

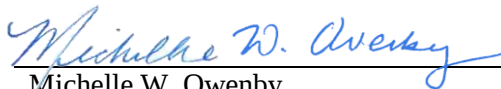


**STATE OF TENNESSEE
AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE**

PERMIT TO CONSTRUCT / MODIFY AIR CONTAMINANT SOURCE(S)

Permit Number: 981278
Facility (Permittee): ABB Installation Products Inc.
Facility ID: 54-0047
Facility Address: 260 Dennis Street, Athens
McMinn County
Facility Classification: True Minor
Federal Requirements: 40 CFR 63, Subpart WWWW
Facility Description: Electrical Product Manufacturing

Permit 981278, consisting of 25 pages is hereby issued August 25, 2023, 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 August 24, 2025. 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 Construction Permit

FACILITY DESCRIPTION			
Source Number	Source Description	Status	Control Device/Equipment
14	Electroplating Operation: Zinc Plating and Chromium Conversion	Modified	Wet Packed-Bed Scrubber
16	Electroplating Operation: Zinc Plating and Chromium Conversion	Modified	Wet Packed-Bed Scrubber

Section II – Permit Record

Permit Type	Description of Permit Action	Issue Date
Initial	Initial issuance of construction permit	August 25, 2023

Section III - General Permit Conditions

G1. Responsible Person

The application that was utilized in the preparation of this construction permit is dated March 27, 2023, and is signed by Shane Sparks, General Manager, 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 the change. 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(s) 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 Adobe 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
• Notifications • Startup certifications • Applications • NSPS reports • MACT/GACT/NESHAP reports • Emission statements • Construction permit extension requests	• Test protocols • Emission test reports • Visible emission evaluation reports	• 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)

- 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 operating permit within 30 days of initial startup of the first 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. A separate startup certification must be submitted for each air contaminant source included in 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 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 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 30 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. 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. Facility-wide Limitations

At the time of application, the potential to emit hazardous air pollutants (HAP) from this facility was less than the major source applicability thresholds of 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAP. The permittee must apply for and receive a construction permit in accordance with the procedures in Chapter 1200-03-09 of the Tennessee Air Pollution Control Regulations (TAPCR) prior to making any changes such that the potential to emit hazardous air pollutants from the facility will exceed these thresholds.

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

G14. NSPS/NESHAP/MACT/GACT Standards

The following source(s) are subject to and shall comply with all applicable requirements of each NSPS/NESHAP/MACT/GACT standard as indicated in the table below, including the General Provisions identified in Appendix 9. The applicable requirements of each standard are incorporated into this permit pursuant to TAPCR 1200-03-09-.03(8) and TAPCR 0400-30-38-.01.

Source Number	NESHAP/MACT/GACT	NSPS
14	40 CFR 63, Subpart WWWWWW	<i>Not Applicable</i>
16	40 CFR 63, Subpart WWWWWW	<i>Not Applicable</i>

TAPCR 1200-03-09-.03(8) and 0400-30-38-.01

Compliance Method: Compliance methods are provided in the conditions in **Section IV** of this permit.

G15. VOC and NO_x Emission Statement – *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
14	Electroplating Operation: Zinc Plating and Chromium Conversion	Wet Packed-Bed Scrubber
16	Electroplating Operation: Zinc Plating and Chromium Conversion	Wet Packed-Bed Scrubber

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 – Federal and/or State Only Requirements

F1. 40 CFR 63, Subpart WWWW – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

F1-1. Plating and polishing facilities, as defined in 40 CFR §63.11511, that are an area source of HAP emissions and meet the criteria specified in §63.11504(a)(1) through (3) are subject to the requirements of 40 CFR 63, Subpart WWWW – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations (Subpart WWWW). The permittee shall comply with all applicable requirements of Subpart WWWW.

Subpart WWWW applies to each new or existing tank that contains one or more of the plating and polishing metal HAP, as defined in §63.11511, and is used for non-chromium electroplating; electroforming; electropolishing; electroless plating or other non-electrolytic coating operations, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating.

40 CFR §§63.11504 and 63.11505

F1-2. Pursuant to 40 CFR §63.11507(g), the permittee, shall implement the following management practices for each affected plating and polishing process unit that contains, applies, or emits one or more of the plating and polishing metal HAP, as defined in §63.11511, as practicable:

- Minimize bath agitation when removing any parts processed in the tank, as practicable except when necessary to meet part quality requirements.
- Maximize the draining of bath solution back into the tank, as practicable, by extending drip time when removing parts from the tank; using drain boards (also known as drip shields); or withdrawing parts slowly from the tank, as practicable.
- Optimize the design of barrels, racks, and parts to minimize dragout of bath solution (such as by using slotted barrels and tilted racks, or by designing parts with flow-through holes to allow the tank solution to drip back into the tank), as practicable.
- Use tank covers, if already owned and available at the facility, whenever practicable.

- (e) Minimize or reduce heating of process tanks, as practicable (e.g., when doing so would not interrupt production or adversely affect part quality).
- (f) Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment associated with affected sources, as practicable.
- (g) Minimize bath contamination, such as through the prevention or quick recovery of dropped parts, use of distilled/de-ionized water, water filtration, pre-cleaning of parts to be plated, and thorough rinsing of pretreated parts to be plated, as practicable.
- (h) Maintain quality control of chemicals, and chemical and all other bath ingredient concentrations in the tanks, as practicable.
- (i) Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practicable.
- (j) Minimize spills and overflow of tanks, as practicable.
- (k) Use squeegee rolls in continuous or reel-to-reel plating tanks, as practicable.
- (l) Perform regular inspections to identify leaks and other opportunities for pollution prevention.

F1-3. Pursuant to 40 CFR §63.11508(b), the permittee must be in compliance with the applicable management practices and equipment standards in **Condition F1-2** at all times.

Compliance Method: Pursuant to 40 CFR §63.11508(d), the permittee shall demonstrate continuous compliance with the applicable management practices and equipment standards, specified in **Condition F1-2**, by satisfying the following requirements:

- (a) The permittee must always operate and maintain the affected source, including air pollution control equipment.
- (b) The permittee must prepare an annual compliance certification according to the requirements specified in **Condition F1-5**.
- (c) The permittee must implement the applicable management practices during all times that the affected tank or process is in operation.

F1-4. Pursuant to 40 CFR §63.11508(b), if a facility makes a change to any items specified in (a) through (c), included in the latest Notification of Compliance Status, that does not result in a deviation, an amended Notification of Compliance Status should be submitted within 30 days of the change.

- (a) List of affected sources and the plating and polishing metal HAP used in, or emitted by, those sources.
- (b) Description of the capture and emission control systems used to comply with the applicable equipment standards.
- (c) Statement by the permittee as to whether the source is in compliance with the applicable standards or other requirements.

F1-5. Pursuant to 40 CFR §63.11509(c), the permittee must prepare an annual certification of compliance report, in accordance with paragraphs (a) and (b) of this condition, for each calendar year reporting period. These reports do not need to be submitted unless a deviation from the requirements of Subpart WWWW has occurred during the reporting year, in which case, the annual compliance report must be submitted along with the deviation report.

- (a) Each annual compliance report must state that the permittee has implemented the applicable management practices, as practicable.
- (b) Each annual compliance report must be prepared no later than January 31 of the year immediately following the reporting period. If a deviation has occurred during the year, each annual compliance report and deviation report must be submitted, and postmarked or delivered to the Field Services Program, at the address specified in **Condition G3**, no later than January 31 of the year immediately following the reporting period.

F1-6. Pursuant to 40 CFR §63.11509(e), the permittee must retain the following records:

- (a) A copy of any Initial Notification and Notification of Compliance Status and all documentation supporting those notifications.
- (b) The records specified in §63.10(b)(2)(i) through (iii) and (xiv) of the General Provisions to 40 CFR Part 63.
- (c) The records required to show continuous compliance with each applicable management practice and equipment standard, as specified in **Condition F1-2**.

F1-7. Pursuant to 40 CFR §63.11509(f), the permittee must keep each record for a minimum of five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1) of the General Provisions to 40 CFR Part 63. You may keep the records offsite for the remaining 3 years.

F1-8. Table 1 to Subpart WWWWWW (Appendix 9) shows which parts of the General Provisions in §§63.1 through 63.16 are applicable to the permittee.

Section V - Source Specific Permit Conditions

Source Number	Source Description
14	Electroplating Operation: This steel strut electroplating line consists of a variety of tanks for various cleaning, rinsing, non-cyanide alkaline electroplating, and chromate conversion coating processes. The following are some of the processes utilized in the electroplating line: <i>Acid Dip:</i> Two acid dip tanks, containing aqueous solutions of either hydrogen chloride (HCl) or sulfuric acid, are used to clean and prepare the surface of the steel struts for the alkaline zinc electroplating process. Chemical fume suppressant and a wet packed-bed scrubber (Unique Source ID #17161, Emission Point ID Scrubber #1) equipped with a chevron blade mist eliminator, are used for emission control. <i>Alkaline Zinc Electroplating:</i> Seven plating tanks, containing non-cyanide alkaline zinc electroplating solution, are used to plate the steel struts in zinc for improved corrosion resistance. A wet packed-bed scrubber (Unique Source ID #17161, Emission Point ID Scrubber #2), equipped with a chevron blade mist eliminator, controls particulate matter process emissions. <i>Chromate Conversion Coating:</i> Two coating tanks, containing trivalent chromate conversion coating solution, apply a chromium film to steel struts for additional corrosion resistance. This process contains plating and polishing metal HAPs, as defined in 40 CFR §63.11511, and is subject to Subpart WWWWWW.

S1-1. Input Limitation(s) or Statement(s) of Design

- A. The design volumetric capacity of each acid dip tank is 2,200 gallons of aqueous acid dip solution. Should the permittee need to modify the source in a manner that increases the design tank capacity a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain documentation to demonstrate the volumetric capacity of each acid dip tank. 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.

- B. The design surface area of the open top of each acid dip tank is 52 square feet. Should the permittee need to modify the source in a manner that increases this surface area a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain documentation to demonstrate the surface area of the open top of each acid dip tank. 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.

- C. The maximum concentration of HCl in each acid dip tank shall not exceed 14% by weight on a daily average basis. Should the permittee need to modify the source in a manner that increases maximum HCl concentration, a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain a daily log of the actual HCl concentration in each acid dip tank that readily shows compliance with the HCl concentration limit (see Appendix 8, Log 1, or use a similar format that includes sufficient information to demonstrate compliance). Each day that HCl is not used in the acid dip tanks shall be noted in the daily log. The log shall be retained in accordance with **Condition G10**.

- D. The stated maximum air velocity across the surface of each acid dip tank is 2,000 feet per minute. Should the permittee need to modify the source in a manner that increases the maximum air velocity, a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain documentation to demonstrate the maximum air velocity across the surface of each acid dip tank. 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.

S1-2. Production Limitation(s) – Not Applicable

S1-3. Operating Hour Limitation(s) – Not Applicable

S1-4. Emission Limitation(s)

- A. Particulate matter (PM) emitted from this source shall not exceed 0.00835 pounds per hour (lbs/hr) on daily average basis.

TAPCR 1200-03-07-.01(5) and the agreement letter dated August 22, 2023

Compliance Method: The permittee shall operate and maintain each wet packed-bed scrubber to control emissions. The source shall not operate unless each wet packed-bed scrubber is operating. Compliance with this emission limit shall be assured by following:

- (1) The permittee shall operate and maintain a liquid flow meter on each wet packed-bed scrubber.
- (2) The permittee shall maintain a minimum scrubber liquid flow rate in gallons per minute (gpm) of each wet packed-bed scrubber, as specified in the table below. Each scrubber's liquid flow rate shall be recorded once daily during source operation in a log (see Appendix 8, Log 2, or use a similar format that includes sufficient information to demonstrate compliance).

Unique Source ID	Emission Point ID	Minimum Liquid Flow Rate (gpm)
#17161	Scrubber #1	60
#17161	Scrubber #2	60

- (3) The permittee shall perform and record weekly visual inspections of each scrubber, and the scrubber ductwork, including the scrubber exhausts. The permittee shall initiate, as well as record, corrective action within 24 hours and complete, as well as record, corrective action as expediently as practical if the permittee finds that any problem has developed during an inspection of the scrubbers. Identification of the problem and corrective action(s) shall be noted in the weekly inspection records. Inspection records shall also include the initials of the person performing the inspection(s) and corrective action(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**.

B. HCl emitted from the acid dip process shall not exceed 0.20 lbs/hr on a daily average basis.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this emission limitation is assured by compliance with **Condition S1-1**.

S1-5. Source-Specific Visible Emissions Limitation(s) – Not Applicable

Source Number	Source Description
16	Electroplating Operation: This steel strut electroplating line consists of a variety of tanks for various cleaning, rinsing, non-cyanide alkaline electroplating, and chromate conversion coating processes. The following are some of the processes utilized in the electroplating line: <i>Acid Dip:</i> Two acid dip tanks, containing aqueous solutions of either hydrogen chloride (HCl) or sulfuric acid, are used to clean and prepare the surface of the steel struts for the alkaline zinc electroplating process. Chemical fume suppressant and a wet packed-bed scrubber (Unique Source ID #05081, Emission Point ID Scrubber #2), equipped with a chevron blade mist eliminator, are used for emission control. <i>Alkaline Zinc Electroplating:</i> Seven plating tanks, containing non-cyanide alkaline zinc electroplating solution, are used to plate the steel struts in zinc for improved corrosion resistance. A wet packed-bed scrubber (Unique Source ID #05081, Emission Point ID Scrubber #1), equipped with a chevron blade mist eliminator, controls particulate matter process emissions. <i>Chromate Conversion Coating:</i> Two coating tanks, containing trivalent chromate conversion coating solution, apply a chromium film to steel struts for additional corrosion resistance. This process contains plating and polishing metal HAPs, as defined in 40 CFR §63.11511, and is subject to Subpart WWWW.

S2-1. Input Limitation(s) or Statement(s) of Design

- A. The design volumetric capacity of each acid dip tank is 2,200 gallons of aqueous acid dip solution. Should the permittee need to modify the source in a manner that increases the design tank capacity a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain documentation to demonstrate the volumetric capacity of each acid dip tank. 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.

- B. The design surface area of the open top of each acid dip tank is 52 square feet. Should the permittee need to modify the source in a manner that increases this surface area a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain documentation to demonstrate the surface area of the open top of each acid dip tank. 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.

- C. The maximum concentration of HCl in each acid dip tank shall not exceed 14% by weight on a daily average basis. Should the permittee need to modify the source in a manner that increases maximum HCl concentration, a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain a daily log of the actual HCl concentration in each acid dip tank that readily shows compliance with the HCl concentration limit (see Appendix 8, Log 1, or use a similar format that includes sufficient information to demonstrate compliance). Each day that HCl is not used in the acid dip tanks shall be noted in the daily log. The log shall be retained in accordance with **Condition G10**.

- D. The stated maximum air velocity across the surface of each acid dip tank is 2,000 feet per minute. Should the permittee need to modify the source in a manner that increases the maximum air velocity, a construction permit shall first be applied for and received in accordance with TAPCR 1200-03-09-.01 prior to making the change.

TAPCR 1200-03-09-.01(1)(d) and the application dated March 27, 2023

Compliance Method: The permittee shall maintain documentation to demonstrate the maximum air velocity across the surface of each acid dip tank. 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.

S2-2. Production Limitation(s) – Not Applicable

S2-3. Operating Hour Limitation(s) – Not Applicable

S2-4. Emission Limitation(s)

- A. Particulate matter (PM) emitted from this source shall not exceed 0.0075 lbs/hr on daily average basis.

TAPCR 1200-03-07-.01(5) and the agreement letter dated August 22, 2023

Compliance Method: The permittee shall operate and maintain each wet packed-bed scrubber to control emissions. The source shall not operate unless each wet packed-bed scrubber is operating. Compliance with this emission limit shall be assured by following:

- (a) The permittee shall operate and maintain a liquid flow meter on each wet packed-bed scrubber.
(b) The permittee shall maintain a minimum scrubber liquid flow rate in gallons per minute (gpm) of each wet packed-bed scrubber, as specified in the table below. Each scrubber's liquid flow rate shall be recorded once daily during source operation in a log (see Appendix 8, Log 3, or use a similar format that includes sufficient information to demonstrate compliance).

Unique Source ID	Emission Point ID	Minimum Liquid Flow Rate (gpm)
#05081	Scrubber #1	30
#05081	Scrubber #2	180

- (c) The permittee shall perform and record weekly visual inspections of each scrubber, and the scrubber ductwork, including the scrubber exhausts. The permittee shall initiate, as well as record, corrective action within 24 hours and complete, as well as record, corrective action as expediently as practical if the permittee finds that any problem has developed during an inspection of the scrubbers. Identification of the problem

and corrective action(s) shall be noted in the weekly inspection records. Inspection records shall also include the initials of the person performing the inspection(s) and corrective action(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**.

- B. HCl emitted from the acid dip process shall not exceed 0.20 lbs/hr on an average daily basis.

TAPCR 1200-03-07-.07(2)

Compliance Method: Compliance with this emission limitation is assured by compliance with **Condition S2-1**.

S2-5. Source-Specific Visible Emissions Limitation(s) – Not Applicable

(end of conditions)

The permit application gives the location of this source as 35.457389 Latitude and 84.604261 Longitude.

Appendix 1: Notification of Change in Responsible Person

Facility (Permittee): _____ ABB Installation Products Inc. _____

Facility ID: _____ 54-0047 _____

Former Responsible Person: _____
Name Title

New Responsible Person: _____
Name Title

Email

Mailing Address

Phone (Office) Phone (cell)

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.

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

Appendix 2: Notification of Changes

Facility (Permittee): ABB Installation Products Inc.

Facility ID: 54-0047

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): ABB Installation Products Inc. (Previous Owner)

Facility ID: 54-0047

Facility (Permittee): _____ (New Owner) _____
Date of Ownership Change

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

Responsible Person/Authorized Contact	Email Address
Mailing Address	Phone with area code
Principal Technical Contact	Email Address
Mailing Address	Phone with area code
Billing Contact	Email Address
Mailing Address	Phone with area code

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): ABB Installation Products Inc.

Facility ID: 54-0047

Startup Certification for Source Number: _____

The permittee shall certify the startup date for each new or modified air contaminant source regulated by construction permit 981278 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 unless otherwise specified in TAPCR 1200-03-26-.02(6)(c). 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: Agreement Letters

August 22, 2023

Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower, 15th Floor
312 Rosa L. Parks Avenue
Nashville, TN 37243

RE: Permit Agreement Letter
ABB Installation Products, Inc.
260 Dennis Street, Athens, Tennessee 37003
Emission Source Reference No. APC Facility ID # 54-0047, Source #s 14 & 16 /
Permit No. 981278

Dear Technical Secretary:

On behalf of ABB Installation Products, Inc., the following limitations are agreed upon for the above referenced facility:

For Emission Source #14

- The proposed volume throughput through the electroplater is 15 loads per hour with each load weighing 720 pounds, for a total of 10,800 pounds per hour.
- Based upon calculations using EPA AP-42 emission factors, we have determined that PM emissions emitted by the facility by this Emission Source shall not exceed 0.00835 pounds per hour (daily average), and 0.0366 tons per 12 consecutive months.

ABB Installation Products, Inc., shall assure compliance with these limitations by operating each wet packed-bed scrubber associated with this source in accordance with the manufacturer specifications of a minimum liquid flow rate of 60 gallons/minute for both scrubber #1 and #2.

For Emission Source #16

- The proposed volume throughput through the electroplater is 15 loads per hour with each load weighing 720 pounds, for a total of 10,800 pounds per hour.
- Based upon calculations using EPA AP-42 emission factors, we have determined that PM emissions emitted by the facility by this Emission Source shall not exceed 0.0075 pounds per hour (daily average), and 0.033 tons per 12 consecutive months.

ABB Installation Products, Inc., shall assure compliance with these limitations by operating each wet packed-bed scrubber associated with this source in accordance with the manufacturer specifications of a minimum liquid flow rate of 30 gallons/minute for scrubber #1 and 180 gallons/minute for scrubber #2.

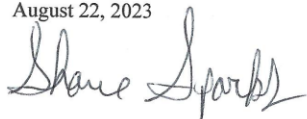
Should you have any questions or require additional information, please contact Shane Sparks via phone at (423)745-6588 or via e-mail at shane.sparks@us.abb.com.

TDEC Permit Agreement Letter
APC Facility ID 54-0057
August 22, 2023
Page 2

On behalf of ABB Installation Products, Inc., I agree to the above limitations. I am authorized to represent and bind the facility in environmental affairs.

Sincerely,

Shane Sparks
Plant Manager
August 22, 2023



Appendix 8: Example Logs

Log 1: Daily HCl Concentration log							
Source Number:							
Month/Year:							
Date	HCl Used in Tank 1?		Tank 1 HCl Concentration (wt%)	HCl Used in Tank 2?		Tank 2 HCl Concentration (wt%)	Notes
	Yes	No		Yes	No		
1	☐	☐		☐	☐		
2	☐	☐		☐	☐		
3	☐	☐		☐	☐		
4	☐	☐		☐	☐		
5	☐	☐		☐	☐		
6	☐	☐		☐	☐		
7	☐	☐		☐	☐		
8	☐	☐		☐	☐		
9	☐	☐		☐	☐		
10	☐	☐		☐	☐		
11	☐	☐		☐	☐		
12	☐	☐		☐	☐		
13	☐	☐		☐	☐		
14	☐	☐		☐	☐		
15	☐	☐		☐	☐		
16	☐	☐		☐	☐		
17	☐	☐		☐	☐		
18	☐	☐		☐	☐		
19	☐	☐		☐	☐		
20	☐	☐		☐	☐		
21	☐	☐		☐	☐		
22	☐	☐		☐	☐		
23	☐	☐		☐	☐		
24	☐	☐		☐	☐		
25	☐	☐		☐	☐		
26	☐	☐		☐	☐		
27	☐	☐		☐	☐		
28	☐	☐		☐	☐		
29	☐	☐		☐	☐		
30	☐	☐		☐	☐		
31	☐	☐		☐	☐		

Log 2: 20XX DAILY SCRUBBER LIQUID FLOW READINGS FOR SOURCE 14 (Unique Source ID #17161), SCRUBBER # _____										
JAN ☐ FEB ☐ MAR ☐ APR ☐ MAY ☐ JUN ☐ JUL ☐ AUG ☐ SEP ☐ OCT ☐ NOV ☐ DEC ☐										
Day	Time		Tanks operating?		Scrubber operating?		Liquid Flow Rate (gal/hr)	Comments / Corrective Actions	Initials	
	Reading	Inspection	Yes	No	Yes	No			Reading	Inspection
1			☐	☐	☐	☐				
2			☐	☐	☐	☐				
3			☐	☐	☐	☐				
4			☐	☐	☐	☐				
5			☐	☐	☐	☐				
6			☐	☐	☐	☐				
7			☐	☐	☐	☐				
8			☐	☐	☐	☐				
9			☐	☐	☐	☐				
10			☐	☐	☐	☐				
11			☐	☐	☐	☐				
12			☐	☐	☐	☐				
13			☐	☐	☐	☐				
14			☐	☐	☐	☐				
15			☐	☐	☐	☐				
16			☐	☐	☐	☐				
17			☐	☐	☐	☐				
18			☐	☐	☐	☐				
19			☐	☐	☐	☐				
20			☐	☐	☐	☐				
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22			☐	☐	☐	☐				
23			☐	☐	☐	☐				
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26			☐	☐	☐	☐				
27			☐	☐	☐	☐				
28			☐	☐	☐	☐				
29			☐	☐	☐	☐				
30			☐	☐	☐	☐				
31			☐	☐	☐	☐				

Log 3: 20XX DAILY SCRUBBER LIQUID FLOW READINGS FOR SOURCE 16 (Unique Source ID #05081), SCRUBBER # _____										
JAN ☐ FEB ☐ MAR ☐ APR ☐ MAY ☐ JUN ☐ JUL ☐ AUG ☐ SEP ☐ OCT ☐ NOV ☐ DEC ☐										
Day	Time		Tanks operating?		Scrubber operating?		Liquid Flow Rate (gal/hr)	Comments / Corrective Actions	Initials	
	Reading	Inspection	Yes	No	Yes	No			Reading	Inspection
1			☐	☐	☐	☐				
2			☐	☐	☐	☐				
3			☐	☐	☐	☐				
4			☐	☐	☐	☐				
5			☐	☐	☐	☐				
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8			☐	☐	☐	☐				
9			☐	☐	☐	☐				
10			☐	☐	☐	☐				
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13			☐	☐	☐	☐				
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23			☐	☐	☐	☐				
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26			☐	☐	☐	☐				
27			☐	☐	☐	☐				
28			☐	☐	☐	☐				
29			☐	☐	☐	☐				
30			☐	☐	☐	☐				
31			☐	☐	☐	☐				

Appendix 9: General Provisions for 40 CFR Part 63, Subpart WWWWW

You are required to comply with the following General Provisions of the federal National Emission Standards for Hazardous Air Pollutants (NESHAP):

General Provisions Citation 40 CFR	Subject of Citation	Applies to Subpart	Explanation
§63.1	Applicability	Yes ☒ No ☐	
§63.2	Definitions	Yes ☒ No ☐	
§63.3	Units and Abbreviations	Yes ☒ No ☐	
§63.4	Prohibited Activities and Circumvention	Yes ☒ No ☐	
§63.5	Preconstruction Review and Notification Requirements	Yes ☐ No ☒	
§63.6(a), (b)(1)-(b)(5), (c)(1), (c)(2), and (c)(5)	Compliance with Standards and Maintenance Requirements—Applicability Compliance Dates	Yes ☒ No ☐	
§63.6(e)	Operation and Maintenance Requirements	Yes ☐ No ☒	
§63.6(j)	Compliance with Non-opacity Emission Standards	Yes ☒ No ☐	
§63.7(a), (e), (f), (g), (h)	Performance Testing Requirements	Yes ☐ No ☒	
§63.8	Monitoring Requirements	Yes ☐ No ☒	
§63.9	Notification Requirements	Yes ☐ No ☒	
§63.10(a), (b)(1), (b)(2)(i)-(iii), (xiv), (b)(3), (d)(1), (f)	Recordkeeping and Reporting Requirements	Yes ☒ No ☐	
§63.11	Control Device Requirements	Yes ☐ No ☒	
§63.12	State Authorities and Delegations	Yes ☒ No ☐	
§63.13	Addresses	Yes ☒ No ☐	
§63.14	Incorporations by Reference	Yes ☒ No ☐	
§63.15	Availability of Information and Confidentiality	Yes ☒ No ☐	
§63.16	Performance Track Provisions	Yes ☒ No ☐	

TAPCR 0400-30-38-.01