCE containing material usage as the primary method of compliance without methodologies to audit reliability is not sufficient to ensure compliance, especially given the narrow margin of compliance expected for the larger portion of the permit term.
184. MPCA did consider Water Gremlin’s argument to eliminate CEMS monitoring. Daily recordkeeping and weighing of solvent usage to show compliance is required as the primary measurement of t-DCE emissions by the permit with required corrective actions to prevent exceedances. Notably, however, both the Minnesota Department of Commerce and National Institute of Standards and Technology (NIST), which develop best practices for the reliable operation of weighing devices, have found that operator error is one of the most common source of errors in weighing processes, even with well-maintained weighing equipment. The independent, automated, CEMS operation as prescribed in the draft permit reduces such human error and serves the purpose of providing reasonable and sufficient assurance that the daily manual calculations of emissions are accurate and that corrective actions are taken promptly.
185. Water Gremlin also contends that daily emission limits are irrelevant. (Petition at 31.) This does not raise a material issue of disputed fact. Moreover, Water Gremlin’s position is contrary to how MPCA established its permit. From the beginning of the 2019 investigation, MPCA has followed a scientific approach to assess chronic public exposure from Water Gremlin using daily measurements and usage records as building blocks for the assessment of chronic impacts (expressed as average annual concentrations) from emission rates regulated as annual sums of emissions. MPCA considers it unacceptable to set the annual t-DCE limit based on 12-month rolling sums or a 365-day block sum because it is unnecessary to have to wait for 365 days or even 30 days to find out an exceedance to the annual emission limit has occurred. Daily verification of compliance with the 365-day rolling sum emission limit is needed to ensure timely corrective action and prevent exceedances.
186. Water Gremlin also makes vague assertions that the CEMS data is “inherently inaccurate,” but does not specifically critique any of the testing MPCA conducted or MPCA’s analysis related to the same. (Petition at 30.) Regardless, MPCA detailed the extensive testing that it conducted related to the CEMS data using two different EPA approved methods in its TSD and determined that the CEMS data was reliable and an appropriate check on the manual record keeping. MPCA considered the variability in all measurement techniques, including both the CEMS and manual

record keeping, and does not find holding a contested case on that issue would further aid the Commissioner.

187. Water Gremlin also argues that discontinuing ambient monitoring would be difficult and does not provide any additional protection to the surrounding community. (Petition at 31-32.) This too does not raise a material issue of fact.
188. First, nothing in law or rule requires that MPCA allow for the discontinuation of monitoring established in a permit during that permit's term. Nor does the permit require that Water Gremlin discontinue monitoring during the term of the permit. That is a sufficient basis in and of itself to deny a contested case hearing on this issue.
189. Second, as an incentive to reduce emissions, MPCA created a process in the permit that Water Gremlin could pursue to discontinue ambient monitoring. Although Water Gremlin criticizes the MPCA's process for discontinuing ambient monitoring, it was created based on established USEPA Ambient Air Monitoring Network Assessment Guidance² and MPCA's development of an air quality monitor siting plan.
190. Notably, EPA's guidance to discontinue monitoring contains even more strenuous tests, including that the monitors showed attainment of the required standard for "the previous five years." EPA Guidance, *Attainment Reached and Expected to Be Maintained*, at 4-1. Moreover, EPA requires that the probability is less than 10 percent that the monitor will exceed 80 percent of the applicable limit during the next three years. *Id.* In contrast, MPCA did not include a 5 year look back and limited its attainment expectation to two years, not three, at 80 percent. Moreover, the discontinuation after 24 months of normal operation was based on the on the reported schedule of operations in the last two years where Water Gremlin typically stopped for weekends and holidays.
191. In any event, the permit is set so that the annual emission limit is met regardless of the distribution of emission during the year. MPCA set the two-year period so that it would have sufficient and sustained data during normal modes of operation to demonstrate the discontinuation of ambient monitoring is justifiable based on Water Gremlin's actual ambient air quality impacts.
192. Water Gremlin argues that MPCA's not crediting to Water Gremlin for its prior monitoring at levels exceeding the current permit is inequitable. (Petition at 31.) Such an argument does not raise a disputed issues of material fact; it asserts an opinion. MPCA explained that the prior period of ambient monitoring between March 2019 and December 2020 is not a good representation of operating conditions authorized under the permit. There was much higher variability on the 365-day rolling sum of t-DCE usage and includes t-DCE usage rates that are much higher than the proposed permit limit. Similarly, the ambient monitoring in 2021 and 2022 was also higher than the proposed emissions limit and included multiple times when the 20 ug/m³ RAA calculated as the highest 365-day rolling average was exceeded.
193. Water Gremlin also argues that the requirements to discontinue ambient monitoring are too conservative and too costly. (Petition at 32.) Continuation of the ambient monitoring of t-DCE is the only way to verify ambient concentrations of t-DCE around the facility are likely to remain below the t-DCE RAA as expected if the facility operates in compliance with the proposed permit. Continuing monitoring for a period to evaluate the effects of changes in Water Gremlin's operations is not too conservative, it's common sense and in keeping with EPA's guidance for the discontinuation of monitoring.

² <https://www.epa.gov/sites/default/files/2020-01/documents/network-assessment-guidance.pdf>

194. Finally, Water Gremlin's emissions are impacting the surrounding ambient air quality area, and Water Gremlin should shoulder the cost of monitoring. Moreover, the sooner Water Gremlin reduces its t-DCE emissions through use of UV or water-based coaters, the less costly the monitoring will be. If Water Gremlin reduces its emissions by the third year of the permit as it claims it can do, Water Gremlin would likely meet the criteria to discontinue monitoring before the end of the permit term. Should Water Gremlin reduce emissions earlier, Water Gremlin has the ability to save costs and reduce exposure to the community. This process provides both an incentive to Water Gremlin to reduce emissions and additional protection to the surrounding community.
195. Water Gremlin has not established it is entitled to a contested case hearing on any of the issues presented in its Petition.

FINAL DETERMINATION ON ISSUANCE OF PERMIT NO. 12300341-101

195. The MPCA's decision to issue the application for air emissions Permit No. 12300341-101 to the Permittee is governed by its permit rule, Minn. R. 7007. 1000, subp. 1, which specifies preconditions to permit issuance. The preconditions conditions are:
- A. The agency has received a complete application for a permit, permit amendment, or permit reissuance, except that a complete application need not be received before issuance of a general permit under part 7007. 1100, subpart 4;
 - B. the agency has complied with the public participation procedures for permit issuance, if required by part 7007. 0850;
 - C. the agency has complied with the procedures for notifying and responding to affected states, if required by part 7007. 0900;
 - D. if the administrator's review is required by part 7007. 0950, the administrator has received a copy of the permit and any notices required and has not objected to issuance of the permit within the time period specified, or the administrator has objected but the objection has been resolved to the administrator's satisfaction;
 - E. the conditions of the permit provide for compliance with all applicable requirements and the requirements of parts 7007. 0100 to 7007. 1850, or include a schedule to achieve such compliance;
 - F. the permit does not reflect a variance from any federally enforceable applicable requirement or requirement of parts 7007. 0100 to 7007. 1850;
 - G. the agency anticipates that the applicant will, with respect to the stationary source and activity to be permitted, comply with all conditions of the permit; and
196. In addition, Minn. R. 7007. 1000, subp. 2, specifies the grounds on which the MPCA may deny permit issuance:
- H. The agency is unable to make any of the determinations required under subpart 1.
 - I. There exists at the stationary source to be permitted unresolved noncompliance with applicable state or federal pollution control statutes or rules administered by the agency, or conditions of a previous or existing air emission permit, and the applicant will not undertake a schedule of compliance to resolve the noncompliance.
 - J. An applicant has failed to disclose fully all facts relevant to the stationary source or activity to be permitted, or the applicant has knowingly submitted false or misleading information to the agency.
 - K. The permitted facility or activity would endanger human health or the environment and the danger cannot be removed by an amendment to the permit.

- L. With respect to the stationary source or activity to be permitted, the applicant has not complied with the requirement to pay fees under chapter 7002.
 - M. With respect to the stationary source or activity to be permitted, the applicant has failed to pay a penalty owed pursuant to court order, consent decree, stipulation agreement, schedule of compliance, or an order issued under Minnesota Statutes, section 116. 072.
 - N. The applicant has failed to prepare a pollution prevention plan or submit a pollution prevention progress report to the commissioner as required by Minnesota Statutes, sections 115D. 07 and 115D. 08.
197. The Permittee has submitted complete applications. These applications have been reviewed and preliminarily approved by MPCA staff and demonstrate that all environmental protection standards will be satisfied.
198. The MPCA has reasonable assurance, based on the information submitted, that proper operation of the Facility in compliance with the requirements of the permit and completion of all required monitoring in accordance with the conditions of the permit issued by this order will result in compliance with all applicable state and federal pollution control statutes and rules, and the conditions of the permit, and will not pose a danger to human health or the environment.
199. The MPCA finds that the proposed issuance of air emissions Permit No. 12300341-101 for the Facility as public-noticed on February 1, 2023 through March 3, 2023, meets the requirements of Minn. R. 7007. 1000, subp. 1 and none of the justifications to deny permit issuance described in Minn. R. 7007. 1000, subp. 2 exists.

CONCLUSIONS OF LAW

200. The MPCA has jurisdiction over the decision whether to issue Permit No. 12300341-101 for the Facility.
201. The MPCA concludes that all procedural and public notice requirements applicable to the proposed permit action have been satisfied.
202. The MPCA has jurisdiction over the decision whether to grant or deny the petition for a contested case hearing for the proposed issuance of Permit No. 12300341-101 for the Water Gremlin Company Facility.
203. For the reasons set forth in the foregoing Findings, the MPCA concludes that the petition for a contested case hearing does not satisfy the requirements of Minn. R. 7001. 1900, subp. 1. Therefore, the request for a contested case hearing is denied.
204. The requirements set forth in Minn. R. 7007. 1000 for issuance of Permit No. 12300341-101 are satisfied. Therefore, Permit No. 12300341-101 for the Water Gremlin Company Facility should be issued.
205. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency determines that the issues raised by the contested case hearing request do not meet the requirements of Minn. R. 7000. 1900 for granting a contested case hearing. The Minnesota Pollution Control Agency denies the request for a contested case hearing.

The Minnesota Pollution Control Agency approves and authorizes the issuance of Permit No. 12300341-101 for the Water Gremlin Company Facility.

IT IS SO ORDERED

Peter Tester for

Commissioner Katrina Kessler
Minnesota Pollution Control Agency

June 15, 2023

Date