air pollution control district
SANTA BARBARA COUNTY

HEARING BOARD STAFF REPORT

TYPE: **REGULAR VARIANCE**

CASE NO: **2025-04-M1**

DATE: **January 7, 2026**

1.0 GENERAL INFORMATION:

1.1 PETITIONER COMPANY NAME: MANN+HUMMEL Water Fluid Solutions, Inc., dba MNUS

1.2 EQUIPMENT LOCATION: 6325 Lindmar Avenue, Goleta, California

1.3 PERMIT NUMBER(S): Permit to Operate 16120

1.4 FACILITY NAME/ID: MNUS / FID 3640

1.5 FACILITY DESCRIPTION: MANN+HUMMEL Water Fluid Solutions, Inc, dba MNUS (Petitioner) manufactures water purification filters. The Petitioner uses three types of casting processes to manufacture water filters: Cellulose Acetate (CA) Casting, Polysulfone (PSF) Casting, and Advanced Composite Membrane (ACM) Casting. The Petitioner utilizes various casting equipment, solvents, wet scrubbers and a thermal oxidizer in their process.

2.0 REASON FOR THE VARIANCE REQUEST: The Petitioner's Advanced Composite Member (ACM) Casting utilizes reactive organic compounds (ROCs) in the process. Emissions from the ACM process are routed to a thermal oxidizer (APCD Device ID 109886), to control emissions. The Petitioner's permitted thermal oxidizer is required to be source tested annually. Results from the November 6, 2024 thermal oxidizer source test indicated the Best Available Control Technology (BACT) 10 ppmv ROC outlet concentration limit and the 750 scfm outlet flow rate limit were both exceeded; the source test results showed the ROC outlet concentration was 20.66 ppmv and the outlet flow rate was 1290 scfm.

On December 10, 2024, the Petitioner contacted a third-party vendor to inspect the thermal oxidizer. During this evaluation, it was determined the heat exchanger pipes were deteriorated. According to the Petitioner, the deterioration is due to the age of the equipment. The thermal oxidizer has been in use for approximately 30 years.

On March 5, 2025, the Hearing Board granted Variance Order 2025-04-R, to allow the Petitioner additional time to evaluate the situation, obtain the necessary quotes to procure a new thermal oxidizer and obtain the necessary permits to achieve compliance.

At this time, the Petitioner remains out of compliance with District Rule 206, Permit to Operate 16120, Conditions 1, 2.d.iv, 9, 11.a (for thermal oxidizer, APCD Device ID 109886), Table 3 (ACM Casting Dryer and Rinse Tank Emissions), and Table 4 (for thermal oxidizer, APCD Device ID 109886). Therefore, in accordance with Health and Safety Code section 42356 and 42357, the Petitioner is requesting a Modification of Variance and Modification of Final Compliance Date of Regular Variance Order 2025-04-R, for relief from the Best Available Control Technology (BACT) reactive organic compounds (ROCs) destruction efficiency requirements, outlet flow rate, and source testing requirements for the thermal oxidizer (APCD Device ID 109886).

The Petitioner was unable to install the new thermal oxidizer during the existing variance coverage because the necessary regulatory permits have not been issued. As a result, additional relief is being sought.

If granted, Variance Order 2025-04-M1, would provide relief from the Best Available Control Technology (BACT) reactive organic compounds (ROCs) destruction efficiency requirements, outlet flow rate, and source testing requirements for the thermal oxidizer (APCD Device ID 109886) at the Petitioner's facility from January 29, 2026 through January 28, 2027, or the date compliance is achieved, whichever occurs first.

3.0 BACKGROUND: The Petitioner is currently operating under Regular Variance Order 2025-04-R, granted on March 5, 2025, by the Hearing Board. When the Petitioner initially came to the Hearing Board to request Variance coverage in January 2025, they were unaware of the state of thermal oxidizer (APCD Device ID 109886) until a third-party vendor was hired to investigate the equipment after the failed source test. On January 13 and 14, 2025, a more detailed investigation of the thermal oxidizer was conducted.

The Petitioner decided to replace the aging thermal oxidizer since it was at the end of its operational life cycle. Quotes for a new thermal oxidizer were acquired by the Petitioner and a District Authority to Construct was applied for and obtained. However, prior to installation of the new thermal oxidizer, additional approvals and permits from other regulatory agencies must be obtained. These approvals and permits are taking longer than expected, further delaying the installation process and the return to compliance.

During the variance period covered by Regular Variance 2025-04-R (March 2025 through December 2025), the following was accomplished by the Petitioner:

a. Met with five different thermal oxidizer vendors, obtained separate quotes and sent them to the Petitioner's procurement team for review. The review and selection process took approximately 8 months, and payment authorization took approximately one month.

b. On May 22, 2025, the Petitioner submitted a permit application to the District for the new thermal oxidizer (ATC 16423).

c. In June 2025, the Petitioner requested abandonment of monitoring wells from the Central Coast Regional Water Quality Control Board (CCRWQCB). The monitoring wells are located in the rear parking lot, identified as the proposed location of the new thermal oxidizer. Due to its larger size, the new thermal oxidizer will not fit in the location of the existing thermal oxidizer, so the Petitioner identified a new location for the new thermal oxidizer in the rear parking lot near monitoring wells.

d. On August 13, 2025, the Petitioner awarded the thermal oxidizer contract to Epcon Industries Inc. Epcon Industries began the process of acquiring specialized mechanical components needed for the thermal oxidizer (e.g., temperature control valve, combustion burner, and flow control valve). These critical parts have an industry-wide lead time of twenty plus weeks.

e. Gathered the necessary documents and conducted the necessary assessments needed for the Land Use Permit for the City of Goleta (e.g., application, project description, proof of documentation from the District regarding the project (ATC application), existing and proposed site plans, covenants/conditions, restrictions, digital sample board, preliminary title report, pictures of site, biological survey, archaeological assessment, cultural resources assessment, justification statement, and thermal oxidizer general arrangements).

f. On November 4, 2025, the Petitioner submitted a Land Use Application to the City of Goleta.

g. On November 4, 2025, the Petitioner received notification from the CCRWQCB that the requested abandonment of the monitoring wells was denied.

h. On November 7, 2025, the Petitioner obtained a District Authority to Construct permit (ATC 16423) to install the new Epcon thermal oxidizer.

i. On October 29, 2025, the Petitioner prepared and submitted a Conjunctive Parking Agreement to the adjacent landowners for their review and signature, as required by the City of Goleta due to the loss of parking spots associated with the proposed location of the new thermal oxidizer.

j. In November 2025, the Petitioner revised the site plans to meet the City of Goleta standards.

k. On November 24, 2025, the Petitioner completed the geotechnical report (soils report), which is required to complete the structural plans needed by the Planning Department.

l. On December 2, 2025, the Petitioner met with the consulting firm, APEX, who is handling the monitoring wells, and they agreed to deflect one of the monitoring wells so that the new site location for the thermal oxidizer can be used.

m. On December 17, 2025, the Petitioner was unsuccessful at securing the signatures for the Conjunctive Parking Agreement by the adjacent landowners and decided to pursue an alternative location for the new thermal oxidizer.

The Petitioner has made every effort to attempt to return to compliance during the existing coverage. However, the remaining items are necessary to complete prior to the installation:

a. Revise the site plan to identify an alternative location for the new thermal oxidizer, due to the well abandonment denial by the CCRWQCB and the unsuccessful Conjunctive Parking Agreement by the adjacent landowners.

b. Resubmit the revised Land Use Permit application documents to the City of Goleta.

c. Obtain the Land Use Permit from the City of Goleta (once the application is complete, expected processing time is 2 – 3 months, but could be longer depending on the lead agency requirements).

d. Obtain any additional agency permits that are required (e.g. City of Goleta building permit).

Once all the necessary approvals and permits are obtained, the Petitioner anticipates compliance to be achieved (installation of the new thermal oxidizer) within 2 – 3 months. Due to the unforeseen nature of the approval process, the Petitioner has requested an additional year to achieve compliance.

Per Health and Safety Code section 42358.b, variances exceeding one year, shall include Increments of Progress. As a result, Increments of Progress have been included in Variance Order 2025-04-M1. No changes to the requested conditions and District Rules have been made.

If granted, Variance Order 2025-04-M1, would extend coverage beyond one year and allow continued relief from the Best Available Control Technology (BACT) reactive organic compounds (ROCs) destruction efficiency requirements, outlet flow rate, and source test requirements for the thermal oxidizer through January 28, 2027, or the date compliance is achieved, whichever occurs first.

4.0 **PERMITTING HISTORY**: The initial permit to operate was issued to Trisep in 1991. Since then, there has been one transfer of owner/operator from Trisep to Mcrodyn-Nadir in 2017, and a name change to MANN+HUMMEL (MNUS) in 2023. There have also been several permitting actions since the facility was first permitted in 1991 (see Permit History table below).

Date of Permit Action	Permit Number	Description
Issued May 8, 1991	Authority to Construct 8074	Solvent operations
Issued January 13, 1993	Permit to Operate 8717	PSF and ACM casting and the installation of a wet scrubber to control emissions from CA and PSF casting
Issued May 28, 1996	Permit to Operate Modification 8717	Epoxy bonding operations removed from permit
Issued April 3, 1996	Authority to Construct 9524	Use of an additional solvent in the casting process
Issued April 3, 1996	Permit to Operate 9524	Use of an additional solvent in the casting process
Issued June 15, 1999	Permit to Operate 10127-R1	Change in the daily emissions calculations
Issued November 27, 2002	Permit to Operate 10127-R2	Change in the emission limits from CA casting to the ACM Casting
Issued July 20, 2007	Authority to Construct/Permit to Operate 12276	Temporary project to continue operations under existing practices that were not previously permitted. Installation of thermal oxidizer.

Issued March 10, 2017	Transfer of Owner Operator 12276-01	Transfer owner/operator from Trisep to Microdyn-Nadir US
Issued September 30, 2008	Authority to Construct 12622	Installation of new CA-V2, PSF-V2, water scrubber and ventilation system. Removal of CA-V1, PSF-V1, and existing water scrubber.
Issued May 22, 2015	Authority to Construct 14521	Installation of a thermal catalytic oxidizer.
Issued March 10, 2017	Authority to Construct Modification 14521-01	Minor modifications
Issued March 10, 2017	Permit to Operate 14521	Combined permits 12276 and 12622.
Issued April 12, 2021	Authority to Construct 15285	New solvent added to casting process and decreasing usage of a specific solvent
Issued December 10, 2020	Authority to Construct/Permit to Operate 15596	Pilot study
Issued December 15, 2022	Authority to Construct 15971	Modify solvent usage, add solvents operating under temporary permit 15596, and company name change from Microdyn-Nadir US to MANN+HUMMEL Water Fluid Solutions, Inc., dba MNUS
Issued September 13, 2023	Authority to Construct 16120	Change in solvent usage
Issued December 16, 2024	Permit to Operate 16120	Change in solvent usage
Withdrawn September 18, 2025	Authority to Construct 16298	Increase the emission limits
Issued November 7, 2025	Authority to Construct 16423	Replace existing thermal oxidizer, to achieve 99% removal of ROC or outlet stack ROC concentrations of <10 ppm, whichever is attainable.

5.0 **COMPLIANCE HISTORY:** In the past three years, the following Notices of Violations (NOVs) were issued to the facility:

- NOV 13441 issued on June 27, 2023, for failing to conduct the 2023 wet scrubber #2 source test by the anniversary date.
- NOV 13442 issued on June 27, 2023, for failing to add a minimum of 3 gal/min of fresh water to wet scrubber #2.
- NOV 13469 issued on August 3, 2023, for failing to submit the 2023 source test results for wet scrubber #2 and the thermal oxidizer by the due date.

- NOV 13757 issued on June 26, 2024, for failing to submit the 2024 source test plan for the thermal oxidizer at least 30 days prior to source test initiation and obtain written approval of the source test plan prior to commencement of source testing.
- NOV 13758 issued on June 26, 2024, for failing to conduct the 2024 thermal oxidizer source test by the anniversary date.
- NOV 13761 issued on June 26, 2024, for failing to submit the 2024 source test plan for wet scrubber #2 at least 30 days prior to source test initiation and obtain written approval of the source test plan prior to commencement of source testing.
- NOV 13762 issued on June 26, 2024, for failing to conduct the 2024 wet scrubber #2 source test by the anniversary date.
- NOV 13763 issued on June 26, 2024, for failing to record the recirculation rate and rate of fresh water added to wet scrubber #1.
- NOV 13834 issued on October 30, 2024, for failing to maintain the inlet and outlet flowrate below 750 scfm during the 2022 thermal oxidizer source test.
- NOV 13835 issued on October 30, 2024, for failing to maintain the inlet and outlet flowrate below 750 scfm during the 2023 thermal oxidizer source test.
- NOV 13880 issued on January 15, 2025, for failing to submit the 2024 source test report for the thermal oxidizer within 45 days of source test completion.
- NOV 13883 issued on January 30, 2025, for failing to conduct the 2024 wet scrubber source test by the anniversary date and for failing to submit the source test report within 45 days of source test completion.
- NOV 13884 issued on January 30, 2025, for exceeding 10 ppmv outlet stack ROC concentration, exceeding the exhaust flowrate limit of 750 dscfm specified in Table 3; and, emitting regulated air pollutants without Best Available Control Technology (BACT) during the 2024 thermal oxidizer source test.

6.0 **REGULATORY ANALYSIS**: The Petitioner requested the below permit conditions and rules be included in the Variance Order. Pursuant to California Government Code Section 6254.7 (air pollution data; public records, notices and orders to building owners; trade secrets), are not considered public records. Trade secrets are defined as (but are not limited to) any formula, plan pattern, process, tool, mechanism, compound, produced, production data, or compilation of information which is not patented, which is known only to certain individuals within commercial concern who are using it to fabricate, produce, or compound an article or trade or service having commercial value wand which gives it user an opportunity to obtain a business advantage over competitors who do not know or use it. The Petitioner has submitted the required documentation per the District's Policies and Procedures (6100.020.2016) as it pertains to confidential information. As such, condition 1 below is a redacted public version of the Petitioner's permit language.

- **Permit to Operate 16120, Conditions:**
  - 1 (redacted)
    - **Emission Limitations.** The mass emissions from the equipment permitted herein shall not exceed the values listed in Table 1 and Table 2. Compliance shall be based on the operational, monitoring, recordkeeping, and reporting conditions of this permit. Compliance with the pound per day (lb/day) emission limits for all solvents except for [redacted] in the ACM-V1 line shall be demonstrated by dividing the

monthly emissions by 21.7 days per month. Compliance with the pound per day (lb/day) emission limit for [redacted] in the ACM-V1 line shall be demonstrated by dividing the monthly emissions by the number of days that the tanks were rinsed with [redacted] in that month. Compliance with the ton per year (TPY) emission limit shall be demonstrated by compiling the monthly ROC emission records for the year. Emissions shall be calculated in accordance with the emission calculation formulas specified in Attachment B of the *Engineering Evaluation* of this permit.

- 2.d.iv
  - ***Removal Efficiency*.** The ROC removal efficiency across the thermal oxidizer shall be greater than 98 percent (mass basis) or outlet stack ROC concentrations shall be <10 ppmv, whichever is attainable.
- 9
  - ***Best Available Control Technology***. The permittee shall apply emission control technology and plant design measures that represent Best Available control Technology (BACT) to the operation of the equipment/facilities as described in this permit and the District's Permit Evaluation for this permit. Table 3 and the Emissions, Operational, Monitoring, Recordkeeping and Reporting Conditions of this permit define the specific control technology and performance standard emission limits for BACT. The BACT shall be in place, and shall be operational at all times, for the life of the project. This permit contains BACT related monitoring, recordkeeping and reporting requirements.

- 11.a (for thermal oxidizer, APCD Device ID 109886)
  - ***Source Testing.*** The following source testing provisions shall apply: a. Source testing shall be performed on an annual schedule (anniversary date of April). The permittee shall conduct source testing of air emissions and process parameters listed in Table 4 of this permit. More frequent source testing may be required if the equipment does not comply with permitted limitations or if other compliance problems, as determined by the District, occur. If after the issuance of ATC 16120, two consecutive source tests demonstrate compliance with the requirements of Table 4, the District may approve biennial (every two years) source testing for DID #109886 and DID #111707 upon permittee request. If a subsequent source test shows a unit to be out of compliance, then source testing of that unit shall revert to an annual basis.

Table 3 - Best Available Control Technology Requirements
FID 3640 MNUS: PTO 16120

Emission Unit/Process	Control Technology	Pollutant	Performance Standard		
CA-V1 Casting and PSF-V1 Casting	Wet Scrubber	ROC	90.0 mass percent ROC removal	or	10 ppmv
ACM Casting Dryer and Rinse Tank Emissions	Thermal Oxidizer	ROC	98.0 mass percent ROC destruction	or	10 ppmv
PSF-V2 Casting & iSep Solvent Welding Emissions	Wet Scrubber	ROC	95.0 mass percent ROC removal	or	10 ppmv
CA-V1 Casting, PSF-V1 Casting, and PSF-V2 Casting	Covered Tanks and 2000 cfm Ventilation System	ROC	95.0 percent ROC capture		

Table 4 - Source Test Requirements
FID 3640 MNUS: PTO 16120

Emission Test Point	Pollutants	Parameters	Test Methods	Limit
Water Scrubber Inlet and Outlet (DID #111707)	Reactive Organic Compounds (ROC)	Inlet and Outlet Concentration (ppmvd) and Mass Rate (lb/hr)	EPA Method 18	95% DRE by mass ~ 10 ppmv ROC
Thermal Oxidizer Fuel Line (DID #109886)	-	Supplemental Fuel Consumption (scfh)	Calibrated meter	952 scfh
Thermal Oxidizer Inlet (DID #109886)	ROC	Flow Rate (scfm) Concentration (ppmvd) Mass Rate (lb/hr)	EPA Method 2 EPA Method 308 EPA Method 308	750 scfm N/A N/A
Thermal Oxidizer Outlet (DID #109886)	ROC	Flow Rate (scfm) Concentration (ppmvd) Mass Rate (lb/hr) Efficiency (%)	EPA Method 2 EPA Method 308 EPA Method 308 EPA Method 308	750 scfm N/A N/A 98%
Thermal Oxidizer Combustion Chamber (DID #109886)	-	Residence Time (seconds)	-	1 second

Notes:
1. Alternative methods may be acceptable on a case-by-case basis.
2. Performance testing of each emission control device shall be performed on an "as-found" basis.
3. All test results are to be reported at standard conditions (60° Fahrenheit, 1 atm).
4. All tests shall be performed on the frequency described in Condition 10 of this permit.
5. Hourly mass emission rates (lb/hour) require measurment of the exhaust stack velocity.
6. Destruction rate efficiency = [100 x (inlet mass - outlet mass)] ÷ (inlet mass)]
7. Residence Time (sec) = combustion chamber volume (cubic feet) x 60 (sec/min) ÷ Outlet Flow Rate (scfm)

7.0 **EMISSIONS ANALYSIS**: At this time, emissions associated with the granting of this variance are below the facility's permitted emission limit.

8.0 ***RESERVED***

9.0 **OTHER FACTORS**: None.

10.0 **DISTRICT RECOMMENDATION**: The District supports the Petitioner's variance request.

11.0 ATTACHMENTS:

- Attachment 1 – Variance Petition for 2025-04-M1
- Attachment 2 – DRAFT Variance Order 2025-04-M1
- Attachment 3 – Monthly Reports for Variance Order 2025-04-R

Aimee Long, Air Quality Specialist
Compliance Division

December 18, 2025
Date