

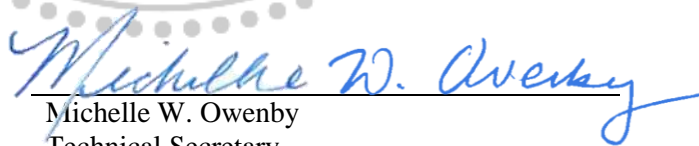


**STATE OF TENNESSEE
AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE**

PERMIT TO CONSTRUCT / MODIFY AIR CONTAMINANT SOURCE(S)

Permit Number: 979841
Facility (Permittee): Wacker Polysilicon North America LLC
Facility ID: 06-0282
Facility Address: 553 Wacker Boulevard NW, Charleston
Bradley County
Facility Classification: Conditional Major
Federal Requirements: None
Facility Description: Polysilicon Manufacturing Plant

Conditional Major Construction Permit 979841, consisting of 26 pages is hereby issued September 22, 2022, pursuant to the Tennessee Air Quality Act and by the Technical Secretary, Tennessee Air Pollution Control Board, Department of Environment and Conservation. This permit expires on September 22, 2024. The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations (TAPCR).



Michelle W. Owenby
Technical Secretary
Tennessee Air Pollution Control Board

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

Section I – Sources Included in this Permit

FACILITY DESCRIPTION			
Source Number	Source Description	Status	Control Device/Equipment
25	Silicon Grinding Process	Modified	Two Baghouses

Section II – Permit Record

Permit Type	Description of Permit Action	Issue Date
Initial	Modification to Previous Insignificant Source 25	September 22, 2022

Section III - General Permit Conditions

G1. Responsible Person

The application that was utilized in the preparation of this conditional major construction permit is dated January 12, 2022, and is signed by Ken Collins, Senior Director, Site Leader, the Responsible Person for the permittee. The Responsible Person may be the owner, president, vice-president, general partner, plant manager, environmental/health/safety coordinator, or other person that is able to represent and bind the facility in environmental permitting affairs. If this Responsible Person terminates their employment or is assigned different duties and is no longer the person to represent and bind the permittee in environmental permitting affairs, the new Responsible Person for the permittee shall notify the Technical Secretary of the change in writing. The Notification shall include the name and title of the new Responsible Person assigned by the permittee to represent and bind the permittee in environmental permitting affairs, and the date the new Responsible Person was assigned these duties.

Should a change in the Responsible Person occur, the new Responsible Person must submit the Notification provided in Appendix 1 of this permit no later than 30 days after being assigned as the Responsible Person. A separate notification shall be submitted for each subsequent change in Responsible Person.

TAPCR 1200-03-09-.03(8)

G2. Application and Agreement Letters

This source shall operate in accordance with the terms of this permit, the information submitted in the approved permit application referenced in **Condition G1**, and any documented agreements made with the Technical Secretary.

TAPCR 1200-03-09-.01(1)(d)

G3. Submittals

Unless otherwise specified within this permit, the permittee shall submit, preferably via email and in Portable Document format (PDF), all applicable plans, checklists, certifications, notifications, test protocols, reports, and applications to the attention of the following Division Programs at the email addresses indicated in the table below:

Permitting Program	Compliance Validation Program	Field Services Program
<ul style="list-style-type: none"> • Notifications • Startup certifications • Applications • NSPS reports • MACT/GACT/NESHAP reports • Emission statements • Construction permit extension requests 	<ul style="list-style-type: none"> • Test protocols • Emission test reports • Visible emission evaluation reports 	<ul style="list-style-type: none"> • Semiannual reports • Annual compliance certifications/status reports
Division of Air Pollution Control William R. Snodgrass TN Tower, 15 th Floor 312 Rosa L. Parks Avenue Nashville, TN 37243 Air.Pollution.Control@tn.gov		Chattanooga Environmental Field Office Division of Air Pollution Control 1301 Riverfront Parkway, Suite #206 Chattanooga, TN 37402 APC.ChattEFO@tn.gov

The permittee shall submit the information identified above as requested in this permit. In lieu of submitting this information to the email addresses above, the permittee may submit the information to the attention of the respective Division Programs at the mailing addresses listed above.

TAPCR 1200-03-09-.03(8)

G4. Notification of Changes

The permittee shall notify the Technical Secretary for any of the following changes to a permitted air contaminant source which would not be a modification requiring a new construction permit:

- change in air pollution control equipment that does not result in an increase or otherwise meet the definition of a modification
- change in stack height or diameter
- change in exit velocity of more than 25 percent or exit temperature of more than 15 percent based on absolute temperature.

The permittee must submit the Notification provided in Appendix 2 of this permit 30 days before the change is commenced.

TAPCR 1200-03-09-.02(7)

G5. Permit Transference

- This permit is not transferable from one air contaminant source to another air contaminant source or from one location to another location. The permittee must submit a construction permit application for a new source to the Permitting Program not less than 90 days prior to the estimated starting date of these events. If the new source will be subject to major New Source Review, the application must be submitted not less than 120 days in advance of the estimated starting date of these events.

TAPCR 1200-03-09-.03(6)(b) and 1200-03-09-.01(1)(b)

- In the event an ownership change occurs at this facility, the new owner must submit the notification provided in Appendix 3 of this permit. The written notification must be submitted by the new owner to the Permitting Program no later than 30 days after the ownership change occurs. If the change in ownership results in a change

in Responsible Person for the facility, notification of the change in Responsible Person must also be submitted, as specified in **Condition G1**.

TAPCR 1200-03-09-.03(6)(a) and (b)

G6. Operating Permit Application Submittal

The permittee shall apply for an amended conditional major operating permit within 30 days of initial startup of this new or modified emission source.

TAPCR 1200-03-09-.02(1) and 1200-03-09-.02(3)

G7. Temporary Operating Permit

A. This construction permit shall serve as a temporary operating permit from the date of issuance, until the Technical Secretary issues an operating permit, provided the permittee submits an operating permit application within the timeframe specified in **Condition G6**.

TAPCR 1200-03-09-.02(1), 1200-03-09-.02(2) and 1200-03-09-.02(3)(b)1

B. If construction of the air contaminant source(s) cannot be completed and/or an operating permit application cannot be filed with the Technical Secretary by the expiration date of this permit, the permittee must submit a permit extension request 30 days prior to permit expiration.

TAPCR 1200-03-09-.02(1) and 1200-03-09-.02(3)

G8. Startup Certification for New or Modified Source(s)

The startup certification provided in Appendix 4 shall be submitted to the Permitting Program once an air contaminant source has started up. Startup of the air contaminant source shall be the date the new or modified air contaminant source began operation for the production of product for sale, use as raw materials, or steam or heat production under the terms of this permit.

TAPCR 1200-03-09-.03(8)

Compliance Method: The startup certification provided in Appendix 4 shall be submitted no later than 30 days after each air contaminant source has begun startup.

G9. Fees

The air contaminant source(s) identified in this permit shall comply with the requirements for payment of applicable annual emission fees and annual conditional major review fees to the Tennessee Division of Air Pollution Control based on the Administrative Fees SCHEDULE I provided in Appendix 5 of this permit. The fee must be paid to the Division in full by the first (1st) day of the month that the fee is due (determined from Appendix 5). (Note: not all facilities are required to pay annual emission fees)

TAPCR 1200-03-26-.02

G10. General Recordkeeping Requirements

A. All recordkeeping requirements for all data required to be recorded shall follow the following schedules:

For Daily Recordkeeping	For Weekly Recordkeeping	For Monthly Recordkeeping
No later than seven days from the end of the day for which the data is required.	No later than seven days from the end of the week for which the data is required.	No later than thirty days from the end of the month for which the data is required.

- B. The information contained in logs, records, and submittals required by this permit shall be kept at the facility's address, unless otherwise noted, and provided to the Technical Secretary or a Division representative upon request or as required in this permit. Computer-generated logs are acceptable. Compliance is assured by retaining the logs, records, and submittals specified in this permit for a period of not less than five years at the facility's address.

TAPCR 1200-03-10-.02(2)(a)

G11. Routine Maintenance Requirements

The permittee shall maintain and repair the emission source, associated air pollution control device(s), and compliance assurance monitoring equipment as required to maintain and assure compliance with the specified emission limits.

TAPCR 1200-03-09-.03(8)

Compliance Method: Records of all repair and maintenance activities required above shall be recorded in a suitable permanent form and kept available for inspection by the Division. These records must be retained for a period of not less than five years. The date each maintenance and repair activity began shall be entered in the log no later than seven days following the start of the repair or maintenance activity, and the completion date shall be entered in the log no later than seven days after activity completion.

G12. Visible and Fugitive Emissions

- A. Unless otherwise specified, visible emissions from this facility shall not exhibit greater than 20% opacity, except for one six-minute period in any one-hour period, and for no more than four six-minute periods in any 24-hour period. A stack is defined as any chimney, flue, conduit, exhaust, vent, or opening of any kind whatsoever, capable of, or used for, the emission of air contaminants.

TAPCR 1200-03-05-.01(1) and 1200-03-05-.03(6)

Compliance Method: When required to demonstrate compliance, visible emissions shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average).

- B. The permittee shall not cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Reasonable precautions shall include, but are not limited to, the following:
- (a) Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land;
 - (b) Application of asphalt, water, or suitable chemicals on dirt roads, material stockpiles, and other surfaces which can create airborne dusts;
 - (c) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

The permittee shall not cause, suffer, allow, or permit fugitive dust to be emitted in such manner to exceed five minutes per hour or 20 minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates, excluding malfunction of equipment as provided in TAPCR 1200-03-20. A malfunction is defined as, any sudden and unavoidable failure of process equipment or for a process to operate in an abnormal and unusual manner. Failures that are caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

TAPCR 1200-03-08-.01(1) and 1200-03-08-.01(2)

Compliance Method: When required to demonstrate compliance, fugitive emissions shall be determined by Tennessee Visible Emissions Evaluation Method 4 as adopted by the Tennessee Air Pollution Control Board on April 16, 1986.

- C. Fugitive emissions from roads and parking areas shall not exhibit greater than 10% opacity.

TAPCR 1200-03-08-.03

Compliance Method: When required to demonstrate compliance, fugitive emissions from roads and parking areas shall be determined by utilizing Tennessee Visible Emissions Evaluation (TVEE) Method 1, as adopted by the Tennessee Air Pollution Control Board on April 29, 1982, as amended on September 15, 1982, and August 24, 1984.

G13. NSPS/NESHAP/MACT/GACT Standards

Not Applicable

G14. VOC and NO_x Emission Statement

Not Applicable

G15. Facility-wide Limitations (Other Than Conditional Major)

Not Applicable

G16. Permit Supersedes Statement

For the modified source(s) identified below, this permit supersedes all previously issued permits for the source(s) upon startup of the modified source(s). Startup of a modified source is defined in **Condition G8**.

Source Number	Source Description	Control Device/Equipment
06-0282-25	Silicon Grinding Process	Two Baghouses

This permit supersedes all previously issued permits for all other sources included in this permit upon issuance of this permit.

TAPCR 1200-03-09-.03(8)

G17. Source Testing Requirements

Not Applicable

Section IV – Conditional Major Conditions

C1. Major Source Opt-Out Requirements

The permittee (Wacker Polysilicon North America LLC) has elected to opt-out of being issued a major source operating permit pursuant to TAPCR 1200-03-09-.02(11)(a). The permittee would be considered a major source because their potential to emit values for Particulate Matter (PM), Carbon Monoxide (CO), and Nitrogen Oxides (NOx) combined with the potential to emit values for PM, CO, and NOx of the contiguous Wacker Chemical Corporation operations (Permit 479203) were greater than 100 tons per year for each pollutant at the time of application. In addition, their potential to emit value for a single Hazardous Air Pollutant (HAP) combined with the potential to emit value for a single HAP of the Wacker Chemical Corporation operations was greater than 10 tons per year at the time of application. The permittee has agreed to be subject to limitations in order to be below the major source applicability threshold for Particulate Matter, Carbon Monoxide and Nitrogen Oxide of 100 tons per year per each pollutant. In addition, the permittee has agreed to be subject to limitations in order to be below the major source applicability thresholds for a single Hazardous Air Pollutant (HAP) of 10 tons per year and a combination of Hazardous Air Pollutants (HAPs) of 25 tons per year.

TAPCR 1200-03-09-.02(11)(a)

C2. Notification of Non-Compliance

Any non-compliance with any condition(s) of this permit set to restrain the potential to emit below the applicability threshold(s) of 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations, shall be reported in writing to the Technical Secretary within 15 working days of such discovery. This notification, at a minimum, shall include the identification of the source, identification of the permit condition(s) violated, and details of the violation.

TAPCR 1200-03-09-.03(8) and 1200-03-09-.02(11)(a)

C3. Failure to Abide by Conditional Major Emission Limit(s)

The permittee is placed on notice that **Condition C4** of this permit contain(s) limitations that allow the permittee to opt-out of the major source operating permit program requirements specified in paragraph 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations. Failure to abide by these limits will not only subject the permittee to enforcement action by the State of Tennessee, but it may also result in the imposition of federal enforcement action by the United States Environmental Protection Agency and the loss of being federally recognized as a conditional major source.

TAPCR 1200-03-09-.02(11)(e)1(vi)(I)

C4. Conditional Major Emission Limit(s)

Emissions from the entire facility comprising the Wacker Polysilicon North America LLC polysilicon operations and the Wacker Chemical Corporation amorphous fumed silica operations (see permit 479203) shall not exceed the following federally enforceable maximum emission rates, including emissions from exempt and insignificant emission units:

Pollutant(s)	Maximum Emission Rate(s) (tons during any period of 12 consecutive months)
Particulate matter (PM)	99.9 Emissions from exempt and insignificant activities and emission units are estimated to be 2.31 tons per 12-consecutive months

Nitrogen Oxides (NO _x)	99.9 Emissions from exempt and insignificant activities and emission units are estimated to be 2.57 tons per 12-consecutive months
Carbon Monoxide (CO)	99.9 Emissions from exempt and insignificant activities and emission units are estimated to be 0.12 tons per 12-consecutive months
Individual Hazardous Air Pollutants (listed pursuant to Section 112(b) of the Federal Act)	9.9 Emissions from exempt and insignificant activities and emission units are estimated to be 0.63 tons per 12-consecutive months for HCl, and 0.024 tons per 12-consecutive months for HF
Combined Hazardous Air Pollutants	24.9 Emissions from exempt and insignificant activities and emission units are estimated to be 0.65 tons per 12-consecutive months

TAPCR 1200-03-09-.02(11)(a) and the permittee's agreement letter dated September 21, 2022 (see **Appendix 8**)

These limits also allow the facility (combined Wacker Chemical Corporation amorphous fumed silica operations and Wacker Polysilicon North America LLC polysilicon operations) to avoid Prevention of Significant Air Quality Deterioration (PSD) review applicability (TAPCR1200-03-09-.01(4)) for particulate matter, nitrogen oxides, and carbon monoxide.

The emission values from insignificant and exempt activities and emission units identified in the above table shall be added to the calculated 12-consecutive month emissions for each pollutant. If the permittee adds insignificant or exempt emission units or activities which emit any of the pollutants listed in the table above, the permittee shall provide notification to the Division of the change in facility VOC or HAP emissions within 30 days prior to the installation of each insignificant activity/ emission unit [TAPCR 1200-03-09-.04(4)(a)] or within 30 days of installation of each exempt activity/ emission unit [TAPCR 1200-03-09-.04(4)(b), (c), or (d)].

Compliance Method: The permittee shall assure compliance with these emission rate(s) as outlined in the table in **Condition C5**.

C5. Annual Compliance Status Report

The permittee shall submit a written report stating the compliance status of this facility with permit **Condition C4 by March 31 of every year**. The report shall cover the preceding calendar year and shall include the records and/or certification required by **Conditions S25-1 of permit 979841**. The report shall also cover the preceding calendar year and shall include the records and/or certification required by **Conditions C5, S1-4C, S3-4C, S4-1, S4-4C, S4-7, S5-1, S5-4C, S6-1, S6-4D, S7-1, S7-3, S7-4C, S8-3, and S8-4C of permit 474253**. In addition, the report shall reference the annual compliance status report information submitted by Wacker Chemical Corporation for monitoring and recordkeeping requirements **C5, S1-2, S1-4C, S2-1, and S2-4A of permit 479203** for sources 06-0282-23 and 24. The annual compliance status information submitted by Wacker Chemical Corporation and Wacker Polysilicon North America LLC shall be used to determine and certify compliance with the facility-wide emission limitations of **Condition C4A**. The first report is due March 31, 2023, and shall cover the following permits and reporting periods:

Source number	Permit number	Reporting period begins	Reporting period ends
06-0282-01	970005P	January 1, 2022	March 30, 2022
06-0282-02	967118P	January 1, 2022	March 30, 2022
06-0282-03	970065P	January 1, 2022	March 30, 2022
06-0282-04	976605	January 1, 2022	March 30, 2022

06-0282-06	974939	January 1, 2022	March 30, 2022
06-0282-15	967203F	January 1, 2022	March 30, 2022
06-0282-16	969455P	January 1, 2022	March 30, 2022
06-0282-17	969674P	January 1, 2022	March 30, 2022
06-0282-20	972846	January 1, 2022	March 30, 2022
06-0282-01, 02, 03, 04, 06, 15, 16, 17, 20	474253	March 31, 2022	December 31, 2022
06-0282-25	979841	January 1, 2022	December 31, 2022

Records submittal requirements for annual compliance status report

Source Number	Permit number	Records Submittal Requirements for annual compliance status report
06-0282-01	970005P	Condition S1-4C**: summary of scrubber parametric monitoring
06-0282-03	970065P	Condition S3-4C**: summary of scrubber parametric monitoring
06-0282-04	976605	Condition S4-1**: records of chlorine & hydrogen input
06-0282-04	976605	Condition S4-4C**: records of HCl production & emissions, summary of scrubber parametric monitoring
06-0282-06	974939	Condition S5-1**: records of silicon & HCl input
06-0282-06	974939	Condition S5-4C**: summary of scrubber parametric monitoring
06-0282-15	967203F	Condition S6-1**: Records of natural gas usage.
06-0282-15	967203F	Condition S6-4D**: Records of NOx emissions
06-0282-17	474253	Condition S7-1**: records of silicon input
06-0282-17	474253	Condition S7-3**: Records of operating time.
06-0282-17	474253	Condition S7-4C**: summary of scrubber parametric monitoring
06-0282-20	474253	Condition S8-3**: Records of operating time
06-0282-20	474253	Condition S8-4C**: summary of scrubber parametric monitoring
06-0282-25	979841	Condition S25-1: records of raw silicon input

*The permittee may opt to certify compliance with **Condition S2-1A of Permit 474253**

Indicates records submittal requirements for **Permit 474253

TAPCR 1200-03-09-.03(8), 1200-03-09-.02(11)(a), and 1200-03-10-.02(2)(a)

Section V - Source Specific Permit Conditions

Source Number	Source Description
25	Silicon Grinding Process ID C218E35 (9,700 CFM) and C218E36 (7,600 CFM)

S25-1. Input Limitation(s) or Statement(s) of Design

The stated design material input rate of raw silicon for this source is 16,535 pounds per hour on a daily average basis. Should the permittee need to modify the source(s) in a manner that increases the design material input rate a construction permit shall be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.03(8) and the application dated January 12, 2022

Compliance Method: Recordkeeping shall be conducted in accordance with **Condition G8**. The permittee shall maintain documentation to demonstrate the material input rate for the Silicon Grinding Process. Documentation shall include, but is not limited to, manufacturer's specifications, purchase records, operating manuals, or a tag affixed to the unit by the manufacturer. These documents shall be kept readily available/accessible and made available upon request by the Technical Secretary or a Division representative. Compliance with this condition shall be demonstrated by recordkeeping data which complies with the limitation of this condition.

S25-2. Production Limitation(s)

Not Applicable

S25-3. Operating Hour Limitation(s)

Not Applicable

S25-4. Emission Limitation(s)

Particulate matter (PM) emitted from this source shall not exceed 0.005 grains/dscf (0.74 lbs/hr on a daily average basis, 3.24 tons during all periods of 12-consecutive months).

TAPCR 1200-03-07-.01(5) and the agreement letter dated September 21, 2022

Compliance Method: The permittee shall calculate the actual quantity of PM emitted from this source during each calendar month and each period of 12-consecutive months and maintain records of the emissions in the log, in the format below, or an alternative format, which readily provides the same information. Records of these emissions shall be maintained at the source location and kept available for inspection by the Technical Secretary or Division representative in accordance with **Condition G8**. The monthly PM emissions shall be included in the facility-wide emission logs required by **Condition C4**.

PM Emissions Log for: Source #25

Month and Year	Previous 11-month Total (tons)	12-Consecutive Month Total (tons)

Note: The tons per 12-consecutive month values are the sum of the ‘description’ (usage, emissions, output, etc.) in the 11 months preceding the month just completed + the ‘description’ in the month just completed. If data is not available for the 11 months preceding the initial use of the table, this value will be equal to the value for tons per month. For the second month, it will be the sum of the first month and the second month. Indicate in parentheses the number of months summed [i.e., 6 (2) represents 6 tons emitted in 2 months].

The permittee shall install, operate, and maintain a baghouse to control PM emissions. The source controlled by the fabric filter(s) / baghouse(s) shall not operate unless the control device(s) is installed and operated. The permittee shall monitor the fabric filter(s) / baghouse(s) control device(s) for this source as follows:

For fabric filter(s) / baghouse(s) with an exhaust gas flow rating of more than 2,000 actual cubic feet per minute (acfm), the permittee shall:

- (1) Install and operate a pressure gauge to measure the pressure drop (inches of water) across the fabric filter(s) / baghouse(s). Upon startup of this source, the permittee shall compile 30 consecutive operating days of pressure drop readings across the fabric filter(s) / baghouse(s). The designated person(s) shall note any relevant baghouse conditions/problems/concerns when recording the values. The records shall also include the initials of the person performing the pressure drop reading, any corrective action(s), along with the date, time, and any relevant comments. Days that the source is not in operation shall be noted.
- (2) Submit the pressure drop data, including a “**proposed**” **minimum pressure drop value**, to the Division no later than 15 days after completion of the initial 30 consecutive operating days of pressure drop readings.
- (3) Assure continued compliance by maintaining the “proposed” minimum pressure drop across each baghouse (unless notified by the Division that an alternate pressure drop must be used), recording one pressure drop reading per day while the source is in operation; conducting weekly visual inspections of the exterior of the baghouse and the baghouse ductwork, including the baghouse exhaust; and maintaining the log in **Appendix 9**. If the permittee finds that a sub-minimum pressure drop, abrasion hole, emissions problem, or plugging problem has developed during an inspection of the baghouse(s), the permittee shall initiate corrective action within 24 hours and complete corrective action as expediently as practical. The permittee shall record all corrective action taken including the initiation and completion of all corrective actions in the log.
- (4) For lower pressure drop reading(s) resulting from replacement of bags, the permittee shall record the deviation(s) in the log. Due allowance will be made for lower pressure drop reading(s) which follow replacement of bags provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of bags.
- (5) In summary, the log shall include the initials of the person performing the pressure drop reading and inspection, any corrective action(s)/deviation(s), along with the date, time, and any relevant comments. Days that the source is not in operation shall be noted. These records shall be retained in accordance with **Condition G10**.

TAPCR 1200-03-09-.03(8)

S25-5. Source-Specific Visible Emissions Limitation(s)

Not Applicable

(End of conditions)

The permit application gives the location of this source as 35.29913751886 Latitude and -84.79683957991 Longitude.

Appendix 1: Notification of Change in Responsible Person

Facility (Permittee): Wacker Polysilicon North America LLC

Facility ID: 06-0282

Former Responsible Person:

<u></u>	<u></u>
Name	Title

New Responsible Person:

<u></u>	<u></u>
Name	Title
<u></u>	
Email	

Date New Responsible Person was assigned this duty:

As the Responsible Person of the above-mentioned facility (permittee), I certify that the information contained in this Notification is accurate and true to the best of my knowledge. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

<u>Signature</u>		<u>Date</u>
<u>Signer's name (print)</u>	<u>Title</u>	<u>Phone (with area code)</u>

Appendix 2: Notification of Changes

Facility (Permittee): Wacker Polysilicon North America LLC

Facility ID: 06-0282

Source Number: _____

	Control Equipment	Stack Height (Feet)	Stack Diameter (Feet)	Exit Velocity (Feet/Second)	Exit Temperature (°F)
Current					
Proposed					
Current					
Proposed					
Current					
Proposed					

Comments:

As the Responsible Person of the above-mentioned facility (permittee), I certify that the information contained in this Notification is accurate and true to the best of my knowledge. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Signature		Date
Signer's name (print)	Title	Phone (with area code)

Appendix 3: Notification of Ownership Change

Facility (Permittee): Wacker Polysilicon North America LLC (Previous Owner)

Facility ID: 06-0282

Facility (Permittee): _____ (New Owner)

Email Address: _____

Secretary of State Control Number: _____ [as registered with the TN Secretary of State]

Date of Ownership Change: _____

Comments:

As the responsible person for the new owner or operator of the above-mentioned facility (permittee):

- I agree to not make any changes to the stationary source(s) that meet the definition of modification as defined in Division 1200-03 or Division 0400-30¹, and
- I agree to comply with the conditions contained in **the permits listed below**, Division 1200-03 and Division 0400-30 of the Tennessee Air Pollution Control Regulations, the Tennessee Air Quality Act, and any documented agreements made by the previous owner to the Technical Secretary.

List all active permits issued to the facility for which the owner wishes to assume ownership:

The information contained in this Notification is accurate and true to the best of my knowledge. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Signature		Date
Signer's name (print)	Title	Phone (with area code)

¹ Appropriate application forms must be submitted prior to modification of the stationary source(s).

Appendix 4: Startup Certification

Facility (Permittee): Wacker Polysilicon North America LLC

Facility ID: 06-0282

Startup Certification for Source Number: _____

The permittee shall certify the startup date for each new or modified air contaminant source regulated by construction permit 979841 by submitting this document

Date of startup: _____ / _____ / _____
Month Day Year

As the Responsible Person of the above-mentioned facility (permittee), I certify that the information contained in this Startup Certification is accurate and true to the best of my knowledge. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Signature		Date
Signer's name (print)	Title	Phone (with area code)

Appendix 5: Fees

All minor and conditional major source annual emission fees are due and payable to the Division in full according to SCHEDULE I below². The county that a source is located in determines when the minor source annual emission fee is due. Fees are due the first day of the month listed. If a source is located on contiguous property in more than one county, the county appearing earliest in the calendar year shall be used to determine the due date of the annual emission fee.

SCHEDULE I Month the Annual Emissions Fee is Due (Accounting Period) Counties in the Monthly Grouping

January	Anderson, Bedford, Benton, Bledsoe, Blount, Bradley and Campbell
February	Cannon, Carroll, Carter, Cheatham, Chester, Claiborne, Clay and Cocke
March	Coffee, Crockett, Cumberland, Davidson, Decatur, DeKalb, Dickson, Dyer and Fayette
April	Fentress, Franklin, Gibson, Giles, Grainger, Greene and Grundy
May	Hamblen, Hamilton, Hancock, Hardeman, Hardin, Hawkins, Haywood and Henderson
June	Henry, Hickman, Houston, Humphreys, Jackson, Jefferson, Johnson, Knox, Lake, Lauderdale, Lawrence and Lewis
July	Lincoln, Loudon, McMinn, McNairy, Macon and Madison
August	Marion, Marshall, Maury, Meigs, Monroe, Montgomery, Moore and Morgan
September	Obion, Overton, Perry, Pickett, Polk, Putnam and Rhea
October	Roane, Robertson, Rutherford, Scott, Sequatchie, Sevier, and Shelby
November	Smith, Stewart, Sullivan, Sumner, Tipton, Trousdale, Unicoi and Union
December	Van Buren, Warren, Washington, Wayne, Weakley, White, Williamson and Wilson

² Note that some sources with allowable emissions below specific thresholds are not subject to the requirement to pay annual emission fees. Contact the Emission Inventory Program at apc.inventory@tn.gov if you have any questions.

Appendix 6: Emission Statement for VOC and NO_x

Not Applicable

Appendix 7: Compliance Certification Statement

Facility (Permittee): Wacker Polysilicon North America LLC

Facility Address: _____

Facility ID: 06-0282

Conditional Major Permit Number	Reporting Period	Report Deadline

This report is required pursuant to TAPCR 1200-03-09-.02(11)(a).

Responsible Person Certification

I, the undersigned, am a Responsible Person (as described in **Condition G1**) of the facility for which this report is being submitted. This document consists of _____ pages and they are numbered from page ____ to _____. As a Responsible Person of the above-mentioned facility (permittee), I certify that the information contained in this Annual Compliance Status Report is accurate and true to the best of my knowledge. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Signature		Date
Signer's name (print)	Title	Phone (with area code)

Appendix 8: Agreement Letters

Agreement Letter dated September 21, 2022, to opt-out of the Title V permit program as a conditional major source

See next page



Jeremy Copeland, CHMM
Compliance Director

Wacker Chemical Corporation
P.O. Box 446
553 Wacker Blvd. NW
Charleston, TN 37310-0446
Tel. 423-780-7953

September 21, 2022

To: Tennessee Department of Environment & Conservation
Attn: Mr. Derek Briggs
Division of Air Pollution Control
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243
Delivered via email

**Re: Wacker Chemical Corporation and Wacker Polysilicon North America
LLC, Charleston, TN Site Emissions Limitation Agreement**

Dear Mr. Briggs,

Wacker Chemical Corporation and Wacker Polysilicon North America LLC (Wacker) are agreeing to limit site emissions at the Charleston, TN location to remain below major source status regarding air emissions permit classification and emissions permit limits. Wacker commits to the following limitations and related monitoring:

1. Emission source reference number 06-0282-15 (Boilers, operating permit number 474253):
 - a. Natural gas usage shall not exceed 1,493 MMscf per any period of 12 consecutive months at source -15. The gas consumption quantity is tracked and logged per operating permit number 474253, condition S6-1.
 - b. The NO_x emission factor value of 0.0204 tons NO_x/MMscf was developed in the boiler emissions testing that occurred on January 31st and February 1st, 2017 and will not be exceeded. The permit limit of 30.46 tons NO_x per any period of twelve consecutive months divided by the emission factor of 0.0204 tons NO_x/MMscf results in the natural gas consumption limitation of 1,493 MMscf/yr for the boilers. The NO_x permit limit of 30.46 tons per any period of twelve consecutive months will not be exceeded.
 - c. The CO emissions factor of 0.037 lb CO/MMBtu heat input and the boiler permit limit of CO emissions of 31.31 tons per 12 consecutive months shall not be exceeded. 1,493 MMscf of natural gas consumed per twelve consecutive months at the boilers multiplied by the CO emissions factor and the natural gas heat input factor of 1,078 btu/scf ensures the boiler emissions are less than the permit limit of 31.31 tons per consecutive 12 months.
 - d. The SO₂ emissions factor of 0.6 lbs/MMscf and SO₂ emissions of 0.5 tons per 12 consecutive months shall not be exceeded. 1,493 MMscf of natural gas consumed per twelve consecutive months at the boilers multiplied by the SO₂ emissions factor ensures the boiler emissions are less than the permit limit of 0.5 tons per consecutive 12 months.
 - e. The PM emissions factor of 0.005 lb/MMBtu of heat input and 4.23 tons per 12 consecutive months shall not be exceeded. 1,493 MMscf of natural gas consumed per year at the boilers multiplied by the PM emissions factor and the

natural gas heat input factor of 1,078 btu/scf ensures the boiler emissions are less than the permit limit of 4.23 tons per 12 consecutive months.

2. Emission source reference numbers 06-0282-02 and -16 (Emergency Generators) includes permit condition S2-3 that imposes running hour limitations and tracking requirements to ensure operating times are minimized. SO₂ emitted from each source shall not exceed 14.69 pounds per hour on a daily average basis.
3. Emission source reference numbers 06-0282-23 and -24 (Amorphous Fumed Silica, operating permit 479203) limits CO and NO_x emissions where compliance is assured by meeting conditions S1-2, S1-4E and F. PM emissions are limited where compliance is assured by meeting condition S2-4A of the permit. SO₂ emitted from this source shall not exceed 0.0023 lb/hr (0.01 ton/consecutive 12 months) on a daily average basis.
4. Emission source reference number 06-0282-25 (Silicon Grinding Operation) is limited to particulate matter emissions of no more than 0.74 lb/hr and 3.24 tons/yr, based on a worst case grain loading performance of the particulate matter control equipment of 0.005 gr/dscf. Assurance of meeting these emissions limitations will be accomplished through proper operation and maintenance of the silicon grinding operation particulate matter control systems.
5. The single hazardous air pollutant HCl emissions shall not exceed 9.9 tons per consecutive 12 months. The HCl emission quantities are controlled by tracking and complying with the existing construction permit conditions, as follows:
 - A. The hydrochloric acid generation operation input rates of chlorine and hydrogen are limited, as identified in permit number 474253 (source 06-0282-04, Hydrochloric Acid Generation) condition S4-1. The operation includes two scrubbers, as identified in condition S4-4.b of the permit where the condition requires daily scrubber flow rate and pH recording.
 - B. The silicon and HCl input rates at the trichlorosilane plant are limited, per permit number 474253 (source 06-0282-06, Trichlorosilane and Polysilicon Operations), condition S5-1. Condition S5-4C of the permit also requires daily scrubber flow rates and pH recordings.
 - C. The silicon tetrachloride input is restricted into the amorphous fumed silica plant, per permit number 479203, condition S1-1 along with the plant production quantity, per condition S1-2. Condition S1-4C of the permit requires daily scrubber flow rate and pH recordings.
 - D. Maintenance activity at the chlorosilane reaction plant includes scrubber control, as identified in permit number 474253 (source 06-0282-01, Maintenance Activities at Chlorosilane Reaction Building). Condition S1-4C of the permit requires daily scrubber flow rate recordings.
 - E. Floor suction and cleaning box (Equipment Cleaning) operation includes scrubber control, as identified in permit number 474253 (source 06-0282-03). Condition S3-4C of the permit requires daily conductivity and flow rate recordings.
 - F. Hydrolysis treatment of chlorosilane reaction residue, as identified in permit number 474253 (source number 06-0282-17) includes two scrubbers for control. Condition S7-1 of the permit limits the process input and condition S7-3 limits annual process time. Condition S7-4C of the permit requires daily scrubber flow rate recordings.
 - G. Periodic cleaning of process tanks and distillation columns, as identified in permit number 474253 (source number 06-0282-20), includes processing

restrictions and scrubber control. Condition S8-4C of the permit requires recordings of scrubber flow.

6. The combined hazardous air pollutant emissions shall not exceed 24.9 tons per consecutive 12 months and any single hazardous air pollutant shall not exceed 9.9 tons per consecutive 12 months. Insignificant and categorically exempt source emissions are included in the site emissions inventory and accounted for when declaring HAP emissions below major source status. The HAP emissions quantities are controlled by the commitments identified in item 5 and by monitoring and recording the natural gas consumption and resulting combined hazardous air pollutants of the Wacker site.
7. Proposed facility-wide emission limits which include insignificant and categorically exempt from permitting emission estimates are included in the table below.

Particulate Matter (PM)	99.9 tons per any period of 12-consecutive months Emissions from categorically exempt and insignificant activity emission units are estimated to be 2.31 tons per 12-consecutive months
Nitrogen Oxides (NO _x)	99.9 tons per any period of 12-consecutive months Emissions from categorically exempt and insignificant activity and emission units are estimated to be 2.57 tons per 12-consecutive months
Carbon Monoxide (CO)	99.9 tons per any period of 12-consecutive months Emissions from categorically exempt and insignificant activity emission units are estimated to be 0.12 tons per 12-consecutive months
Individual Hazardous Air Pollutants (listed pursuant to Section 112(b) of the Federal Clean Air Act	9.9 tons per any period of 12-consecutive months Emissions from categorically exempt and insignificant activity emission units are estimated to be 0.63 tons per 12-consecutive months for HCl and 0.024 tons per 12-consecutive months for HF
Combined Hazardous Air Pollutants	24.9 tons per any period of 12-consecutive months Emissions from categorically exempt and insignificant activity emission units are estimated to be 0.65 tons per 12-consecutive months

Signature: 

Name: Ken Collins

Title: Senior Director, Site Leader

Date: 09/21/2022

Please contact me directly at (423) 780-7953 if you have any questions regarding this topic.

Cordially,

A handwritten signature in blue ink, appearing to read "Jeremy Copeland", with a stylized flourish at the end.

Jeremy Copeland, CHMM
Compliance Director

Appendix 9: Example Logs

20 <u> </u> DAILY BAGHOUSE PRESSURE DROP READINGS FOR SOURCE 25								
JAN <input type="checkbox"/> FEB <input type="checkbox"/> MAR <input type="checkbox"/> APR <input type="checkbox"/> MAY <input type="checkbox"/> JUN <input type="checkbox"/> JUL <input type="checkbox"/> AUG <input type="checkbox"/> SEP <input type="checkbox"/> OCT <input type="checkbox"/> NOV <input type="checkbox"/> DEC <input type="checkbox"/>								
1 st Shift <input type="checkbox"/> Shift Start Time: _____ Shift End Time: _____ 2 nd Shift <input type="checkbox"/> Shift Start Time: _____ Shift End Time: _____ 3 rd Shift <input type="checkbox"/> Shift Start Time: _____ Shift End Time: _____								
Day	Reading Time	Silicon Grinding Process operating?		Baghouse operating?		Pressure Drop (inches of water)	Comments / Corrective Actions	Initials
		Yes	No	Yes	No			
1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
13		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
14		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
15		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
16		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
17		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
18		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
19		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
21		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
22		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
23		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
24		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
25		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
26		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
27		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
28		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
29		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
30		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
31		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

20** WEEKLY VISUAL INSPECTION LOG											
Date (MM/DD/YY)	Time (HH:MM)	Silicon Grinding Process operating?		Baghouse operating?		Is baghouse exterior free of holes, corrosion, or leaks?		Is baghouse ductwork free of holes, corrosion, or leaks?		Are any corrective actions or repairs necessary?	Initials
		Yes	No	Yes	No	Yes	No	Yes	No		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		