

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

April 24, 2019

**PERMIT TO INSTALL
29-18A**

**ISSUED TO
Cabot Corporation**

**LOCATED AT
3603 South Saginaw Road
Midland, Michigan**

**IN THE COUNTY OF
Midland**

**STATE REGISTRATION NUMBER
N6251**

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: March 7, 2019	
DATE PERMIT TO INSTALL APPROVED: April 24, 2019	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU-FILTERVENT	Secondary Filter separation. Separation of residual fumed silica product from conveying air.	08/01/1998 06/27/2018	FG-SILICA-MFTING-PROCESS
EU-HCL-RECOVERY	HCl Recovery Plant. Series of absorption towers to recover HCl and NaOH to remove trace residual amounts of chlorine and HCl from the process off-gas stream prior to its discharge to atmosphere.	08/01/1998 06/27/2018	FG-SILICA-MFTING-PROCESS
EU-DENSER	Two (2) Densers. Doubles the (normal) density of the fumed silica.	08/01/1998	FG-SILICA-MFTING-PROCESS
EU-STMCOND TANK	Steam Condensate Tank. Receiving and storage tank for all steam condensate at the facility.	08/01/1998	FG-SILICA-MFTING-PROCESS
EU-CAUSTIC TANK	Caustic Storage Tank. Tank stores 20% NaOH for use in scrubbing in CD-SCRUB.	08/01/1998	FG-SILICA-MFTING-PROCESS
EU-HYPOREACTOR	Hypochlorite Reactor. Tank provides catalytic reduction of NaOCl (from CD-SCRUB) to NaCl (wastewater).	08/01/1998 06/27/2018	FG-SILICA-MFTING-PROCESS
EU-GLYCOL TANK	Ethylene Glycol Tank. Provides tank inventory of chilled ethylene glycol used in condensing water from the HCl gas product stream.	08/01/1998	FG-SILICA-MFTING-PROCESS
EU-FLOOR SWEEP	Particulate Collection System. Vacuum system evacuates silica from equipment and is generally used for sweeping floor particulates.	08/01/1998	FG-SILICA-MFTING-PROCESS
EU-TANK FARM	Weak acid gases from breathing losses of HCl storage tanks and container loading. Emissions are controlled by CD-SCRUB or CD-TFSCRUBBER (backup).	4/24/2019	FG-SILICA-MFTING-PROCESS
EU-WWTANK	Wastewater Storage Tank. Contains wastewater from CD-SCRUB discharge	08/01/1998	FG-SILICA-MFTING-PROCESS
EU-RC-LOAD FILTER	Railcar Loading Filter. Product separation from conveying air during railcar loading.	08/01/1998	FG-SILICA-MFTING-PROCESS

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-SILICA-MFTING-PROCESS	Amorphous fumed silica manufacturing facility.	EU-STMCONDNTANK, EU-FILTERVENT, EU-HCL-RECOVERY, EU-DENSER, EU-CAUSTICTANK, EU-HYPOREACTOR, EU-GLYCOLTANK, EU-FLOORSWEEP, EU-TANKFARM, EU-WWTANK, EU-RC-LOADFILTER

**FG-SILICA-MFTNG-PROCESS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Amorphous fumed silica manufacturing facility.

Emission Unit: EU-STMCONDNTANK, EU-FILTERVENT, EU-HCL-RECOVERY, EU-DENSER, EU-CAUSTICTANK, EU-HYPOREACTOR, EU-GLYCOLTANK, EU-FLOORSWEEP, EU-TANKFARM, EU-WWTANK, EU-RC-LOADFILTER

POLLUTION CONTROL EQUIPMENT

Particulate Filter Vent (EU-FILTERVENT): Bag filter is used to control particulate emissions during separation of residual fumed silica product from conveying air.

Caustic Scrubber Control (CD-SCRUB): Sodium hydroxide is used to scrub out trace amounts of chlorine and HCl prior to discharge to atmosphere.

Backup Water Scrubber Control for EU-TANKFARM (CD-TFSCRUBBER): Water is used to scrub out trace amounts of chlorine and HCl prior to discharge to atmosphere.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. CO	4,000 ppmv*	Continuous based on 15-minute rolling average	FG-SILICA-MFTING-PROCESS equipment venting to SV-7	SC VI.1 & 2	40 CFR 52.21(d) &(j)
2. CO	432 tpy	12-month rolling time period as determined at the end of each calendar month	FG-SILICA-MFTING-PROCESS	SC VI.1, 2, & 6	40 CFR 52.21(j)
3. Total Chloro-methanes	21 ppmv ¹	Hourly	FG-SILICA-MFTING-PROCESS equipment venting to SV-7	SC V.1, VI.1	R 336.1224
4. Total Chloro-methanes	8.9 tpy	12-month rolling time period as determined at the end of each calendar month	FG-SILICA-MFTING-PROCESS	SC VI.1,2,4 & 6	R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a)
5. PM	0.10 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis	Hourly	FG-SILICA-MFTING-PROCESS equipment venting to SV-2	SC VI.3 & 5	R 336.1331
6. PM	3.4 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-SILICA-MFTING-PROCESS	SC VI.3, 5 & 6	40 CFR 52.21
7. Hydrogen chloride (HCl)	0.95 pph ¹	Hourly	FG-SILICA-MFTING-PROCESS equipment venting to SV-2	SC V.2, VI.2	R 336.1224, R 336.1225

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
8. HCl	0.61 pph ¹	Hourly	FG-SILICA-MFTING-PROCESS equipment venting to SV-7	SC III.1, III.4, V.3	R 336.1224, R 336.1225

* Except during:

- Start-up (the first 60 minutes following initiation of operation of the process, after a period of process downtime),
- Grade changes (the first 60 minutes following initiation of changes in process conditions to produce a different specified quality product), and
- Rate changes (the first 60 minutes following initiation of changes in process conditions to produce the same product at an increased or decreased rate)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG-SILICA-MFTING-PROCESS unless CD-SCRUB is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the minimum pH level and recirculation flow rate specified in the Compliance Assurance Monitoring (CAM) plan and the Malfunction Abatement Plan (MAP). **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1910, R 336.1911)**
2. The permittee shall not operate FG-SILICA-MFTING-PROCESS unless a post reaction peak temperature range of 1300°F - 1600°F, as measured in the staged methane/ hydrogen injection process, is maintained. This temperature range may be revised upon request by the applicant and approval by the Department, upon demonstration that the change will not result in an increase above permitted emission rates. **(R 336.1224, R 336.1225, R 336.1910, 40 CFR 52.21(j))**
3. The permittee shall not operate FG-SILICA-MFTING-PROCESS unless the bag filter (EU-FILTERVENT) is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes maintaining the operating parameters within the ranges specified in the MAP. **(R 336.1331, R 336.1910)**
4. The permittee shall not operate FG-SILICA-MFTING-PROCESS unless the approved MAP for satisfactory operation of EU-FILTERVENT and EU-HCL-RECOVERY is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1910, R 336.1911)**
5. The permittee shall submit to the AQD District Supervisor, for review and approval, an amendment for the MAP required by SC III.4 within 45 days of commencement of trial operation of the new adiabatic tower with the changed raw material feed. If the AQD does not notify the permittee within 90 days of submittal, the amended MAP shall be considered approved. Until an amended MAP is approved, the permittee shall implement manufacturer's recommendations and other practices necessary to comply with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain CD-SCRUB with a liquid flowrate indicator. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall equip and maintain EU-FILTERVENT with a pressure drop indicator. **(R 336.1331, R 336.1910)**
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the CO emissions from FG-SILICA-MFTING-PROCESS vent SV-7 on a continuous basis. **(40 CFR 52.21(d)&(j))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Verification of total chloromethanes emission rates from CD-SCRUB (SV-7) by testing at owner's expense, in accordance with Department requirements, no later than 36 months after ROP renewal. Verification of emission rates includes the submittal of complete report of the test results. **(R 336.2001(a)(e))**
 - a. The permittee shall submit a complete test protocol to the AQD for approval at least 30 days prior to the anticipated test date. **(R 336.2001(3))**
 - b. The permittee shall notify the District Supervisor or the Technical Programs Unit no less than 7 days prior to the anticipated test date. **(R 336.2001(3))**
 - c. The permittee shall submit a complete test report of the test results to the District Supervisor or the Technical Programs Unit within 60 days following the last date of the test. **(R 336.2001(4))**
2. Within 180 days after commencement of permanent use of the changed raw material feed with the new adiabatic tower, the permittee shall verify HCl emission rates from FG-SILICA-MFTING-PROCESS equipment venting to SV-2 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1224, R 336.1225, R 336.2001, R 336.2003, R 336.2004)**
3. Within 180 days after commencement of permanent use of the changed raw material feed with the new adiabatic tower, the permittee shall verify HCl emission rates from FG-SILICA-MFTING-PROCESS equipment venting to SV-7 by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1224, R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Applicant shall monitor and record the carbon monoxide (ppm) emissions from FG-SILICA-MFTING-PROCESS and CD-SCRUB, specifically from vent SV-7, on a continuous basis in a manner and with instrumentation acceptable to the Air Quality Division. A relationship between process operating parameters and the CO CEMS may be used to demonstrate compliance with the chloromethane emission rate limit (tons per year). For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period.

The CO monitor and associated monitoring data shall be used for compliance demonstration purposes. Prior to installation, applicant shall submit a Monitoring Plan to the District Supervisor for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required monitor.

The continuous emission monitoring system (CEMS) shall be installed, calibrated, maintained and operated in accordance with the procedures set forth in 40 CFR 60.13 and Performance Specification No. 4, of Appendix B, 40 CFR Part 60. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations. No less than 30 days prior to the performance specification testing, a complete test plan must be submitted to the District Supervisor for approval. Applicant shall submit to the District Supervisor within 30 days of completion, 2 copies of the final report demonstrating the CEM complies with the requirements of PS No. 4. In accordance with 40 CFR Parts 60.7(c) and (d) an excess emissions report (EER) and summary report shall be submitted in an acceptable format to the District Supervisor within 30 days following the end of each calendar quarter. The EER shall include each occurrence of all excursions and the magnitudes of the excess emissions of the specified permit limit, the cause of the excess emissions, if known, periods of monitor downtime, any corrective action taken and the total operating time of the source.

If no exceedances or CEMS downtime occurred during the reporting period, applicant shall report that fact. Applicant shall perform and report the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Each quarter the results shall be presented and submitted in the format of the data assessment report (DAR) along with the quarterly EER and summary reports. Furthermore, all monitoring data shall be kept on file and made available to the Air Quality Division upon request. **(R 336.1910, 40 CFR 52.21, 40 CFR 60.7(c) and (d), 40 CFR 60.13 and Performance Specification No. 4 of Appendix B, 40 CFR Part 60; 40 CFR Part 60-Appendix F)**

2. The permittee shall equip and maintain FG-SILICA-MFTING-PROCESS with a continuous temperature indicator and data recording system for the staged methane/hydrogen injection process post reaction peak temperatures. This data shall be kept on file and made available to the Air Quality Division upon request. **(R 336.1910)**
3. Maintenance records for EU-FILTERVENT, specifically of filter bag inspections and replacements, shall be kept on file and made available to the Air Quality Division upon request. **(R 336.1331, R 336.1910)**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the liquid flow rate, liquid level, and pH for CD-SCRUB on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. **(R 336.1910)**
5. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the pressure drop for EU-FILTERVENT on a continuous basis. For the purpose of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes for at least 90 percent of the operating time during an operating calendar day. **(R 336.1910)**
6. The permittee shall calculate the CO, total chloromethanes, and PM emission rates from FG-SILICA-MFTING-PROCESS monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3), R 336.1331, R 336.1702)**
7. The permittee shall calculate and keep records of the annual emissions of CO from FG-SILICA-MFTING-PROCESS described in Appendix B, in tons per calendar year. Calculations and record keeping shall begin the month in which regular operations of FG-SILICA-MFTING-PROCESS resume and shall continue for ten (10) years. **(40 CFR 52.21(r)(6)(c)(iii))**
8. The permittee shall keep a record of the beginning time, the duration, and the date of each the following occurrences for FG-SILICA-MFTING-PROCESS.
 - a. Start-up (the first 60 minutes following initiation of operation of the process, after a period of process downtime)
 - b. Grade changes (the first 60 minutes following initiation of changes in process conditions to produce a different specified quality product)

- c. Rate changes (the first 60 minutes following initiation of changes in process conditions to produce the same product at an increased or decreased rate)

The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(40 CFR 52.21)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor and the AQD Permit Section Manager, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of permanent use of the changed raw material feed with the new adiabatic tower. **(R 336.1201(7)(a), 40 CFR 52.21(r)(6)(c)(iii))**
2. The permittee shall submit records of the annual emission of CO from FG-SILICA-MFTING-PROCESS described in Appendix B, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:
 - a. The calendar year actual emissions of CO exceed the baseline actual emissions (BAE) by a significant amount, and
 - b. The calendar year actual emissions differ from the pre-construction projection.

The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to SC VI.7, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection). **(40 CFR 52.21(r)(6)(c)(iii))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-2 (Product Filter Vent) unobstructed non-vertically discharged	8	47	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV-7 (Caustic Tower Stack)	24	135	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV-10 (NaOCl Reactor)	2	20	R 336.1225, 40 CFR 52.21(c)&(d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall strictly adhere to the AQD approved fugitive dust control program in Appendix A or an alternate program approved by the AQD District Supervisor. **(R 336.1371)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

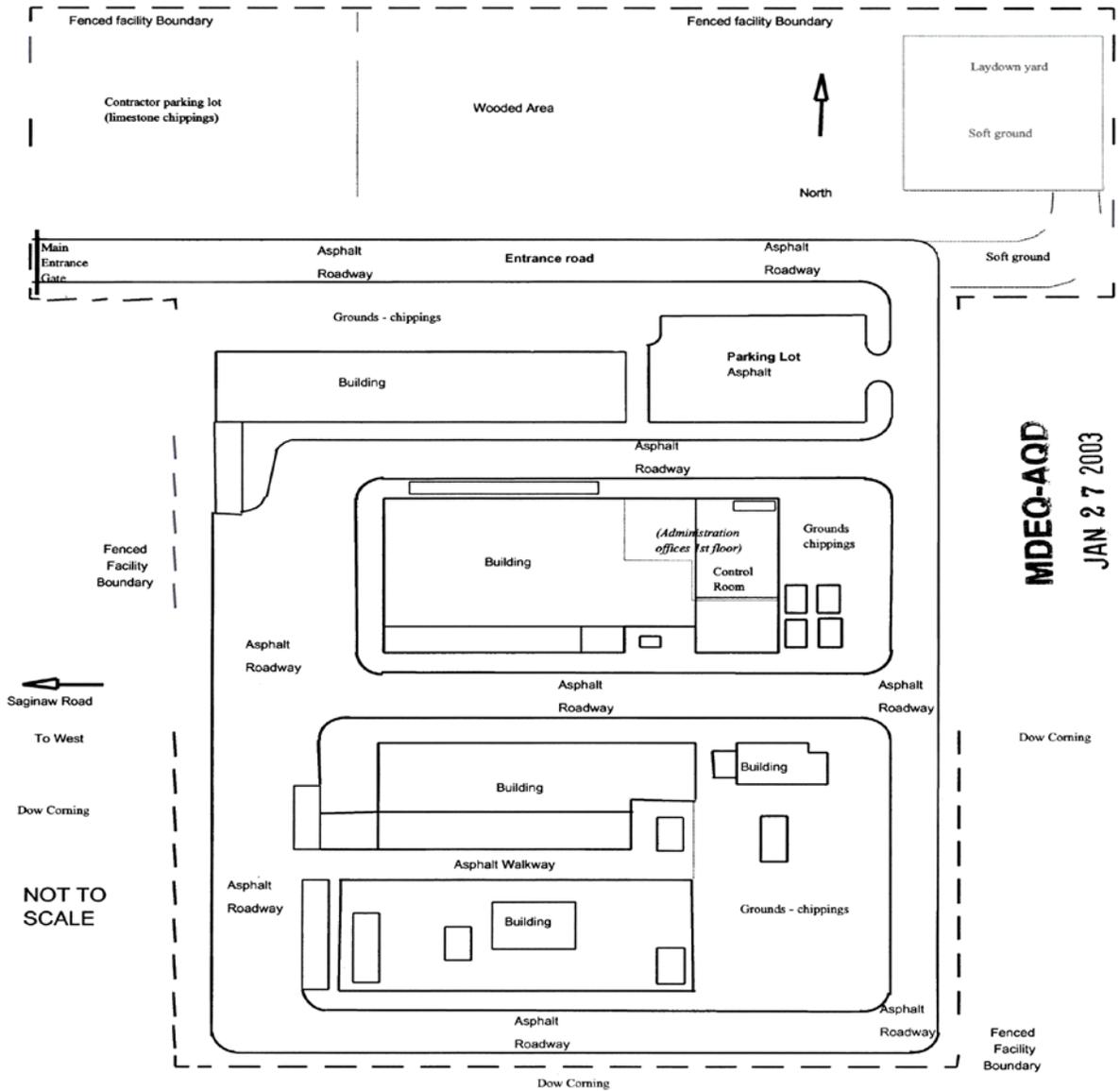
APPENDIX A: Fugitive Dust Control Plan

CABOT MIDLANT PLANT FUGITIVE DUST EMISSION PROGRAM

January 24, 2003

AREA	CONTROL METHOD	FREQUENCY *
Paved Entrance road & Parking Lot	Street sweeper / power washer	None - due to low vehicle access approx. 20 / day
All other paved roads	Street sweeper / power washer	None - due to rare vehicle access approx. 1-2 / day
Contractor Parking Lot	Apply CaCl ₂ dust suppressant	None - low vehicle access - approx. 5 / day
Unpaved areas of stone chippings	Apply CaCl ₂ dust suppressant	None - rare vehicle access approx. 1 / month
Unpaved laydown yard - north end	Apply CaCl ₂ dust suppressant	None - rare vehicle access - approx 1 / quarter

* Road conditions will be monitored and road dust controlled accordingly as necessary.



APPENDIX B: Recordkeeping Provisions for Source Using Actual to Projected Actual Applicability Test

All information in this Appendix shall be maintained pursuant to 40 CFR 52.21(r)(6)(i) for ten years after the emission unit(s) identified in Table C resume regular operations and shall be provided to the Department for the first year and thereafter made available to the Department upon request or as required by SC VII.2.

A. Project Description:

Increase chlorine content of raw material feed, with associated replacement of the adiabatic tower and increased hydrogen plant capacity, for which PTI No. 29-18 was issued.

B. Applicability Test Description:

Hybrid test with no netting.

C. Emission Limitations

Table C

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)			Reason for Exclusion
		Baseline Actual	Project Total	Excluded	
FG-SILICA-MFTING-PROCESS and all hydrogen plants	CO	157.4	280.9	42.5	Maximum monthly emissions during baseline period