



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY PROGRAM

PLAN APPROVAL

Issue Date: June 27, 2023 Effective Date: June 27, 2026
Revision Date: April 1, 2026 Expiration Date: December 27, 2026
Revision Type: Extension

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to construct, install, modify or reactivate the air emission source(s) more fully described in the site inventory list. This Facility is subject to all terms and conditions specified in this plan approval. Nothing in this plan approval relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each plan approval condition is set forth in brackets. All terms and conditions in this permit are federally enforceable unless otherwise designated as "State-Only" requirements.

Plan Approval No. 46-0282A

Federal Tax Id - Plant Code: 22-3404063-2

Owner Information

Name: TITAN INTL INC
Mailing Address: 740 QUEEN ST
POTTSTOWN, PA 19464-6008

Plant Information

Plant: TITAN INTL/POTTSTOWN
Location: 46 Montgomery County 46005 Pottstown Borough
SIC Code: 3341 Manufacturing - Secondary Nonferrous Metals

Responsible Official

Name: HERNAN RIZO
Title: CFO
Phone: (856) 735 - 2220 Email: hrizo@titanintl.com

Plan Approval Contact Person

Name: TIM DZIAK
Title: EHS
Phone: (856) 735 - 2220 Email: tdziak@titanintl.com

[Signature] _____
JILLIAN A. GALLAGHER, SOUTHEAST REGION AIR PROGRAM MANAGER



Plan Approval Description

This plan approval is for the replacement of two 1,000-gallon tanks previously designated as Source ID 201 (Reactor Tank 10) and Source ID 202 (Reactor Tank 11) with two new 1,200-gallon tanks designated as Source ID 301 (Reactor Tank 12) and Source ID 302 (Reactor Tank 13). HCl emissions will be exhausted to the existing HCl Fume Scrubber (C01).



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Note: These same sub-sections are repeated for each source!

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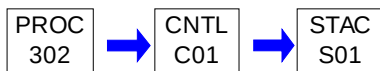
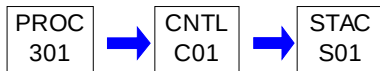
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**SECTION A. Plan Approval Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
301	REACTOR TANK 12	N/A	
302	REACTOR TANK 13	N/A	
C01	HCL FUME SCRUBBER		
S01	HCL FUME SCRUBBER STACK		

PERMIT MAPS



SECTION B. General Plan Approval Requirements

#001 [25 Pa. Code § 121.1]

Definitions

Words and terms that are not otherwise defined in this plan approval shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

#002 [25 Pa. Code § 127.12b (a) (b)]

Future Adoption of Requirements

The issuance of this plan approval does not prevent the future adoption by the Department of any rules, regulations or standards, or the issuance of orders necessary to comply with the requirements of the Federal Clean Air Act or the Pennsylvania Air Pollution Control Act, or to achieve or maintain ambient air quality standards. The issuance of this plan approval shall not be construed to limit the Department's enforcement authority.

#003 [25 Pa. Code § 127.12b]

Plan Approval Temporary Operation

This plan approval authorizes temporary operation of the source(s) covered by this plan approval provided the following conditions are met.

(a) When construction, installation, modification, or reactivation is being conducted, the permittee shall provide written notice to the Department of the completion of the activity approved by this plan approval and the permittee's intent to commence operation at least five (5) working days prior to the completion of said activity. The notice shall state when the activity will be completed and when the permittee expects to commence operation. When the activity involves multiple sources on different time schedules, notice is required for the commencement of operation of each source.

(b) Pursuant to 25 Pa. Code § 127.12b (d), temporary operation of the source(s) is authorized to facilitate the shakedown of sources and air cleaning devices, to permit operations pending the issuance of a permit under 25 Pa. Code Chapter 127, Subchapter F (relating to operating permits) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contaminant aspects of the source.

(c) This plan approval authorizes a temporary operation period not to exceed 180 days from the date of commencement of operation, provided the Department receives notice from the permittee pursuant to paragraph (a), above.

(d) The permittee may request an extension of the 180-day shakedown period if further evaluation of the air contamination aspects of the source(s) is necessary. The request for an extension shall be submitted, in writing, to the Department at least 30 days prior to the end of the initial 180-day shakedown period and shall provide a description of the compliance status of the source, a detailed schedule for establishing compliance, and the reasons compliance has not been established. This temporary operation period will be valid for a limited time and may be extended for additional limited periods, each not to exceed 180 days.

(e) The notice submitted by the permittee pursuant to subpart (a) above, prior to the expiration of the plan approval, shall modify the plan approval expiration date on Page 1 of this plan approval. The new plan approval expiration date shall be 180 days from the date of commencement of operation.

#004 [25 Pa. Code § 127.12(a) (10)]

Content of Applications

The permittee shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice as described in the plan approval application submitted to the Department.

#005 [25 Pa. Code §§ 127.12(c) and (d) & 35 P.S. § 4013.2]

Public Records and Confidential Information

(a) The records, reports or information obtained by the Department or referred to at public hearings shall be available to the public, except as provided in paragraph (b) of this condition.

(b) Upon cause shown by the permittee that the records, reports or information, or a particular portion thereof, but not emission data, to which the Department has access under the act, if made public, would divulge production or sales figures or methods, processes or production unique to that person or would otherwise tend to affect adversely the

**SECTION B. General Plan Approval Requirements**

competitive position of that person by revealing trade secrets, including intellectual property rights, the Department will consider the record, report or information, or particular portion thereof confidential in the administration of the act. The Department will implement this section consistent with sections 112(d) and 114(c) of the Clean Air Act (42 U.S.C.A. § 7412(d) and 7414(c)). Nothing in this section prevents disclosure of the report, record or information to Federal, State or local representatives as necessary for purposes of administration of Federal, State or local air pollution control laws, or when relevant in a proceeding under the act.

#006 [25 Pa. Code § 127.12b]**Plan Approval Terms and Conditions**

[Additional authority for this condition is derived from 25 Pa. Code Section 127.13]

(a) This plan approval will be valid for a limited time, as specified by the expiration date contained on Page 1 of this plan approval. Except as provided in § § 127.11a and 127.215 (relating to reactivation of sources; and reactivation), at the end of the time, if the construction, modification, reactivation or installation has not been completed, a new plan approval application or an extension of the previous approval will be required.

(b) If construction has commenced, but cannot be completed before the expiration of this plan approval, an extension of the plan approval must be obtained to continue construction. To allow adequate time for departmental action, a request for the extension shall be postmarked at least thirty (30) days prior to the expiration date. The request for an extension shall include the following:

- (i) A justification for the extension,
- (ii) A schedule for the completion of the construction

If construction has not commenced before the expiration of this plan approval, then a new plan approval application must be submitted and approval obtained before construction can commence.

(c) If the construction, modification or installation is not commenced within 18 months of the issuance of this plan approval or if there is more than an 18-month lapse in construction, modification or installation, a new plan approval application that meets the requirements of 25 Pa. Code Chapter 127, Subchapter B (related to plan approval requirements), Subchapter D (related to prevention of significant deterioration of air quality), and Subchapter E (related to new source review) shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified.

#007 [25 Pa. Code § 127.32]**Transfer of Plan Approvals**

(a) This plan approval may not be transferred from one person to another except when a change of ownership is demonstrated to the satisfaction of the Department and the Department approves the transfer of the plan approval in writing.

(b) Section 127.12a (relating to compliance review) applies to a request for transfer of a plan approval. A compliance review form shall accompany the request.

(c) This plan approval is valid only for the specific source and the specific location of the source as described in the application.

#008 [25 Pa. Code § 127.12(a)(4) & 35 P.S. § 4008 & § 114 of the CAA]**Inspection and Entry**

(a) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel in the performance of any duty authorized under the Air Pollution Control Act.

(b) The permittee shall also allow the Department to have access at reasonable times to said sources and associated air cleaning devices with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act and regulations adopted under the act.

**SECTION B. General Plan Approval Requirements**

(c) Nothing in this plan approval condition shall limit the ability of the Environmental Protection Agency to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

#009 [25 Pa. Code 127.13a]**Plan Approval Changes for Cause**

This plan approval may be terminated, modified, suspended or revoked and reissued if one or more of the following applies:

(a) The permittee constructs or operates the source subject to the plan approval in violation of the act, the Clean Air Act, the regulations promulgated under the act or the Clean Air Act, a plan approval or permit or in a manner that causes air pollution.

(b) The permittee fails to properly or adequately maintain or repair an air pollution control device or equipment attached to or otherwise made a part of the source.

(c) The permittee fails to submit a report required by this plan approval.

(d) The Environmental Protection Agency determines that this plan approval is not in compliance with the Clean Air Act or the regulations thereunder.

#010 [25 Pa. Code §§ 121.9 & 127.216]**Circumvention**

(a) The permittee, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.

(b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this plan approval, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department, the device or technique may be used for control of malodors.

#011 [25 Pa. Code § 127.12c]**Submissions**

Reports, test data, monitoring data, notifications shall be submitted to the:

Regional Air Program Manager

PA Department of Environmental Protection

(At the address given on the plan approval transmittal letter or otherwise notified)

#012 [25 Pa. Code § 127.12(a)(9) & 40 CFR Part 68]**Risk Management**

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the facility. The permittee shall submit the RMP to the Environmental Protection Agency according to the following schedule and requirements:

(1) The permittee shall submit the first RMP to a central point specified by the Environmental Protection Agency no later than the latest of the following:

**SECTION B. General Plan Approval Requirements**

- (i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
- (ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or the Environmental Protection Agency concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this plan approval condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

#013 [25 Pa. Code § 121.7]**Prohibition of Air Pollution**

No person may permit air pollution as that term is defined in the Air Pollution Control Act (35 P.S. §§ 4001-4015).

#014 [25 Pa. Code § 127.25]**Compliance Requirement**

A person may not cause or permit the operation of a source subject to § 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.



SECTION C. Site Level Plan Approval Requirements

I. RESTRICTIONS.

Emission Restriction(s).

001 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The permittee shall limit facility-wide Hazardous Air Pollutant (HAP) emissions as follows:

- (a) less than 25 tons per year any combination HAPs, based on a 12-month rolling sum, and
- (b) less than 10 tons per year any individual HAP, based on a 12-month rolling sum.

II. TESTING REQUIREMENTS.

002 [25 Pa. Code §127.12b]

Plan approval terms and conditions.

The following condition applies to any source test conducted at the facility.

(a) The permittee shall email all source test submissions (notifications, protocols, reports, supplemental information, etc.) to both the AQ Program Manager for the Southeast Regional Office and the PSIMS Administrator in Central Office (email addresses are provided below). Any questions or concerns about source testing submissions can be sent to RAEPstacktesting@pa.gov and the PSIMS Administrator will address them.

Southeast Region
RA-EPSEstacktesting@pa.gov

Central Office
RA-EPstacktesting@pa.gov

(b) The following pertinent information shall be listed on the title page.

(1) Test Date(s)

- (i) For protocols, provide the proposed date on which testing will commence or "TBD"
- (ii) For reports, provide the first and last day of testing

(2) Facility Identification Number (Facility - ID): For test programs that were conducted under a multi-site protocol, also include the PF ID under which the protocol was stored in PSIMS, as indicated in the protocol response letter.

(3) Source ID(s) for the applicable source(s) and air pollution control device(s): The term Source ID is used in the permit but "Other Id" is used in DEP electronic systems. They are the same number and must also be listed for control equipment.

(4) Testing Requirements (all that apply):

- (i) Plan approval number(s)
- (ii) Operating permit number
- (iii) Applicable federal subpart(s) (i.e. 40 CFR 60, Subpart JJJJ)
- (iv) Special purpose(s) (Consent Order, RFD, RACT II, Tier II, etc.)

(c) If confidential information must be submitted, submit both a public copy, which has been redacted, and a confidential copy. The cover page of each submittal should state whether it is a "Public Copy" or "Confidential Copy" and each page of the latter must be marked "CONFIDENTIAL".

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**SECTION C. Site Level Plan Approval Requirements****IV. RECORDKEEPING REQUIREMENTS.****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall maintain records of facility-wide individual HAP emissions and facility-wide any combination HAP emissions on a monthly basis and 12-month rolling sum.

V. REPORTING REQUIREMENTS.**# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) The permittee shall report malfunctions, emergencies or incidents of excess emissions to the Department at 484-250-5920. A malfunction is any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. An emergency is any situation arising from sudden and reasonably unforeseeable events beyond the control of the owner or operator of a facility which requires immediate corrective action to restore normal operation and which causes the emission source to exceed emissions, due to unavoidable increases in emissions attributable to the situation. An emergency shall not include situations caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

(b) When the malfunction, emergency or incident of excess emissions poses an imminent danger to the public health, safety, welfare, or environment, it shall be reported to the Department and the County Emergency Management Agency by telephone within one (1) hour after the discovery of the malfunction, emergency or incident of excess emissions. The owner or operator shall submit a written or emailed report of instances of such malfunctions, emergencies or incidents of excess emissions to the Department within three (3) business days of the telephone report.

(c) The report shall describe the following:

- (1) Name, permit or authorization number, and location of the facility;
- (2) Nature and cause of the malfunction, emergency or incident;
- (3) Date and time when the malfunction, emergency or incident was first observed;
- (4) Expected duration of excess emissions;
- (5) Estimated rate of emissions; and
- (6) Corrective actions or preventative measures taken.

(d) Any malfunction, emergency or incident of excess emissions that is not subject to the notice requirements of paragraph (b) of this condition shall be reported to the Department by telephone within 24 hours (or by 4:00 PM of the next business day, whichever is later) of discovery and in writing or by e-mail within five (5) business days of discovery. The report shall contain the same information required by paragraph (c), and any permit specific malfunction reporting requirements.

(e) During an emergency an owner or operator may continue to operate the source at their discretion provided they submit justification for continued operation of a source during the emergency and follow all the notification and reporting requirements in accordance with paragraphs (b)-(d), as applicable, including any permit specific malfunction reporting requirements.

(f) Reports regarding malfunctions, emergencies or incidents of excess emissions shall be submitted to the appropriate DEP Regional Office Air Program Manager.

(g) Any emissions resulted from malfunction or emergency are to be reported in the annual emissions inventory report, if the annual emissions inventory report is required by permit or authorization.

005 [25 Pa. Code §135.3]**Reporting**

If the permittee has been previously advised by the Department to submit a source report, the permittee shall submit by March 1, of each year, a source report for the preceding calendar year. The report shall include information from all previously reported sources, new sources which were first operated during the preceding calendar year, and sources modified during the same period which were not previously reported, including those sources listed in the Miscellaneous Section of this permit.

**SECTION C. Site Level Plan Approval Requirements**

The permittee may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

VI. WORK PRACTICE REQUIREMENTS.**# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall comply with all of the existing requirements of the current Operating Permit No. 46-00282, unless specifically revised in this plan approval. The provisions in this plan approval shall be construed to supersede any contrary provisions in any previous operating permit.

007 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The sources listed in this plan approval shall be installed and operated in accordance with the plans submitted with the plan approval application (as approved herein).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VIII. COMPLIANCE CERTIFICATION.

No additional compliance certifications exist except as provided in other sections of this plan approval including Section B (relating to Plan Approval General Requirements).

IX. COMPLIANCE SCHEDULE.

No compliance milestones exist.

**SECTION D. Source Level Plan Approval Requirements**

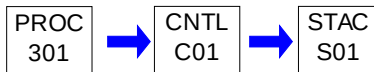
Source ID: 301

Source Name: REACTOR TANK 12

Source Capacity/Throughput:

N/A

Conditions for this source occur in the following groups: GROUP 1

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall limit the total post-control HCl emissions from this source and Source ID 302 to less than 0.50 tons per year (1,000 lb/yr), based on a 12-month rolling sum.

DEP reserves the right to update the post-control HCl emission limit based on information obtained during a compliant and DEP-approved source test performed on the HCl fume scrubber, including but not limited to a revised post-control HCl emission factor.

002 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall limit the total NO_x emissions from this source and Source ID 302 to less than 13.72 tons per year, based on a 12-month rolling sum.

DEP reserves the right to update the NO_x emission limit based on information obtained during a compliant and DEP-approved source test, including but not limited to, a revised uncontrolled NO_x emission factor.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Plan Approval Requirements****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Plan Approval Requirements**

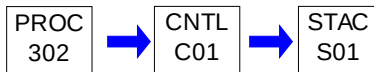
Source ID: 302

Source Name: REACTOR TANK 13

Source Capacity/Throughput:

N/A

Conditions for this source occur in the following groups: GROUP 1

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall limit the total post-control HCl emissions from this source and Source ID 301 to less than 0.50 tons per year (1,000 lb/yr), based on a 12-month rolling sum.

DEP reserves the right to update the post-control HCl emission limit based on information obtained during a compliant and DEP-approved source test performed on the HCl fume scrubber, including but not limited to, a revised post-control HCl emission factor.

002 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall limit the total NOx emissions from this source and Source ID 301 to less than 13.72 tons per year, based on a 12-month rolling sum.

DEP reserves the right to update the NOx emission limit based on information obtained during a compliant and DEP-approved source test, including but not limited to, a revised uncontrolled NOx emission factor.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).



SECTION D. Source Level Plan Approval Requirements

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements) and/or Section E (Source Group Restrictions).

**SECTION E. Source Group Plan Approval Restrictions.**

Group Name: GROUP 1

Group Description: Reactor Tanks

Sources included in this group

ID	Name
301	REACTOR TANK 12
302	REACTOR TANK 13

I. RESTRICTIONS.**Operation Hours Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall process a batch reaction in one (1) tank at a time. The permittee shall not process batches in Tank 12 and Tank 13 simultaneously.

Control Device Efficiency Restriction(s).**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall maintain a minimum of 99.0% HCl removal efficiency for the HCl Fume Scrubber (C01) associated with the reactor tanks.

[Compliance with this permit condition will be determined during the initial source test.]

II. TESTING REQUIREMENTS.**# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) Within one hundred and eighty (180) days of commencement of operation of Reactor Tank 12 (Source ID 301) and Reactor Tank 13 (Source ID 302), the permittee shall conduct a performance test on the HCl Fume Scrubber (C01) while processing a reaction in one of the new 1,200-gallon Reactor Tanks (either Reactor Tank 12 or Reactor Tank 13) under maximum routine conditions or under other conditions within the capacity of the equipment, which may be requested by DEP, to measure the following:

- (1) pre- and post-control HCl emissions using USEPA Test Methods 26 or 26A,
- (2) NO_x (as NO) emissions using USEPA Test Method 7,
- (3) SO₂ emissions, using USEPA Method 6 or 6C,
- (4) or other DEP-approved test methodology for the above listed emissions.

(b) At a minimum, the permittee shall conduct twelve (12) one-hour runs. At least one (1) run shall be conducted during initial charging of hydrochloric acid and at least one (1) run shall be conducted during initial charging of nitric acid into the tank. For the remaining runs, the test shall be conducted when the maximum amount of HCl and NO_x losses are expected during the reaction.

(c) The permittee shall monitor and record the following operating parameters while conducting the performance test:

- (1) pH of the scrubber solution,
- (2) Flow rate of the scrubber solution,
- (3) Temperature of the scrubber solution,
- (4) Amount of HCl added to the batch during the test,
- (5) Amount of H₂SO₄ added to the batch during the test,
- (6) Amount of HNO₃ added to the batch during the test,
- (7) Start and end time of the entire batch process (even if the actual batch process began prior to the test and/or continued after the test),
- (8) Approximate start and end time of actual reaction occurring in the tank,
- (9) Start and end time of the source test and each test run.

**SECTION E. Source Group Plan Approval Restrictions.**

- (d) The HCl removal efficiency shall be calculated by considering the measured post-control HCl emissions against either the analyzed amount of chlorides in the stripped mother liquor or by the analyzed amount of chlorides in the exhaust from the tank which are sent to the scrubber. A clearly defined alternate method for HCl removal efficiency may be submitted by the permittee for approval by the Department.
- (e) The post-control HCl emission factor in lb HCl/gal HCl shall be calculated by considering the amount of HCl used in the reaction batch during the test. The NO_x emission factor in lb NO_x/gal HNO₃ shall be calculated by considering the amount of HNO₃ used in the reaction batch during the test.
- (f) The performance tests shall be conducted as per 25 Pa. Code Chapter 139 of the Rules and Regulations of the Department in order to verify the emission limitations established in this Plan Approval. Tests shall also be conducted in accordance with the provisions of the current version of the DEP Source Testing Manual and the EPA Clean Air Act National Stack Testing Guidance.
- (g) At least ninety (90) days prior to the test, the permittee shall submit to the Department for approval the procedures for the test and a sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples.
- (h) At least thirty (30) days prior to the test, the Regional Air Quality Manager shall be informed of the date and time of the test.
- (i) Within sixty (60) days after the source test(s), two copies of the complete test report, including all operating conditions, shall be submitted to the Regional Air Quality Manager for approval.
- (j) In the event that any of the above deadlines cannot be met, the permittee may request an extension for the due date(s) in writing and include a justification for the extension. The Department may grant an extension for a reasonable cause.
- [The Department reserves the right to determine whether periodic testing will be required. The subsequent testing requirement may be revised based on the results of the initial source test required above.]

III. MONITORING REQUIREMENTS.**# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

- (a) The permittee shall continuously monitor the pH of the scrubbing solution in the HCl Fume Scrubber sump during reaction, using a Walchem or equivalent automated pH monitoring equipment.
- (b) The permittee shall continuously monitor the HCl Fume Scrubber solution recirculation mass flow rate and density (or specific gravity) during reaction, using a Coriolis mass flow measuring system.
- (c) The permittee shall continuously monitor the pressure drop across the HCl Fume Scrubber using a photohelic pressure gauge.

005 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

- (a) The permittee shall calculate post-control HCl emissions on a monthly and 12-month rolling basis, based on the amount of HCl used per batch (gal HCl/batch), number of batches per month, and the removal efficiency or the emission factor (lb HCl/gal HCl used) determined during the initial source test.
- (b) The permittee shall calculate NO_x emissions on a monthly and 12-month rolling basis, based on the amount of HNO₃ used per batch (gal HNO₃/batch), number of batches per month, and the emission factor (lb NO_x/gal HNO₃ used) determined during the initial source test.

[An alternative emission calculation method may be approved by the Department upon a request that must be validated.]

IV. RECORDKEEPING REQUIREMENTS.**# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

**SECTION E. Source Group Plan Approval Restrictions.**

(a) The permittee shall record the following parameters on an hourly basis during each batch reaction through the use of the PLC system:

- (1) HCl Fume Scrubber solution pH;
- (2) HCl Fume Scrubber solution recirculation mass flow rates and specific gravity;
- (3) HCl Fume Scrubber pressure drop.

(b) The permittee shall specify in the recordkeeping log the time interval at which the above readings are made.

(c) The permittee shall maintain records of the time at which any chemicals are added to the HCl Fume Scrubber sump during each batch reaction, including the amount and type of chemicals added.

007 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

(a) The permittee shall maintain records of the following operating parameters for each reactor tank on a per batch basis:

- (1) amount and type of each process chemical used (gallons/batch),
- (2) length of time for the entire batch process,
- (3) approximate length of time for the main reaction to occur per batch,
- (4) number of batches processed per month and 12-month rolling sum.

(b) The permittee shall maintain monthly and 12-month rolling sums of post-control HCl emissions, based on the above information and the removal efficiency or emission factor determined during the stack test, as appropriate.

(c) The permittee shall maintain monthly and 12-month rolling sums of NO_x emissions, based on the above information and the emission factor determined during the stack test, as appropriate.

008 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall maintain a log of any inspections or actions performed according to the HCl Fume Scrubber Operation and Maintenance (O&M) Plan, including any deficiencies noted and corrective actions taken.

009 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall maintain records of each certified analysis of rhenium shot received including the lot number and the weight of material.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

VI. WORK PRACTICE REQUIREMENTS.**# 010 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall vent emissions from each reactor tank to the HCl Fume Scrubber (C01) at all times during operation of a batch in either Reactor Tank 12 or 13.

011 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

(a) The permittee shall maintain the HCl Fume Scrubber solution at a pH range of 10 - 14 during operation of a batch in either Reactor Tank 12 or 13.

(b) The permittee shall add sodium hydroxide (NaOH or caustic soda) to the HCl Fume Scrubber sump using the automated PLC system when the pH of the scrubbing solution drops below 11 during operation of a batch in either Reactor Tank 12 or 13.

(c) The permittee shall maintain a scrubber recirculation flow rate of 40 - 65 gallons per minute during operation of a batch in either Reactor Tank 12 or 13.

**SECTION E. Source Group Plan Approval Restrictions.**

(d) The permittee shall maintain the specific gravity of the HCl Fume Scrubber recirculation solution less than or equal to 1.21 during operation of a batch in either Reactor Tank 12 or 13.

(e) The permittee shall add water to the scrubber tank when the recirculation solution specific gravity reading is greater than 1.21 during operation of a batch in either Reactor 12 or 13.

(f) The permittee shall maintain a pressure drop range between 1.0 - 5.0" water gauge across the HCl Fume Scrubber, when in operation.

012 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall implement an Operation and Maintenance (O&M) Plan for the HCl Fume Scrubber, including but not limited to:

- (a) Inspection of the blower motor including bearings,
- (b) Inspection of the spray pattern and volume,
- (c) Inspection of the stack discharge,
- (d) Inspection of the recirculation pump,
- (e) Cleaning of the nozzles and header,
- (f) Cleaning of chevron mist eliminator and dual mist eliminator.
- (g) Calibration of automated monitoring equipment.

013 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The permittee shall limit the total number of batches processed in Tanks 12 and 13 to 288 batches per year, based on a 12-month rolling sum.

014 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

- (a) The permittee shall limit the maximum amount of HCl used to 100 gallons per batch.
- (b) The permittee shall limit the maximum amount of HNO₃ used to 117 gallons per batch.

015 [25 Pa. Code §127.12b]**Plan approval terms and conditions.**

The lid shall remain closed at all times while processing a reaction batch in the reactor tank.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this plan approval including Section B (Plan Approval General Requirements).

**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Plan Approval facility.

**SECTION G. Emission Restriction Summary.**

Source Id	Source Description		
301	REACTOR TANK 12		
Emission Limit			Pollutant
0.500	Tons/Yr	based on a 12-month rolling sum	Hydrochloric Acid
1,000.000	Lbs/Yr	based on a 12-month rolling sum	Hydrochloric Acid
13.720	Tons/Yr	based on a 12-month rolling sum	NOX
302	REACTOR TANK 13		
Emission Limit			Pollutant
0.500	Tons/Yr	based on a 12-month rolling sum	Hydrochloric Acid
1,000.000	Lbs/Yr	based on a 12-month rolling sum	Hydrochloric Acid
13.720	Tons/Yr	based on a 12-month rolling sum	NOX

Site Emission Restriction Summary

Emission Limit		Pollutant
9.900	Tons/Yr	Individual HAP, based on a 12-month rolling sum
24.900	Tons/Yr	Any combination HAP, based on a 12-month rolling sum

**SECTION H. Miscellaneous.**

With the installation of the new 1,200-gallon tanks (Source ID 301 and 302), the 1,000-gallon tanks (Source ID 201 and 202) will be removed from the facility.



***** End of Report *****
