

**DRAFT TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 110281****I. INTRODUCTION**

This Class II air quality synthetic minor renewal permit is issued to W.L. Gore & Associates, Inc., the Permittee, for the continued operation of the Woody Mountain Campus facility. The facility is located at 3650 West Kiltie Lane, Flagstaff, Arizona 86005 in Coconino County. This permit renews and supersedes Permit No. 85854.

The Woody Mountain Campus facility manufactures medical devices from nitinol wire, an alloy used in medical applications, and fluoropolymers, specialty plastics that support medical device functions. The facility has the potential to emit (PTE), without controls or operating limitations, greater than 100 tons per year (tpy) of VOCs. The Permittee has accepted voluntary emissions limits for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) to ensure that the facility remains below major source thresholds.

To qualify for a Class II synthetic minor permit pursuant to Arizona Administrative Code (A.A.C.) R18-2-302.B.2.b, the Permittee has accepted facility-wide VOC emission limits of 70 tpy of VOCs, 18 tpy of combined federal HAPs, and 7 tpy of any single federal HAP.

A. Company Information

Facility Name: W.L. Gore & Associates, Inc.

Mailing Address: P.O. Box 240
Flagstaff, Arizona 86003

Facility Location: 3650 West Kiltie Lane
Flagstaff, Arizona 86005

B. Attainment Classification

The facility is located in Coconino County, an area that is designated as attainment for all criteria pollutants.

II. PROCESS DESCRIPTION**A. Facility Operations**

The Woody Mountain Campus manufacturing process consists of fluoropolymer powder blending with liquid extrusion aid to form a billet, which is later paste-extruded to form final product shapes. Final processing or assembly steps occur after the extrusion aid is volatilized from the fluoropolymer.

B. Emergency Internal Combustion Engines (ICEs)

The facility operates eight (8) natural gas-fired emergency generators. These generators will provide backup power to facility-wide systems. All emergency generators will have the potential to emit NO_x, CO, PM₁₀, PM_{2.5}, VOCs, SO₂, and HAPs.

III. COMPLIANCE HISTORY

A. Report Reviews

During the permit term W.L. Gore & Associates, Inc. submitted five (5) compliance certifications associated with Permit No. 85854 where no deficiencies were noted.

The facility has undergone two (2) physical inspections during the permit term. The inspections resulted in no Notice of Violations (NOVs) and no Notice of Opportunity to Correct (NOCs).

B. Performance Tests

The facility has undergone one (1) performance tests during the compliance period. No deficiencies were noted during the performance test.

Table 1 below shows the results of the performance tests.

Table 1: Performance Test Results

Emission Unit	Pollutant	Date of Test	Permitted Emission Rate	Result of Performance Test	
SC101	PM	9/28/2021	0.1 gr/dscf @12% O ₂	0.03 gr/dscf @12% O ₂	PASS
SC101	Visible Emissions	9/28/2021	20% Opacity	0% Opacity	PASS

IV. POTENTIAL TO EMIT (PTE)

A. Emergency ICEs

Emissions from the emergency ICEs were estimated based on maximum of 100 hours per year for testing and maintenance including 500 hours of operation per year. Emissions for these were calculated using U.S Environmental Protection Agency (U.S. EPA), AP-42, Section 3.2, Table 3 for Natural Gas-fired Reciprocating Engines and 40 CFR 60 Subpart JJJJ for Stationary Spark Ignition ICEs.

B. Boilers, Humidifiers, Heaters and Gas-Fired Ovens

Emissions from the boilers, humidifiers, heaters, and gas-fired ovens were calculated based on continuous operations at maximum rated capacity of 8,760 hours per year. Emission factors for NO_x and CO were obtained from AP-42, Section 1.4, Table 1, while emission factors for PM, SO₂, and VOCs were obtained from Table 2 of the same section.

Table 2 provides the facility's potential to emit:

Table 2: Potential to Emit (tpy)

Pollutant	Previous PTE	Change in PTE	Current PTE	Minor NSR Triggered?
NO _x	41.67	-4.99*	36.68	No
PM ₁₀	2.76	-0.49*	2.27	No
PM _{2.5}	2.76	-0.49*	2.27	No
CO	50.46	-2.30*	48.16	No
SO ₂	0.49	-0.28*	0.21	No
VOC	70	+0.00	70**	No
HAPs (single)	7	+0.00	7**	No
Total HAPs	18	+0.00	18**	No

*Decrease in emissions is attributed to the removal of co-fired incinerator from the facility.

** Voluntarily accepted limits to remain below major source thresholds.

V. MINOR NEW SOURCE REVIEW (NSR)

This renewal permit does not propose any changes that would increase potential to emit in excess of the permitting exemption thresholds. As a result, minor NSR does not apply.

VI. VOLUNTARILY ACCEPTED EMISSION LIMITATIONS AND STANDARDS

The permit contains the following voluntarily accepted emission limitations and standards:

A. Facility-Wide Emissions Cap

1. The facility has accepted a voluntary VOC emissions cap such that the calendar year total does not exceed seventy (70) tons.
2. The facility has accepted a voluntary HAPs emissions cap such that the calendar year total does not exceed either of the following:
 - a. Seven (7) tons of any single federal HAP; or
 - b. Eighteen (18) tons of any combination of federal HAPs.

- B. The facility has accepted a voluntary limit to only combust natural gas in all emergency ICEs, boilers, humidifiers, heaters, and gas-fired ovens.

VII. APPLICABLE REGULATIONS

Table 3 identifies applicable regulations and why each one applies.

Table 3: Applicable Regulations

Unit	Control Device	A.A.C. / NSPS / NESHAP	Discussion
Emergency Internal Combustion Engines (ICEs)	N/A	NSPS 40 CFR 60 Subpart JJJJ; NESHAP 40 CFR 63 Subpart ZZZZ; A.A.C. R18-2-719	These standards are applicable to owners and operators of stationary spark ignition (SI) ICEs that commenced construction after June 12, 2006. These standards are applicable to stationary reciprocating ICEs. Pursuant to 40 CFR 63.6590(c), new engines that comply with the requirements of NSPS 40 CFR 60 Subpart JJJJ satisfy the requirements of NESHAP 40 CFR 63 Subpart ZZZZ. These standards are applicable to existing stationary rotating machinery.
Production Lines	N/A	A.A.C. R18-2-730	These standards are applicable to unclassified sources.
Boilers, Water Heaters, Humidifiers, and Gas-Fired Ovens	N/A	A.A.C. R18-2-724	These standards are applicable to fossil-fuel fired industrial and commercial equipment.
Fugitive Dust	Dust Suppressants	A.A.C. R18-2 Article 6; A.A.C. R18-2-702	The standards are applicable to all fugitive dust sources at the facility.
Abrasive Blasting	Wet Blasting; Dust Collecting Equipment; Other Approved Methods	A.A.C. R18-2-702; A.A.C. R18-2-726	These standards are applicable to any abrasive blasting operation.
Spray Painting	Enclosures	A.A.C. R18-2-702; A.A.C. R-18-2-727	These standards are applicable to any spray-painting operation.
Demolition and Renovation	N/A	A.A.C.R18-2-1101.A.12	This standard is applicable to any asbestos related demolition or renovation operations.

VIII. PREVIOUS PERMIT REVISIONS AND CONDITIONS

A. Previous Permit Revisions

Table 4 provides a description of the permit revisions made to Permit No. 85854 during the previous permit term.

Table 4: Permit Revisions to Permit No. 85854

Permit Revision No.	Permit Revision Type	Brief Description
97556	Minor Permit Revision	This minor permit revision authorizes the construction, installation, and operation of two (2) natural gas-fired emergency generators and six (6) new boilers. This equipment replaces existing equipment at the facility.

B. Changes to Current Renewal

Table 5 addresses the changes made to the sections and conditions from Permit No. 85854:

Table 5: Previous Permit Conditions

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "A"		X		General Provisions: Revised to represent the most recent template language
Att. "B" Section I		X		Facility-Wide Requirements: Revised to represent the most recent template language and includes emission cap for VOCs and HAPs
Att. "B" Section II		X		Emergency ICEs Requirements: Revised to represent the most recent CFR language subject to NSPS Subpart JJJJ and NESHAP ZZZZ requirements
Att. "B" Section III		X		Production Line Equipment Requirements: Revised to represent the most recent template language
Att. "B" Section IV		X		Boiler and Water Heaters Requirements: Revised to represent the most recent template language
Att. "B" Section V			X	Co-Fired Incinerator Requirements: Deleted
Att. "B" Section V-VI		X		Other Periodic Activities and Fugitive Dust Requirements:

Section No.	Determination			Comments
	Added	Revised	Deleted	
				Revised to represent the most recent template language
Att. "C"		X		Equipment List: Revised to reflect the most recent equipment list table.

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IX. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Table 6 contains an inclusive but not an exhaustive list of the monitoring, recordkeeping and reporting requirements prescribed by the air quality permit. The table below is intended to provide insight to the public for how the facility is required to demonstrate compliance with the emission limits in the permit. Records are required be kept for a minimum of five (5) years as outlined in Attachment "A" of the permit.

Table 6: Permit No. 110281

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Facility-Wide	VOCs	70 tpy	Maintain records of the purchases, quantity of VOC-containing materials, any safety data sheets.		N/A
	HAPs (Single /Combined)	7 tpy / 18 tpy	Maintain records of the purchases, quantity of HAP-containing materials, any safety data sheets.		N/A
ICEs Subject to NSPS JJJJ	NOx	2.0 g/hp-hr or 160 ppmvd at 15% O ₂	Maintenance conducted on the ICEs.	Maintain documentation certifying the ICEs for the emission standards.	N/A
	CO	4.0 g/hp-hr or 160 ppmvd at 15% O ₂			N/A
	VOC	1.0 g/hp-hr or 160 ppmvd at 15% O ₂			N/A
ICEs Subject to NESHAP ZZZZ	N/A	N/A	Non-resettable hour meter	Record emergency and non- emergency hours of operation. Maintain oil analysis and maintenance records.	N/A

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
ICEs Subject to State Regulations	PM	40% Opacity	Conduct visible emissions observation procedure every quarter.	Record visible emissions observations. Record fuel supplier and lower heating value.	N/A
	SO ₂	1.0 lb/MMBtu	N/A	Record the daily sulfur content of the fuel used in the engines.	Report ADEQ Director any daily period which the sulfur content exceeds 0.8%.
Production Lines	PM	20% Opacity	N/A	N/A	N/A
Boilers, Heaters, Humidifiers, and Gas-fired Ovens	PM	15% Opacity	Conduct visible emissions observation procedure every quarter.	Record visible emissions observations. Record fuel supplier and lower heating value.	N/A
Fugitive Dust	PM	40% Opacity	Conduct visible emissions observation procedure every quarter.	Record of the dates and types of dust control measures employed, and if applicable, the results of any observations, and any corrective action taken to lower the opacity of any excess emissions.	N/A
Abrasive Blasting	PM	20% Opacity	Conduct visible emissions observation procedure quarterly only when	Record the date, duration and pollution control measures of any abrasive blasting project.	N/A

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
			abrasive blasting is conducted.		
Spray Painting	VOCs	20% Opacity Control 96% of the Overspray	Conduct visible emissions observation procedure only when spray-painting is conducted.	Maintain records of the date, duration, quantity of paint used, any applicable material safety data sheets, and pollution control measures of any spray-painting project.	N/A
Demolition/ Renovation	Asbestos	N/A	N/A	Maintain records of all asbestos related demolition or renovation projects including the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.	N/A

X. LEARNING SITE EVALUTATION

In accordance with ADEQ's Environmental Permits and Approvals Near Learning Sites Policy, an evaluation was conducted to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

This renewal will not result in an increase in emissions above permitting exemption thresholds and thus, it is exempt from a learning sites evaluation.

XI. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
AQD	Air Quality Division
A.R.S.	Arizona Revised Statutes
Btu/ft ³	British Thermal Units per Cubic Foot
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
EPA	Environmental Protection Agency
ft	Feet
g	Gram
HAP	Hazardous Air Pollutant
hp	Horsepower
hr	Hour
ICE	Internal Combustion Engine
kW	Kilowatt
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate Matter less than 10 µm nominal aerodynamic diameter
PM _{2.5}	Particulate Matter less than 2.5 µm nominal aerodynamic diameter
PTE	Potential to Emit
sec	Seconds
TPY	Tons per Year
VOC	Volatile Organic Compound
yr	Year