



## DEPARTMENT OF NATURAL RESOURCES

## MISSOURI AIR CONSERVATION COMMISSION

## PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 092011-004 Project Number: 2009-04-033

Parent Company: Archimica Inc.

Parent Company Address: 2460 West Bennett Street, Springfield, MO 65807

Installation Name: Archimica Inc.

Installation Number: 077-0017

Installation Address: 2460 West Bennett Street, Springfield, MO 65807


Location Information: Greene County, S29 T27N, R22W

Application for Authority to Construct was made for:  
Plantwide Applicability Limitation permit for Volatile Organic Compounds with pre-approved changes. This review was conducted in accordance with Section (8), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

- 
- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

SEP 19 2011

EFFECTIVE DATE

  
\_\_\_\_\_  
DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

**You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review.** In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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## SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

Archimica Inc.  
Greene County, S29 T27N, R22W

1. **Superseding Condition**  
The conditions of this permit supersede all special conditions found in all previously issued construction permits and amendments, as found in Appendix A, issued to Archimica, Inc. from the Air Pollution Control Program and/or Springfield-Greene County Health Department Air Quality Control.
2. **Annual Emission Limitation – Plantwide Applicability Limitation (PAL)**
  - A. Archimica Inc. shall emit less than 116.8 tons of Volatile Organic Compounds (VOCs) from the entire installation in any consecutive 12-month period. The consecutive 12-month period shall not include time periods prior to issuance of this construction permit. For each month during the first 11 months from the issuance of this PAL permit, Archimica, Inc. shall show that the sum of the preceding monthly emissions from the PAL effective date is less than 116.8 tons of VOC from the entire installation. Emissions during periods of start-up, shutdown, and malfunction of the control device shall be counted towards the limit during the 12-month period and the first 11 month period.
  - B. Archimica Inc. shall track VOC emissions and calculate the monthly and consecutive 12-month VOC emissions from the entire installation. Attachment A, or equivalent forms approved by the permitting authority shall be used to demonstrate compliance with Special Conditions 2.A.
  - C. Archimica Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2.B. indicate that the source exceeds the limitation of Special Conditions Number 2.A.
  - D. Archimica Inc. shall keep documentation of any emission factors used to demonstrate compliance with Special Condition 2.A. Emission factors must be obtained from the most recent edition of AP-42, *Compilation of Air Pollutant Emission Factors*, the most recent stack performance test

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results, a mass balance approach using the Material Safety Data Sheets (MSDS) of all materials, and/or by a method approved by the permitting authority. Documentation sufficient to support the emission factors must accompany Attachment A required by Special Condition 2.B.

- E. Archimica Inc. shall keep documentation of any overall control efficiencies used to demonstrate compliance with Special Condition 2.A. Overall control efficiency is the product of the capture efficiency and control efficiency of the pollution control device. Documentation sufficient to support the capture and control efficiencies must accompany Attachment A required by Special Condition 2.B.
  - F. Archimica Inc. shall keep documentation of all data relied upon, including but not limited to, any quality assurance/quality control data, in calculating the monthly and annual VOC emissions.
3. Pre-Approved Operational and Equipment Modifications
- A. Archimica Inc. is authorized to perform the physical or operational changes, or changes deemed consistent with those physical or operational changes, listed in Attachment B, *Pre-Approved Changes*, without applying for or obtaining a construction permit or amendment from the permitting authority. Any increase or decrease in emissions of VOC resulting from the construction and operation of any of the above pre-approved changes are subject to the requirements listed in Special Condition 2. Any increase or decrease in emissions of non-VOC criteria air pollutants resulting from the construction and operation of any of the above pre-approved changes are subject to the requirements listed in Special Condition 22.
  - B. Archimica Inc. shall maintain a log of equipment installed and/or modified under the Pre-Approved Changes and the date on which construction and/or modification and operation began. In addition, Archimica Inc. shall maintain a log of equipment removed from the installation and the date on which it was removed. The log must account for all equipment present at the installation at any given time. Attachment C, or equivalent forms approved by the permitting authority, may be used for this purpose.
  - C. Archimica Inc. shall notify the permitting authority of all activities associated with any Pre-Approved Change according to Special Condition 4 and 5.

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The permittee is authorized to construct and operate subject to the following special conditions:

- D. If Archimica Inc. wishes to make physical or operational changes that are not deemed consistent with the physical or operational changes listed in Attachment B of this construction permit and are not exempt from the construction permit rule, then Archimica Inc. must first apply for and obtain a construction permit or amendment according to 10 CSR 10-6.060, *Construction Permits Required*.
4. Notification of Actual Construction of Pre-Approved Change
- A. Archimica Inc. shall submit written notification to the permitting authority (including the regional office) at least ten days prior to the actual construction of any pre-approved change listed in Attachment B. The notification shall contain the following:
    - 1) Detailed description of the physical or operational change including the affect on existing equipment;
    - 2) A plant layout diagram with representation of existing equipment and physical or operational changes;
    - 3) A schedule of construction activities related to the pre-approved change;
    - 4) A statement of applicability for any New Source Performance Standard, National Emissions Standard of Hazardous Air Pollutants and/or state regulations not identified as core requirements in the operating permit;
    - 5) An emissions calculation sheet for the pre-approved change including any modeling required by Special Condition 6;
    - 6) A calculation sheet for the potential emissions of all criteria air pollutants except VOC for the pre-approved change;
    - 7) A summation of the potential emissions from completed and proposed pre-approved changes;
    - 8) A statement of verification that the physical or operational change will not result in installation emissions that exceed the limitations stated in Special Condition 2; and
    - 9) A summary of the impact analysis on the capture efficiency as outlined in Special Condition 9.E.
  - B. This notification shall become an enforceable part of this construction permit upon receipt by the permitting authority and Archimica Inc. shall comply with the terms and conditions of the notification.
  - C. The permitting authority may disapprove any activity that has not been demonstrated to the satisfaction of the Program to be related to the pre-approved changes. At that time, Archimica Inc. shall cease construction

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of the change until an appropriate authorization of the activities is obtained (such as a construction permit, if necessary).

5. Notification of Actual Start-up of Pre-Approved Change
  - A. Archimica Inc. shall submit written notification to the permitting authority (including the regional office) at least ten days prior to the actual start-up or operation of any pre-approved change listed in Attachment B. The notification shall contain the following:
    - 1) Reference to the notification of actual construction including date of notification and brief description of change;
    - 2) Verification that the physical or operational change was completed as described in the original notification; and
    - 3) Scheduled date operations will be commenced.
  - B. It is a violation of this construction permit for Archimica Inc. to construct, modify or operate the installation not in accordance with the notification of 5.A. above.
  
6. Ambient Air Quality Analysis Requirement for Individual Hazardous Air Pollutant(s) (HAPs)

Prior to submitting notification of a pre-approved change, Archimica Inc. must evaluate HAP emissions for the pre-approved change, not subject to a MACT, according to the following methodology:

  - A. For all HAPs listed in *Table of Hazardous Air Pollutants, Screen Model Action Levels and Risk Assessment Levels (current revision)* with a potential to emit greater than their respective threshold levels, Archimica Inc. shall perform screen modeling using the methods outlined in Special Condition 7 to determine the one-hour, eight-hour, 24-hour, and/or annual concentration of any individual HAP. The results of the screen modeling must be submitted with the notification required in Special Condition 4 for all pre-approved changes containing HAP, not subject to a MACT.
  - B. The eight-hour, 24-hour and/or annual concentrations shall be compared to the current, available Risk Assessment Levels for each HAP listed in *Table of Hazardous Air Pollutants, Screen Model Action Levels and Risk Assessment Levels (current revision)*.
  - C. If the screen modeling indicates that the emissions from the pre-approved change at the installation exceeds acceptable concentration levels as stated in the most current version of *Table of Hazardous Air Pollutants, Screen Model Action Levels and Risk Assessment Levels (current*

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*revision*) then Archimica must submit and obtain approval for either of the following options prior to submitting notification of construction (Special Condition 4):

- 1) Refined modeling, or
- 2) An amendment to the flexible construction permit to include a federally enforceable limit on HAP emissions.

### 7. Screen Modeling Method for Individual HAPs

- A. Archimica Inc. shall use the preferred screening method stated in 40 CFR Part 51 Appendix W, "*Guideline on Air Quality Models*".
- B. The emission rate to be used in the model shall be the potential to emit of the individual HAP. Stack parameters used in the model shall be representative of actual stack parameters including height, diameter, flow rate/velocity, temperature, etc. If Archimica Inc. wishes to use values other than the default values for any parameter with a default value, Archimica Inc. shall submit justification and obtain approval for the proposed value prior to use in the model.

### 9. Capture and Control Equipment

- A. The specified control device (e.g. thermal oxidizer) must be in use at all times when a control efficiency is claimed for compliance with the VOC emissions limitation. When a control efficiency is claimed, the control device shall be operated and maintained in accordance with the manufacturer's specifications.
- B. Thermal Oxidizer Requirements
  - 1) The operating temperature shall be continuously monitored and recorded when a control efficiency is claimed for compliance with the VOC emissions limitation. The operating temperature of the thermal oxidizer shall be maintained above the minimum operating temperature of the oxidizer recorded during the compliance test specified in Special Condition 10. The acceptable minimum temperature may be reestablished by performing a new set of emission tests. The most recent sixty months of records shall be maintained on-site and shall be made immediately available to Missouri Department of Natural Resources' personnel upon request.
  - 2) An assessment of thermal oxidizer valve operation and leakage shall be conducted as part of the maintenance and inspection activities, at least annually.
- C. Scrubber Requirements

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- 1) The scrubber shall be equipped with a gauge(s) or meter(s) that indicates the scrubber pH and recirculation flowrate.
  - 2) The scrubber pH and recirculation flowrate will be continuously monitored and recorded when the Thermal Oxidizer is operating for compliance with the VOC emissions limitation. The scrubber operating pH and recirculation flows shall be maintained above the minimum limits established during the compliance test specified in Special Condition 10.
- D. Future Control Device Requirements
- 1) Any future control device shall be equipped with a gauge or meter to monitor appropriate parametric measurements as identified in the performance tests required by Special Condition 10.
  - 2) These parametric measurements shall be monitored and recorded at least once every 24 hours. The parametric measurements shall be maintained within the design conditions specified by the manufacturer's performance warranty.
- E. Capture Equipment Requirements
- 1) Archimica Inc. shall evaluate all pre-approved changes that involve VOC emissions directed to emission control equipment for potential impacts to emission control equipment capture efficiency. This evaluation shall include the following:
    - a) An impact analysis of the pre-approved change on the capture efficiency;
    - b) An determination of the need for a new capture efficiency test based on the impact analysis;
    - c) A summary of the evaluation to be included in the Notification of Actual Construction as stated in Special Condition 4.
  - 2) Archimica Inc. shall develop a monitoring plan for each capture system that:
    - a) Identifies the operating parameter(s) to be monitored to assure capture efficiency,
    - b) Explains why this parameter is appropriate for demonstrating ongoing compliance,
    - c) Identifies the specific monitoring procedures, and
    - d) Specifies the operating parameter value or range of values (or the procedures for establishing the values) that shall be maintained to demonstrate capture efficiency is being maintained.



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The permittee is authorized to construct and operate subject to the following special conditions:

- 3) Archimica Inc. shall install and maintain, for any intermittently controllable work station, a system to monitor when bypass of the control device system occurs while the work station is in operation.
  - 4) Archimica Inc. shall maintain an operating and maintenance log for the capture and control systems (enclosures and thermal oxidizers) for a period of (60) sixty months which shall include the following:
    - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
    - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
    - c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
10. Performance Testing
- A. Archimica Inc. shall conduct performance tests on existing thermal oxidizer and any future control devices used for compliance with the PAL. Archimica Inc. shall determine the VOC and HAP destruction and/or removal efficiencies and operating parameters of these control devices when all the processes controlled by these devices are in normal operation. These control efficiencies will be used in Attachment A for compliance.
  - B. For each capture system, Archimica Inc. shall:
    - 1) Confirm that the capture system continues to meet the requirements of EPA Method 204 from an approved performance test with no changes to operating parameters, or
    - 2) Conduct a performance test to determine the capture efficiency and establish the value or range of values for the selected operating parameter(s) when all the processes controlled by these devices are in normal operation. These capture efficiencies shall be used in Attachment A for compliance.
  - C. Section 6 of EPA method 204 of 40 CFR part 51, Appendix M shall be used to confirm that an enclosure meets the requirements for permanent total enclosures. If the enclosure meets the permanent total enclosure criteria and directs all VOC to a control device, a capture efficiency of 100 percent may be assumed.
  - D. By December 1, 2013 and, henceforth, within 5 years of the most recent performance tests, Archimica Inc. shall:

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The permittee is authorized to construct and operate subject to the following special conditions:

- 1) Conduct performance tests to verify the operating parameters and/or the control efficiencies of the control devices ; and
- 2) Confirm the capture efficiencies of the total or partial enclosures by Special Condition 10.B.1) or 10.B.2).

For any control device installed subsequent to the issuance of this construction permit, performance tests shall be performed within 60 days after installation, but not later than 180 days after initial start-up of the control equipment.

- E. Testing shall be conducted in accordance with the procedures outlined in Special Condition 11. Archimica Inc. shall maintain a record of the results of all performance tests required by Special Conditions 10.A. and 10.B.

#### 11. Proposed Test Plan

- A. A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program, Enforcement Section, within thirty days prior to the proposed test date so that the Air Pollution Control Program, Enforcement Section, may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Staff Director prior to conducting the required emission testing.
- B. Two copies of a written report of the performance test results shall be submitted to the Staff Director within thirty days of completion of any required testing, unless an extension is requested and approved by the Staff Director. The extension must be submitted in writing at least ten days prior to the thirty day deadline. The report must include legible copies of the raw data sheets, analytical instrument laboratory data and complete sample calculations from the required U.S. EPA Method for at least one sample run.
- C. The test report is to fully account for all operational and emission parameters addressed both in the construction permit conditions as well as in any other applicable state or federal rules or regulations.

#### 12. Startup, Shutdown, and Malfunction Requirement

- A. Archimica Inc. shall develop and implement an operation and maintenance plan to minimize the instances of excess emissions during start-up, shutdown and malfunction. The operation and maintenance plan shall detail procedures for maintaining, repairing and operating the various

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The permittee is authorized to construct and operate subject to the following special conditions:

sources and their controls during all periods of operation, including start-up, shutdown and malfunction. The operation and maintenance plan shall also comply with the requirements of 10 CSR 10-6.050 *Start-Up, Shutdown and Malfunction Conditions*.

#### 13. Reopening of the Construction Permit

- A. The permitting authority may reopen this construction permit to accomplish the following actions:
- 1) Revise Special Condition 2 to reflect an increase in the PAL as outlined in Special Condition 18.
  - 2) Reduce the PAL to reflect newly applicable Federal and/or State requirements with compliance dates after the issuance of this construction permit.
  - 3) Reduce the PAL if the permitting authority determines that a reduction is necessary to avoid causing or contributing to a National Ambient Air Quality Standard or Prevention of Significant Deterioration increment violation, or to an adverse impact on air quality in a Class I area.
- B. All reopenings that increase the PAL level are required to be placed on public notice for at least a thirty day period for submittal of public comment.

#### 14. PAL Effective Period

- A. The PAL in Special Condition 2 will be effective for ten years. The PAL term commences on the date of issuance of this construction permit.

#### 15. Permit Application Submission Requirements

- A. Between six and eighteen months prior to the expiration of the PAL in Special Condition 2, Archimica Inc. shall submit a complete application for the renewal or expiration of the PAL in Special Condition 2. For PAL renewal, Archimica Inc. will be required to comply with Special Condition 16. For PAL expiration, Archimica Inc. will be required to comply with Special Condition 17.
- B. Once a complete application according to Special Condition 15.A. is received by the permitting authority, the PAL in Special Condition 2 will remain in effect until a revised PAL or a revised permit incorporating allowable limits is issued by the permitting authority.
- C. Failure to submit a complete application according to Special Condition 15.A. to the permitting authority at least six months prior to the expiration

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The permittee is authorized to construct and operate subject to the following special conditions:

of the PAL is a violation of this construction permit and will result in the termination of the PAL on the date of expiration. At the time of termination, Archimica Inc. will be required to comply with Special Condition 17.

### 16. PAL Renewal Requirements

- A. A complete application shall consist of written documentation and/or calculations for the following items:
- 1) A proposed PAL level;
  - 2) A list of all emissions units with applicable Federal or State requirements;
  - 3) The potential emissions of all current equipment at the installation;
  - 4) Identification of the baseline period;
  - 5) Baseline actual emissions; and
  - 6) A compliance plan for the proposed PAL.
- B. The permitting authority will have the final authority to set the new plantwide emissions limitation based on the following guidelines:
- 1) If the baseline actual emissions at the time of renewal are equal to or greater than eighty percent of the PAL, the PAL may be renewed at the same level.
  - 2) The PAL may not be set at a level that is greater than the potential to emit of the entire installation.
  - 3) The PAL shall be adjusted to account for any applicable State or Federal requirement with a compliance date that occurs during the effective period of this PAL.
  - 4) A PAL level higher than the current PAL level cannot be approved unless otherwise approved through Special Condition 18.
- C. Any request to renew the PAL level is required to be placed on public notice for at least a thirty day period for submittal of public comment.

### 17. Expiration of the PAL

- A. If Archimica Inc. does not wish to renew the PAL of this construction permit, Archimica Inc. shall apply for and obtain a construction permit for each emissions unit (or each group of emissions units) that existed under the PAL.
- B. A complete application shall consist of a proposed allowable emission limitation for each emissions unit (or each group of emissions units) by distributing the PAL allowable emissions for the installation among each of the emissions units that existed under the PAL. If the PAL had not yet

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The permittee is authorized to construct and operate subject to the following special conditions:

been adjusted for an applicable requirement that became effective during the PAL effective period, such distribution shall be made as if the PAL had been adjusted.

- C. The PAL in Special Condition 2 will remain in effect until a revised construction permit is issued by the permitting authority.
  - D. Any physical change or change in the method of operation at the installation that meets the definition of major modification will be subject to major construction permitting requirements.
  - E. Archimica Inc. shall continue to comply with any State or Federal applicable requirements that may have applied either during the PAL effective period or prior to the PAL effective period except for the emissions limitations that are superseded in Special Condition 1.
18. Increase of the PAL during the Effective Period
- A. If Archimica Inc. wishes to alter Special Condition 2 of this construction permit to allow the installation to emit more than 116.8 tons per year of VOC, Archimica Inc. shall submit a complete application to request an increase in the PAL meeting all the requirements for a major modification.
  - B. A complete application shall consist of written documentation and/or calculations to accomplish the following items:
    - 1) Identify the emissions units contributing to the increase in emissions so as to cause Archimica Inc.'s emissions to equal or exceed the PAL in Special Condition 2.
    - 2) Determine the Best Available Control Technology (BACT) equivalent controls for each emission unit using current technology.
    - 3) Demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions units exceeds the PAL.
    - 4) Comply with the provisions of a current BACT analysis for all emissions unit(s) identified in Special Condition 18.B(1) in accordance with the requirements of 10 CSR 10-6.060 section (8) regardless of the magnitude of the emissions increase resulting from them.

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The permittee is authorized to construct and operate subject to the following special conditions:

- C. The revised PAL shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit VOC.
  - D. The revised PAL level shall be placed on public notice for at least a thirty day period for submittal of public comment.
19. Records Retention Requirement
- A. Archimica Inc. shall maintain all records required by this construction permit for not less than ten years unless otherwise specified in a special condition.
  - B. Archimica Inc. shall make these records available immediately to any Missouri Department of Natural Resources' personnel upon request.
20. Reporting Requirement
- A. Archimica Inc. shall submit a semi-annual emissions report to the permitting authority within 30 days after the end of each reporting period.
  - B. The reporting periods are January 1 – June 30, and July 1 – December 31. The report shall contain the following information:
    - 1) Identification of owner and operator and the permit number;
    - 2) Total annual emissions in tons per year based on a 12-month rolling total for each month in the reporting period;
    - 3) A summary of all data relied upon, including but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual VOC emissions;
    - 4) A list of any emissions units modified or added to the installation during the preceding six-month period;
    - 5) The number, duration, and cause of any deviations or monitoring malfunctions, and any corrective action taken;
    - 6) A notification of shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of VOC;
    - 7) A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report.
  - C. Archimica Inc. shall submit reports to the permitting authority within ten days of any deviations or exceedance of permitting requirements. The

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The permittee is authorized to construct and operate subject to the following special conditions:

report shall contain the following information:

- 1) The identification of owner and operator and the permit number:
- 2) The permit requirement that experienced the deviation or that was exceeded:
- 3) Emissions resulting from the deviation or the exceedance: and
- 4) A signed statement by the responsible official certifying the truth, accuracy, and completeness of the information provided in the report.

### 21. Quality Assurance/Quality Control Plan

Archimica Inc. shall maintain an operation and maintenance plan on site at all times. A table of contents of the plan shall be submitted to the permitting authority within 120 days of the issuance of this construction permit and updated within 60 days of receipt of the performance test reports required of Special Condition 10. The plan shall be a detailed, specific to the Archimica Plant and include the following information:

- A. A preventative maintenance program for avoidance of excess emissions which shall include all maintenance activities, with inspection schedule, repair actions, and replacements inventory.
- B. A range of operating conditions and outlet variables for normal operation.
- C. A summary of operating conditions and outlet variables for all control equipment that will be monitored for malfunction or breakdown and a description of the method of detecting and informing responsible personnel of any malfunction or breakdowns, including alarm systems, lights and other indicators.
- D. A description of the generic corrective procedures that will be taken in the event of a malfunction or breakdown in order to restore compliance with the applicable emission limitations and permit conditions (e.g. reducing of production rate).

### 22. Emission Limitation for Non-VOC pollutants

- A. Archimica Inc. shall maintain documentation of the summation of the potential emissions of all criteria air pollutants except VOC from completed and proposed pre-approved changes. Attachment D, or equivalent forms approved by the permitting authority shall be used for this purpose.
- B. If the records from Special Condition 22.A. indicate that the summation of potential emissions of any criteria air pollutant exceeds its respective de minimis level as indicated in Special Condition 22.B.(1), Archimica Inc.

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The permittee is authorized to construct and operate subject to the following special conditions:

shall comply with the provisions of Special Condition 22.B.(1)-(3) for that particular pollutant.

- 1) Archimica Inc. shall emit less than the following amounts for each listed criteria air pollutant in any consecutive 12 month period from all equipment, which has been installed under the authority of pre-approved changes set forth in Special Condition 3.A. and listed in Attachment B, *Pre-Approved Changes*:

Pollutant	Limitation (tpy)
Particulate Matter (PM)	25.0
Particulate Matter less than 10 microns in diameter (PM <sub>10</sub> )	15.0
Particulate Matter less than 2.5 microns in diameter (PM <sub>2.5</sub> )	10.0
Sulfur Oxides (SO <sub>x</sub> )	40.0
Nitrogen Oxides (NO <sub>x</sub> )	40.0
Carbon Monoxide (CO)	100.0
Sulfur acid mist	7.0
Hydrogen Sulfide	10.0
Lead	0.6

- 2) Archimica Inc. shall track and calculate the monthly emissions of the listed criteria air pollutants in Special Condition 22.B (1) from all equipment listed in Attachment B, *Pre-Approved Changes*. Attachment E, or equivalent forms approved by the permitting authority shall be used to demonstrate compliance with Special Conditions 22.B.(1).
  - 3) Archimica Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 23.B(2) indicate that the source exceeds the limitation of Special Conditions Number 22.B(1).
23. Operational Requirements from Previous Construction Permit #0992143D Regenerative Thermal Oxidizer (Equipment Permit ID RTO1A, EIQ VENT ID RTO1A located in the RTO Building) shall not burn #2 fuel oil more than 30 days per 12-month rolling period.
  24. Operational Requirements from Previous Construction Permit #109094D Boiler #2 (Equipment Permit ID 16-4-ATM, EIQ VENT ID EP02A&B located in Building 16A) shall not burn #2 fuel oil more than 30 days per 12-month rolling period.



REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (8) REVIEW

Project Number: 2009-04-033  
Installation ID Number: 077-0017  
Permit Number:

Archimica Inc.  
2460 West Bennett Street  
Springfield, MO 65807

Complete: June, 9, 2011

Parent Company:  
Archimica Inc.  
2460 West Bennett Street  
Springfield, MO 65807

Greene County, S29 T27N, R22W

REVIEW SUMMARY

- Archimica Inc. has applied for authority for a Plantwide Applicability Limitation (PAL) permit for pre-approved changes at the existing pharmaceutical plant in Springfield, Missouri.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. However, HAP emissions may not exceed acceptable ambient air quality concentrations as required by special conditions of this construction permit.
- Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels*, of the NSPS applies to the installation.
- The Maximum Achievable Control Technology (MACT) standards, 40 CFR Part 63: Subpart GGG—*National Emission Standards for Pharmaceuticals Production*, and Subpart FFFF—*National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing*, applies to the affected source covered by this permit.
- A thermal oxidizer is being used to control the VOC emissions from the equipment in this permit. No new control device is being proposed at the time of issuance of this permit.
- This review was conducted in accordance with Section (8) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Emissions of VOC for the entire installation are conditioned with a PAL. The remaining criteria pollutants are limited to de minimis for all pre-approved changes.
- This installation is located in Greene County, an attainment area for all criteria pollutants.

- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2, as chemical process plant. The installation's major source level is 100 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the PAL permit were not determined. However, screen modeling for HAPs is required as specified in the special conditions of this construction permit.
- Emissions testing are required for the source.
- A Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Archimica, Inc. (Archimica) owns and operates an existing chemical manufacturing plant in Springfield, Missouri. A summary of the existing emission points can be found in Table B. This installation is a major source of VOC and HAP emissions. A Part 70 Operating Permit was issued by the Air Pollution Control Program on December 10, 2001.

On August 28, 2006, Archimica submitted an application to the Springfield Air Quality Control for a VOC Plantwide Applicability Limitation (PAL) permit. Based on that permit application, the Springfield Air Quality Control issued a construction permit (Permit #0906-251) to Archimica using the federal rules for PALs to create the permit conditions. During a subsequent review of the issued permit, some errors were discovered that required revision and re-issuance of the permit. In particular, the Springfield Air Quality Control did not have the authority to issue the PAL permit without prior Air Pollution Control Program approval. Consequently, Archimica was required to undergo re-review of their PAL application. As a result, this construction permit is being issued as a VOC PAL permit and replaces the previously issued Permit #0906-251.

A list of permits that have been issued to Archimica from the Air Pollution Control Program and/or the Springfield-Greene County Health Department Air Quality Control (Springfield Air Quality Control) can be found in Appendix A.

One purpose of this construction permit is to supercede the special conditions of previously issued construction permits. Archimica has 48 construction permits issued to them. All of the superceded conditions will be rendered unnecessary with the issuance of this permit because they have been subsumed into the conditions of this construction permit. Special Condition 1 was set forth to supercede the special conditions of all 48 construction permits. For ease of interpretation, all 48 construction permits have been included in Special Condition 1 regardless of the existence of special conditions in the 48 permits. With the issuance of this construction permit, no other construction permits issued prior to this construction permit will be effective.

Some conditions are being carried over from previous permits because they are not limits that affect VOC emissions and, therefore, are not affected by the PAL. Specifically, the special conditions of Permit Numbers 109094D and 0992143D address non-VOC (i.e. #2 fuel oil usage) issues that must continue to be effective. These conditions are re-instated in this permit as Special Conditions 23 and 24 for continuing compliance.

## PROJECT DESCRIPTION

A Plantwide Applicability Limitation (PAL) is a plantwide emissions limit based on historical actual emissions and a reasonable operational margin. With the issuance of a PAL, the company is allowed to make modifications to operations without triggering major or minor construction permitting as long as emissions from the installation remained below the PAL “emissions cap”. A PAL cap is established for existing emissions units with an emissions history greater than 24-months, using the average rate of emissions during any one consecutive 24-month period. This 24-month period must be contained within the 10-year period immediately preceding the application for a PAL.

Once the average is determined, a reasonable operating margin can be added to the average and must be set such that major construction is not triggered. This assures that the environment sees no significant increase in emissions compared to the baseline actual emissions existing before the PAL is established.

One purpose of this construction permit is to supercede the special conditions of previously issued construction permits in order to reduce the necessity of tracking a large number of de minimis permits and conditions by establishing a new limitation that will cap the entire installation’s VOC emissions.

Under this application, Archimica has requested a plantwide emissions cap for only VOC. To determine this cap, emissions reported in the Emissions Inventory Questionnaires (EIQs) were examined and a two-year average for VOC was calculated over the 10 year period starting from the date the PAL application was originally submitted in 2006. Table 1 summarizes these values.

Table 1: Two-year averages of VOC emissions over the last 10 years

Emission Year	Actual VOC Emissions (tons)	Two-Year Average (tpy)	Two-year Average of VOC Emissions + 39.9 tpy (tons)
2006	34.4	33.6	72.6
2005	32.8	33.6	72.6
2004	38.7	35.7	74.7
2003	22.4	30.5	69.5
2002	22.4	22.4	61.4
2001	30.5	26.4	65.4
2000	51.4	41.0	80.0
1999	60.5	55.9	94.9
1998	46.1	53.3	92.3
1997	109.5	77.8	116.8

Adjustments to the PAL can be made if during the baseline period emission units have been permanently shut down or started up. Since the issuance of Permit #0906-251, Archimica has installed equipment under the authority of that permit. A listing of the installed equipment can be found in Appendix B. However, Archimica's 10-year look back period, started with the submission of the original PAL application in August 2006. Therefore, the equipment listed in Appendix B have not been considered for inclusion in the 10-year look back period and did not affect the setting of the PAL.

In addition, when setting the PAL, the PAL should be reduced such that any federal or state regulatory requirements that have become effective must be taken into account. During the 10-year look back period, Archimica became subject to the 40 CFR Part 63 Subpart GGG, the Pharmaceutical MACT in 2002. Therefore, actual emissions prior to 2002 may not be used in setting the PAL unless the actual emissions of the affected emission units are reduced such that the limitations of the MACT are not exceeded. In this case, Archimica has contended that the actual emissions of 1997 and 1998 meet the necessary reduction requirements of the Pharmaceutical MACT and should be used in setting the PAL. After reviewing data submitted by Archimica for the emission units subject to the Pharmaceutical MACT, construction permit staff agrees.

In 1993, Archimica was issued a construction permit for the installation of a Regenerative Thermal Oxidizer (RTO), which became operational in mid-1994. The construction permit included operational requirements and emissions limitations. The RTO was monitored by a continuous emissions system utilizing a mass spectrometer and flow meters with data logging calculations to record methylene chloride and VOC inlet concentrations to the RTO. This data was recorded every 10 minutes. In comparison, the Pharmaceutical MACT requires parametric monitoring of temperature and flow rates and data collection every 15 minutes. Construction permitting staff believes that the monitoring requirements of the previously issued construction permit are similar to the current Pharmaceutical MACT requirements, such that no further reduction of the actual emissions prior to 2002 is necessary.

Subsequently, Archimica has chosen 1997 and 1998 as the baseline years. The two-year average emissions of VOC are 77.8 tons per year. To set the emissions cap, a reasonable operating margin for VOC was set just below the significance levels for major source reviews, which is 40 tons per year. Therefore, the total allowable emissions limit set forth in this construction permit is 116.8 tons of VOC per year (77.8 +39).

Attachment A, or any form approved by the permitting authority, will be used to demonstrate compliance with the emissions limitation. Attachment A is intended to account for emissions from the entire installation including any equipment added or removed under authority of this construction permit. Although Attachment A implies that emissions must be reconciled monthly, Archimica will be required to account for daily emissions that occur as a result of start-up, shut-down, and/or malfunction of the control device. Accordingly, Archimica may use monthly inventory data to backcast daily emissions prorated on each day's production rates during such times.

For equipment that is added or removed under authority of this construction permit,

Archimica must keep a record of these additions/removals per Special Condition 4.B. Furthermore, Archimica must verify any emission factors and control efficiencies applied to emissions from the installation through documentation accompanying the Attachment. Documentation may include Material Safety Data Sheets (MSDS) specific to the material being used and/or recent stack performance test results. In particular, the documentation should include explicit details on how the emission factor and/or control efficiency was determined. At the time of permit issuance, the emission factors used to determine compliance with the PAL for each existing emission unit has been approved and are listed in Table B. The approval of these emission factors was necessary to ensure that an underestimation/overestimation of the emissions from the installation will not occur. Construction permit staff believes that since the emission factors approved for compliance with the PAL (i.e. Table B) are the same emission factors used to determine the baseline actual emissions when setting the PAL levels, Archimica will not be subjected to any unfair advantage/disadvantage that would occur if an under-estimating emission factor was used to demonstrate compliance with a PAL level that was established using an overly conservative emission factor or vice versa.

Attachment A outlines the compliance methods Archimica may use to demonstrate compliance with the PAL. If Archimica wishes to utilize a different emission factor than what is listed in Table B or an emission factor that has not been pre-approved, Archimica must seek approval from the permitting authority prior to use in any compliance demonstration. For new equipment, approval can be requested through the notification process.

Under the emissions limitation, Archimica is authorized to perform physical and operational changes stated in the list of pre-approved changes found in Attachment B, *Pre-Approved Changes*. This construction permit may be amended to include activities that are not identified in the original list of pre-approved modifications if those activities will not increase emissions over the plantwide cap. .

For modifications that are not considered a pre-approved change and increase potential emissions of criteria air pollutants other than VOC and HAP, the installation must submit a construction permit application for evaluation and approval. In order for the installation to obtain any additional construction permits, the emissions must be below de minimis levels for that pollutant to avoid major source review. In addition, any VOC emissions associated with the modification must be accounted for in any compliance demonstration with the PAL of this permit. This may be accomplished by amending the pre-approved changes list to include the new project or by supplementing the permit for the modification with conditions requiring the inclusion of the new project in the PAL calculations.

When Archimica submits notification of a pre-approved change that produces emissions other than VOC, Archimica is required to include a calculation sheet and a summation of potential emissions of all criteria air pollutants except VOC for the proposed pre-approved changes and all completed pre-approved changes. Proposed pre-approved changes consist of any equipment for which a notification has been received including the equipment proposed in the current notification. A record of the summation must also be kept on site as specified in Special Condition 23.

The purpose of these special conditions is to set forth provisions for recordkeeping for equipment installed under authority of the pre-approved changes with potential emissions greater than de minimis levels for non-VOC pollutants. This is required to ensure these pollutants do not trigger major review for these phased projects. Therefore, once the potential emissions of a non-VOC criteria air pollutant exceeds de minimis levels, Archimica will be required to maintain a 12-month rolling average of actual emissions below de minimis levels from all completed pre-approved changes for that particular criteria air pollutant.

For example, if Archimica were to install sources with the following emissions under authority of a pre-approved change (see Table 2), Archimica would not be required to comply with an emissions limitation for PM<sub>10</sub>, SO<sub>x</sub>, or CO. However, upon installation of the third source, Archimica would be required to track NO<sub>x</sub> emissions for all three sources and not exceed an annual limitation of 40 tons.

Table 2: Example Applicability Summary for Special Condition 23

Pollutant	Source 1	Source 2	Source 3	Summation
PM <sub>10</sub>	1.0	1.3	1.0	3.3
SO <sub>x</sub>	0.1	0.1	0.1	0.3
NO <sub>x</sub>	14.0	16.6	13.1	43.7
CO	12.0	14.0	11.0	37.0

From a timeline perspective, in this example, if source 1 and 2 were installed in 2012 and 2013, respectively, and source 3 were installed in 2014, the limit would not become effective until 2014.

Besides VOC emissions, some materials are anticipated to contain HAP, which are required to meet state requirements as outlined in Special Conditions 7 and 8, if those HAP emissions are not subjected to an applicable MACT. Based on the potential emissions of each specific HAP, Archimica is required to determine the impact of the HAP on the ambient air. To do this, Archimica must screen using the EPA preferred screening method prior to operation. The modeled screening concentration must then be compared to the acceptable concentrations found in the Missouri document *Table of Hazardous Air Pollutants, Screening Model Action Levels and Risk Assessment Levels*, which is maintained by the permitting authority. Archimica must also contact the Program for the most recent update to the document to ensure compliance with the construction permit. If modeled concentrations are above acceptable concentration levels on any averaging period (i.e. 3-hour, 8-hour, 24-hour, and/or annual), Archimica may not commence operation until Archimica completes refined modeling to document ambient concentrations that are below acceptable concentration levels or applies for and obtains a construction permit limiting the HAP emissions.

Once this construction permit is issued, Archimica is authorized to construct and operate any pre-approved modification in accordance with the notification system (Special Conditions 5 and 6). Prior to commencement of construction and operation, Archimica must submit notification to the permitting authority describing all required details of the operational and/or physical changes being performed. As a part of the notification, Archimica is required to submit a statement verifying that the physical or

operational change will not result in installation emissions that exceed the plantwide limitation. Construction permitting staff believes that the notifications are similar to pre-construction waivers, where the applicant is requesting authority to start construction before issuance of the permit. In this case, if a change is determined to be inconsistent with the pre-approved changes, and the change requires an amendment to the permit, the statement of verification serves as assurance that the change will not affect the limit. Once received, these notifications will become incorporated into the construction permit, and compliance with the notifications will be enforceable.

The plantwide limitation set forth in this construction permit is effective for a period of ten (10) years from the date of issuance. At least six (6) months prior to, but not earlier than 18 months from, the expiration date of this plantwide limitation, Archimica must submit a request for either the renewal of or the termination of the plantwide limitation.

Once a request for renewal is received by the permitting authority, the plantwide limitation will continue as an enforceable requirement. At that time, the limitation must be re-evaluated to account for newly applicable requirements and/or declining potential emissions. For example, if Archimica removes equipment from the installation that results in a total decrease in potential emissions below the current plantwide limitation, the renewed plantwide limitation must be adjusted downward accordingly. On the other hand, if applicable requirements and potential emissions remain the same, or if the Director deems it appropriate, the plantwide limitation may remain at the same level.

However, if Archimica wishes to allow the limitation to terminate, Archimica must submit a proposed approach for allocating the plantwide limitation among existing emissions units for review and approval. The allowable emission limitations for each emissions units will be based on a 12-month rolling basis. In addition, once the original plantwide limitation expires, Archimica may not perform activities previously approved under this construction permit and must comply with the permitting requirements found in Sections (5), (6), (7), (8), and (9), as appropriate.

Once Archimica requests termination of, expiration of, or an increase in the plantwide limitation, Archimica must submit appropriate applications for revised or replacement permits. During any review by the permitting authority and until a valid construction permit is issued, Archimica must continue to comply with the plantwide limitation in Special Condition 2 of this construction permit.

## EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies obtained from the most recent edition of the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, shall be used to determine compliance with the plantwide limitation of VOCs. For materials that contain VOCs and for which there is a Material Safety Data Sheet (MSDS), a mass balance approach should be used to determine emissions from the process. The upper limit of any content range stated in the MSDS must be used in the calculations unless approved tests indicate a more appropriate value. Per permitting authority policy, it is assumed that all VOCs and HAPs contained in the material will be emitted into the

atmosphere unless an alternative method is approved by the Program. Approval for the use of additional emission factors not approved in the initial review process can be requested through the notification process.

Due to the nature of the flexible permit, potential emissions of the application and existing potential emissions were not determined. Existing actual emissions were taken from the 2010 EIQ. The following table provides an emissions summary for this project.

Table 3: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	N/D	2.65	N/D	N/A
SO <sub>x</sub>	40.0	N/D	0.80	N/D	N/A
NO <sub>x</sub>	40.0	N/D	7.66	N/D	N/A
VOC	40.0	major	4.60	N/D	116.8
CO	100.0	N/D	1.90	N/D	N/A
HAPs	10.0/25.0	major	17.46	N/D	N/A

N/A = Not Applicable; N/D = Not Determined

### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (8) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Emissions of VOC for the entire installation are conditioned with a PAL. The remaining criteria pollutants are limited to de minimis for all pre-approved changes.

### APPLICABLE REQUIREMENTS

Name shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065



- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

#### SPECIFIC REQUIREMENTS

- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels*, 40 CFR Part 60, Subpart Kb
- *Maximum Achievable Control Technology (MACT) Regulations*, 10 CSR 10-6.075, *National Emission Standards for Pharmaceuticals Production*, 40 CFR Part 63, Subpart GGG
- *Maximum Achievable Control Technology (MACT) Regulations*, 10 CSR 10-6.075, *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing*, 40 CFR Part 63, Subpart FFFF
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060

#### AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling is required to determine the ambient impact of hazardous air pollutants (HAP) from any physical or operational change performed under the pre-approved changes of this construction permit. Currently, the EPA preferred method for screening is Screen 3 modeling.

## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (8), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Emily Wilbur  
Environmental Engineer

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Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 20, 2011, designating Archimica Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition.

## Appendix A: List of Previously Issued Air Permits

Archimica Inc.  
Project Number: 2009-04-033

The following is a list of air permits issued to Archimica, Inc. by the Air Pollution Control Program and/or Springfield-Greene County Health Department Air Quality Control.

No.	Permit Number	Description
1	109094D	Boiler #2
2	0391113D	Semi-Works Processing Equipment (Process Shutdown 1995)
3	0202130D	Semi-Works Processing Equipment (Process Shutdown 1995)
4	0191111D	BPA Distillation Equipment
5	1191127D	BPA Phosphorus Trichloride GL200 Vessel
6	0493150D	BPA Processing Equipment; 2 Hydrobromic Acid Storage Tanks
7	1291128D	BPA Hydrobromic Acid Storage Tank Replacement
8	0493150D	CS30000 Wastewater Tank (Removal of Air Spargers—install agitators)
9	0793154D	Drum Washer/Steamer (Unit dismantled and removed)
10	0997191D	Drum Washer/Steamer Installed in HWSB
11	0893157D	LPK Process Equipment Emissions in Building S-14
12	0202-227D	S-14 Multi-Purpose Pharmaceutical Production in Building S-14
13	0998-200D	CS9800 Solvent Storage Tank
14	0305-240D	CS9801 Solvent Storage Tank
15	0793155D	Building S18 Processing Equipment (Equipment Dismantled 1996)
16	0793156D	Building S18 Processing Equipment (Equipment Dismantled 1996)
17	0593153D	BMN S19A,B & C Process Equipment Emission Limitations
18	0692134D	BMN S19A, B & C Process Equipment (Replaced by Permit #0593153D)
19	1290110D	BMN S19A, B & C Process Equipment (Replaced by Permit #0692134D)
20	1294174D	Hydrobromic Acid Receiver (FG200)
21	1190109D	Methyl Chloride Pressurized Storage Tank (Replaced by Permit #0193147D)
22	0193147D	Methyl Chloride Pressurized Storage Tank
23	0692139D	S28 Distillation Equipment (Replaced by Permit #0593153D)
24	0992142D	GL125 Storage Vessel for Sulfuric Acid in S19
25	1290110D	BMN Process Equipment
26	1091123D	LL261 Storage Tank (Replaced by Permit #0692134D)
27	1091124D	LL263 Storage Tank (Replaced by Permit #0692-134D)
28	1091125D	LL1202 Storage Tank (Replaced by Permit #0692-134D)
29	1190107D	No.4 Distillation Unit for BMN (Replaced by Permit #1290110D)
30	1190108D	Rosenmund Filter Installation (Replaced by Permit #1290110D)
31	1190109D	S19 Process Wastewater Tank and Hydrobromic Acid Receiver (Replaced by Modification Letter of December 12, 1994)
32	1091126D	S-25 Processing Equipment (Equipment idle since 1992)
33	1291128D	S-25 Processing Equipment (Equipment idle since 1992) Benko Drum Heater moved to Building S4.
34	0989043D	S-25 Processing Equipment (Equipment idle since 1992)
35	0989044D	S-25 Processing Equipment (Equipment idle since 1992)

36	0989045D	S-25 Processing Equipment (Equipment idle since 1992)
37	0629139D	S-25 Processing Equipment (Equipment idle since 1992)
38	1285009D	Distillation Unit in S-28; 5-storage tanks
39	0992143D	Regenerative Thermal Oxidizer –( No.2 Fuel Oil)
40	1285009D	Groundwater Remediation Equipment
41	0900-219D	Pilot Plant Equipment
42	0900-200D	2-NEEP Air Strippers; 2-7600 gallon wastewater storage tanks
43	0702-229D	Gabapentin-4 Processing Equipment in S19C
44	0106-243D	EEC-3 Process Equipment and Storage Tanks
45	0206-247D	EEC-4 Process Equipment and Storage Tanks
46	0206-244D	EEC-14 & 15 Process Equipment and Storage Tanks
47	0106-245D	DC-03 Wastewater Steam Stripper and Support Equipment
48	0906-251	Pharmaceutical Processing Emission Limitation

## Appendix B: Equipment and Permits Issued (2006 – 2011)

Archimica Inc.  
Project Number: 2009-04-033

The following is a reproduction of the letters submitted by Archimica, Inc. to the Springfield Air Quality Control and represents all information on the equipment installed under Permit #0906-251.

### 1. Cyanodiester and Gabapentin-4

March 6, 2007

Springfield/Greene County Air Quality  
227 E. Chestnut Expressway  
Springfield, MO 65802-3881  
Attn: Mr. Brian Adams  
Air Control Specialist III

Re: Cyanodiester and Gabapentin-4 Notification of Actual  
Construction of Pre-Approved Changes

Dear Mr. Adams:

Enclosed please find a completed "Notification of Actual Construction of Pre-Approved Changes" as specified by Construction Permit Number 0906-251. The Notification is for Cyanodiester and Gabapentin-4, two pharmaceutical intermediates that will be produced in Buildings S19A, B, C and D. Production of the two pharmaceutical intermediates is scheduled to begin April 1, 2007 and continue throughout CY2007.

**Table 3 CYANODIESTER EQUIPMENT LIST (S-19) 1/31/07**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
Busch Cobra #1	(Dry)High Vacuum Pump #1	No	RTO	RTO1B
Busch Cobra #2	(Dry)High Vacuum Pump #2	No	RTO	RTO1B
CS400	Caustic Feed Tank	No	Atmosphere	N/A
CS400	East Caustic Supply Pump	No	N/A	N/A
CS2700	S-19A Relief C.S. Vessel	No	Atmosphere	N/A
CS7601	Carbon Steel Vessel	No	RTO	RTO1B
CS7602	Carbon Steel Vessel	No	RTO	RTO1B
CS9800	Carbon Steel Vessel	No	Atmosphere	N/A
CS12502	Carbon Steel Vessel	No	Atmosphere	N/A

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
FG100	Fiberglass Vessel (RTO Expansion Tank)	No	RTO	RTO1B
HA50	Wiped Film Evaporator	No	Vacuum System D	RTO1B
HCN Scrubber	Packed Scrubber	No	Atmosphere	
HCN Absorber	KL-1000 Packed Column	No	RTO	RTO1B
House Scrubber	Heil Packed Scrubber	No	Atmosphere	19A
GL516	Glass-lined Vessel	No	RTO	RTO1B
GL1004	Glass-lined Vessel	No	RTO	RTO1B
GL1013	Glass-lined Vessel	No	RTO	RTO1B
GL1022	Glass-lined Vessel	No	Atmosphere	NA
GL2002	Glass-lined Vessel	No	CN Absorber	RTO1B
GL3001	Glass-lined Vessel	No	RTO	RTO1B
GL3001	GL3001 Transfer Pump	No	N/A	N/A
GL3001	GL3001 Decanter	Yes	N/A	N/A
KL-1000	CN Absorber Tank	No	RTO	RTO1B
SS100	Stainless Steel Vessel	No	RTO	RTO1B
SS125	Wastewater Sump Tank	No	CS-7602	RTO1B
SS204	House Scrubber Recirculation Tank	No	House Scrubber	N/A
SS250	Stainless Steel Vessel	No	Vacuum System D	RTO1B
SS1014	Stainless Steel Vessel	No	Vacuum System D	RTO1B
SS1016	Stainless Steel Vessel	No	RTO	RTO1B
SS1016	GL1016 Transfer Pump	No	N/A	N/A
SS1600	Stainless Steel Vessel	No	SS1014	RTO1B
SS2000	Stainless Steel Vessel	No	RTO	RTO1B
SS2003	Stainless Steel Vessel	No	RTO	RTO1B
SS2007	Stainless Steel Vessel	No	RTO	RTO1B
SS2008	Stainless Steel Vessel	No	RTO	RTO1B
SS2009	Stainless Steel Vessel	No	HCN Scrubber	
SS2010	Stainless Steel Vessel	No	RTO	RTO1B
SS2500	Stainless Steel Vessel	No	RTO	RTO1B
SS3000	Stainless Steel Vessel	No	RTO	RTO1B
SS3000	SS3000 East Catch Pump	No	N/A	N/A
SS4501	Stainless Lined Carbon Steel Tank	No	RTO	RTO1B
SS4502	Stainless Lined Carbon Steel Tank	No	RTO	RTO1B
SS6001	Stainless Steel Vessel	No	CN Absorber	RTO1B

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
SS6002	Stainless Steel Vessel	No	CN Absorber	RTO1B
SS6003	Stainless Steel Vessel	No	RTO	RTO1B
SS6005	Stainless Steel Vessel	No	RTO	RTO1B
SS10000	Stainless Steel Vessel	No	RTO	RTO1B
SS12002	Stainless Steel Vessel	No	RTO	RTO1B
SS20001	Stainless Steel Vessel	No	RTO	RTO1B
House Vacuum	19A East Wall Vacuum Pump	No	House Scrubber	S19A
Vacuum System D	Vacuum Pumps in D-Line Hot Oil Room	No	RTO	RTO1B
SS-Totes	Stainless Steel Totes (Portable)	Yes	House Scrubber	S19A
Drum Charge Station	Dipropylamine Drum Charge to GL-516	No	RTO	RTO1B
Drum Unloading Station #2	Sodium Hypochlorite Unloading	Yes	N/A	N/A
DC-01	Solvent Recovery Unit 01	No	RTO	RTO1B
DC-03	Steam Stripper	No	RTO	RTO1B
DC-03	Steam Stripper Support Equipment	No	RTO	RTO1B
PEG Air Stripper	PEG Wastewater Air Stripper	No	RTO	RTO1B
ALT Air Stripper	ALT Wastewater Air Stripper	No	RTO	RTO1B
Silo	Sodium Sulfite Storage Silo	No	Atmosphere	19J

**Table 4 GABAPENTIN-4 EQUIPMENT LIST (S-19C) 2/1/07**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
CS400	Carbon Steel Vessel	No	Atmosphere	19Q
CS9800	Carbon Steel Tank	No	Atmosphere	14O
Drum Charging	Drum Charging Station	No	Halogen Scrubber	19K
GL1000	Glass Lined Vessel	No	RTO	RTO1B
GL1002	Glass Lined Vessel	No	RTO	RTO1B
GL1007	Glass Lined Vessel	No	RTO	RTO1B
GL1008	Glass Lined Vessel	No	RTO	RTO1B
GL1010	Glass Lined Vessel	No	RTO	RTO1B
GL1011	Glass Lined Vessel	No	RTO	RTO1B
GL2001	Glass Lined Vessel	No	RTO	RTO1B
GL3002	Glass Lined Vessel	No	RTO	RTO1B
Halogen Scrubber	Packed Scrubber	No	Atmosphere	19K
HCl Trailer	HCl Tube Trailers	No	Halogen Scrubber	19K

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
HCN Scrubber	Packed Scrubber	No	Hydrogen Cyanide Scrubber	19R
SS1017	Stain Steel Vessel	No	RTO	RTO1B
SS1800	Stain Steel Vessel	No	RTO	RTO1B
SS2012	Stain Steel Vessel	No	RTO	RTO1B
SS2600	Stain Steel Vessel	No	RTO	RTO1B
SS6004	Stainless Steel Tank	No	RTO	RTO1B
SS12001	Stainless Steel Tank	No	RTO	RTO1B
Vacuum System #1	S19D Vacuum System	No	RTO	RTO1B
Vacuum System #2	S19D High Vacuum System	No	RTO	RTO1B
DC-03	Steam Stripper	No	RTO	RTO1B
DC-03	Steam Stripper Support Equipment	No	RTO	RTO1B
PEG Air Stripper	PEG Wastewater Air Stripper	No	RTO	RTO1B
ALT Air Stripper	ALT Wastewater Air Stripper	No	RTO	RTO1B

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## 2. EEC-3, EEC-4 and EEC-14 & 15

June 1, 2009

Springfield/Greene County Air Quality  
 227 E. Chestnut Expressway  
 Springfield, MO 65802-3881  
 Attn: Mr. Brian Adams  
 Air Control Specialist III

Re: EEC-3, EEC-4 and EEC-14 & 15  
 Notification of Actual Construction of Pre-Approved Changes

Dear Mr. Adams:

Enclosed please find a completed "Notification of Actual Construction of Pre-Approved Changes" as specified by Construction Permit Number 0906-251. The Notification is for EEC-Shikimic Ester (EEC-3), EEC-Ketal (EEC-4) and EEC-Epoide (EEC 14 & 15) three pharmaceutical intermediates that will be produced in Buildings S3, S4, S14 and S19A, B and C. Production of the three pharmaceutical intermediates is scheduled to begin June 29, 2009 and continue throughout CY2009.



Should you have questions concerning any of the enclosed information, please contact me at 868-3438.

Sincerely,  
 Archimica Inc.  
 Nancy Luxton  
 Environmental Manager

### EEC-3 EQUIPMENT LIST

**Table 4**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
Krauss-Maffei	Centrifuge (Rental Unit)	Yes	RTO	RTO1B
SS300	Stainless Steel Tote	No	RTO	RTO1B
Charge Station 1	Raw Material Drum Charge Station	No	RTO	RTO1B
Rotocone Dryer	Rotocone Dryer (S3)	No	RTO	RTO1B
Condenser	Rotocone Dryer (S3) Vacuum Line Condenser	No	RTO	RTO1B
SS101	Vacuum System Collection Vessel	No	RTO	RTO1B
SS15	Vacuum Pump Receiver	No	RTO	RTO1B
Vacuum Pump	SiHi Vacuum Pump TRB	No	RTO	RTO1B
Solids Charge System	Solids Charge System PIAB Model C2104	No	RTO	RTO1B
GL1000	Glass-lined Vessel	No	RTO	RTO1B
GL1002	Glass-lined Vessel	No	RTO	RTO1B
GL1007	Glass-lined Vessel	No	RTO	RTO1B
GL1008	Glass-lined Vessel	No	RTO	RTO1B
GL1010	Glass-lined Vessel	No	RTO	RTO1B
GL1011	Glass-lined Vessel	No	RTO	RTO1B
GL2001	Glass-lined Vessel	No	RTO	RTO1B
GL3000	Glass-lined Vessel	No	RTO	RTO1B
Solids Charge Hopper	Solids Charge Hopper (Corrosive)	No	RTO	RTO1B
GL3002	Glass-lined Vessel	No	RTO	RTO1B
GL514	Glass-lined Vessel	No	RTO	RTO1B
GL516	Glass-lined Vessel	No	RTO	RTO1B
Rosenmund Filter	Rosenmund Filter	No	RTO	RTO1B
SS750	Stainless Steel Vessel	No	RTO	RTO1B
SS2008	Stainless Steel Vessel	No	RTO	RTO1B
SS6000	Stainless Steel Vessel	No	RTO	RTO1B
FG500	Fiber-glass RTO Expansion Tank	No	RTO	RTO1B
CS501	Carbon Steel Emergency Relief Vessel (S3)	No	NA	Atmosphere
SS100	Stainless Steel Wastewater Tank (S3)	No	RTO	RTO1B

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
KL1600	Kynar-lined Emergency Relief Vessel (S19)	No	NA	Atmosphere
Scrubber	Heil Scrubber	No	Heil Scrubber	Atmosphere (EP19A)
Solids Charge Room	Solids Charge Room	No	RTO	RTO1B
SS1017	Stainless Steel Vessel	No	RTO	RTO1B
SS12001	Stainless Steel Tank	No	RTO	RTO1B
SS12002	Stainless Steel Tank	No	RTO	RTO1B
SS1800	Stainless Steel Vessel	No	RTO	RTO1B
SS2600	Stainless Steel Vessel	No	RTO	RTO1B
Monofluid Heater System	Monofluid Heater System	No	NA	Atmosphere
SS6004	Stainless Steel Tank	No	RTO	RTO1B
CS12502	Carbon Steel Tank	No	NA	Atmosphere (EP19F)
SS10000	Stainless Steel Tank	No	RTO	RTO1B
SS12001	Stainless Steel Tank	No	RTO	RTO1B
SS12002	Stainless Steel Tank	No	RTO	RTO1B
SS20001	Stainless Steel Tank	No	RTO	RTO1B
CS12002	Carbon Steel Tank	No	RTO	RTO1B
CS14001	Carbon Steel Tank	No	NA	Atmosphere (EP19L)
CS14002	Carbon Steel Tank	No	NA	Atmosphere (EP19M)
CS400	Carbon Steel Tank	No	NA	Atmosphere (EP19Q)

**Table 5 EEC-4 EQUIPMENT LIST (S-4)**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
Benko Drum Heater	Raw Material Evacuation/ Cleaning	No	RTO	RTO1B
Busch Cobra #1	(Dry) High Vacuum Pump #1	No	RTO	RTO1B
Busch Cobra #2	(Dry) High Vacuum Pump #2	No	RTO	RTO1B
FG100	Fiberglass Vessel (RTO Liquid Release Vessel)	No	Atmosphere	04I
FG500	Fiberglass Vessel	No	Heil Scrubber	04A
FG Scrubber	Packed Scrubber	No	Heil Scrubber	04A
GL51	Glass Lined Vessel	No	Heil Scrubber	04A
GL200	Glass Lined Vessel	No	RTO	RTO1B
GL201	Glass Lined Vessel	No	RTO	RTO1B
GL301	Glass Lined Vessel	No	RTO	RTO1B
GL511	Glass Lined Vessel	No	RTO	RTO1B
GL516	Glass Lined Vessel	No	RTO	RTO1B
GL519	Glass Lined Vessel	No	RTO	RTO1B
GL520	Glass Lined Vessel	No	RTO	RTO1B

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
GL1002	Glass Lined Vessel	No	RTO	RTO1B
GL1003	Glass Lined Vessel	No	RTO	RTO1B
GL1004	Glass Lined Vessel	No	RTO	RTO1B
GL1006	Glass Lined Vessel	No	RTO	RTO1B
GL1007	Glass Lined Vessel	No	RTO	RTO1B
GL1500	Glass Lined Vessel	No	RTO	RTO1B
Heil Scrubber	Fiberglass Scrubber	No	Heil Scrubber	04A
High Vacuum	Steam Jet System	No	Heil Scrubber	04A
House Prescrubber	Kynar	No	Heil Scrubber	04A
SS100	Stainless Steel Vessel	No	RTO	RTO1B
SS112	Stainless Steel Vessel	No	RTO	RTO1B
SS750	Stainless Steel Vessel	No	RTO	RTO1B
SS1023	Stainless Steel Vessel	No	RTO	RTO1B
SS1024	Stainless Steel Vessel	No	RTO	RTO1B
SS2009	Stainless Steel Vessel	No	RTO	RTO1B
SiHi	Vacuum Pump	No	Heil Scrubber	04A
SS-Totes	Stainless Steel Totes (Portable)	No	Heil Scrubber	04A
Drum Charge Station	Triethylamine Drum Charge	No	RTO	RTO1B

**Table 6 EEC-14 & 15 EQUIPMENT LIST (S-14 and S19A)**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
Baghouse (East)	S14 (East) Dust Collector	No	East Baghouse	14N
Baghouse (West)	S14 (West) Dust Collector	No	West Baghouse	14M
CE-1	Heinkel Centrifuge	No	RTO	RTO2
Chiller	Vilter Chiller	No	NA	22J
CS60	Carbon Steel Vacuum Pump Discharge Collection Vessel	No	NA	14R
CS100	Dry Vacuum Receiver	No	RTO	RTO2
CS101	Carbon Steel Liquid Expansion Vessel (RTO)	No	RTO	RTO2
CS400	Sodium Hydroxide Storage Tank	No	NA	Atmosphere (EP19Q)
CS1000	Carbon Steel Emergency Release Vessel	No	NA	14Q
CS1600	Carbon Steel Vessel Syltherm Storage Vessel	No	NA	Atmosphere (EP22J)
CS2700	Carbon Steel Vessel Relief Vessel	No	NA	Atmosphere (19PR-4)
DC02	Distillation Column #02	No	RTO	RTO2

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
DC03	Wastewater Steam Stripper	No	RTO	RTO2
DR-1	Jaygo Dryer	No	RTO	RTO2
FG100	Fiberglass RTO Expansion Vessel	No	S19 Heil Scrubber	19A
FG101	Fiberglass RTO Expansion Vessel	No	S19 Heil Scrubber	19A
Fitzpatrick Mill	Fitzpatrick Mill	No	Baghouse (East)	14N
GL300	Glass-lined Vessel	No	RTO	RTO2
GL1008	Glass-lined Vessel	No	RTO	RTO2
GL1009	Glass-lined Vessel	No	RTO	RTO2
GL1012	Glass-lined Vessel	No	RTO	RTO2
GL2000 (S14)	Glass-lined Vessel	No	RTO	RTO2
GL2000 (S19)	Glass-lined Vessel	No	RTO	RTO1B
GL2004	Glass-lined Vessel	No	RTO	RTO2
GL2006	Glass-lined Vessel	No	RTO	RTO2 (H2 Venting to ATM)
GL2007	Glass-lined Vessel	No	RTO	RTO2
GL3003	Glass-lined Vessel	No	RTO	RTO1B
HA2003	Hasteloy Vessel	No	RTO	RTO2
Heil Scrubber	Sodium Hydroxide/Water Heil Scrubber	No	NA	14A
Pick Heater	Pick Steam Injection Heater	No	NA	Atmosphere (14T)
Solids Charging System	DeDietrich Charging System	No	RTO	RTO2/ATM
SS60	Stainless Steel Reflux Vessel (DC02)	No	RTO	RTO2
SS100	Stainless Steel Reflux Container	No	RTO	RTO2
SS150	Stainless Steel Tote/Vacuum Pump	No	RTO	RTO2
SS300	Stainless Steel Water Sump Collection Vessel	No	NA	Atmosphere
SS1000	Stainless Steel Vessel (CD11)	No	RTO	RTO2
SS2001	Stainless Steel Vessel	No	RTO	RTO2
SS2005	Stainless Steel Vessel	No	RTO	RTO2
SS2006	Stainless Steel Vessel	No	RTO	RTO2
SS2009	Stainless Steel Vessel	No	RTO	RTO2
SS2009 Dust Collector	Dust Collector	No	Dust Collector	19V
SS3000	Stainless Steel <90-Day Haz Waste Tank	No	RTO	RTO2
SS4000	Stainless Steel Vessel	No	RTO	RTO2
SS6000	Stainless Steel Vessel	No	RTO	RTO2
SS6001	Stainless Steel Vessel	No	RTO	RTO1B
SS6002	Stainless Steel Vessel	No	RTO	RTO1B

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
SS6003	Stainless Steel Vessel	No	RTO	RTO1B
Vacuum System #1	Jaygo Dryer Vacuum	No	RTO	RTO2
Vacuum System #2	VacuMax Solids Charge System	No	NA	Atmosphere
Vacuum System #3	S14 House Vacuum Pump System	No	RTO	RTO2
Vacuum System #4	PTS (Busch R5C)	NA		Atmosphere
VP101	S19A (East) Vacuum Pump (Sampling System)	No	S19 Heil Scrubber	19A
VP19	S19C (South) Vacuum System	No	RTO	RTO1B

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### 3. n-Heptane Recovery

May 4, 2010

Springfield/Greene County Air Quality  
227 E. Chestnut Expressway  
Springfield, MO 65802-3881  
Attn: Mr. Brian Adams  
Air Control Specialist III

Re: n-Heptane Recovery  
Notification of Actual Construction of Pre-Approved Changes

Dear Mr. Adams:

Enclosed please find a completed "Notification of Actual Construction of Pre-Approved Changes" as specified by Construction Permit Number 0906-251. The Notification is for n-Heptane Recovery, a solvent utilized in pharmaceutical production that will be recovered in Building S4. Recovery activities are scheduled to begin May 31, 2010 and continue through June 15, 2010.

Should you have questions concerning any of the enclosed information, please contact me at 868-3438.

Sincerely,  
Archimica Inc.  
Nancy Luxton

Environmental Manager

**Table 1 n-HEPTANE EQUIPMENT LIST (S-4) 5/3/10**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
GL-519	Glass-Lined Vessel	No	RTO	RTO1B
GL-1002	Glass-Lined Vessel	No	RTO	RTO1B
GL-1007	Glass-Lined Vessel	No	RTO	RTO1B
Heil Scrubber	S4 Heil Scrubber	No	Atmosphere	04A
Vacuum Pump	Cobra Vacuum Pump #3	No	RTO	RTO1B
Vacuum Pump	Cobra Vacuum Pump #4	No	RTO	RTO1B

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#### 4. Pfaudler Wiped Film Evaporator (Pilot Plant)

September 8, 2010

Springfield/Greene County Air Quality  
227 East Chestnut Expressway  
Springfield, Missouri 65802-3881  
Attn: Mr. Brian Adams  
Director of Air Quality

Re: Pilot Plant Pfaudler Wiped Film Evaporator Installation

Dear Mr. Adams:

The Archimica Inc., Springfield, Missouri facility is requesting approval to install a Pfaudler Wiped Film Evaporator in the Pilot Plant. This equipment will be utilized for multiple processes proposed for production in the Pilot Plant. This request will be a modification to Construction Permit No.0900-219D.

Archimica Inc. will comply with all of the Construction Permit requirements for the Pilot Plant and emissions will not exceed the de minimus levels specified in Permit No. 0900-219D.

Thank you for your consideration of this request.

Sincerely,  
Archimica Inc.  
Nancy Luxton  
Site Environmental Manager

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## 5. CAT11 and CAT12

August 31, 2010

Springfield/Greene County Air Quality  
227 E. Chestnut Expressway  
Springfield, MO 65802-3881  
Attn: Mr. Brian Adams  
Air Control Specialist III

Re: CAT11 and CAT12  
Notification of Actual Construction of Pre-Approved Changes

Dear Mr. Adams:

Enclosed please find a completed "Notification of Actual Construction of Pre-Approved Changes" as specified by Construction Permit Number 0906-251. The Notification is for CAT11 and CAT12, production of two pharmaceutical intermediates that will be produced in Buildings S4, S19A and S19D. Production activities are scheduled to begin October 11, 2010 and continue through November 25, 2010.

Should you have questions concerning any of the enclosed information, please contact me at 868-3438.

Sincerely,  
Archimica Inc.  
Nancy Luxton  
Environmental Manager

**Table 1 CAT11 EQUIPMENT LIST (S-4, S19A, S19D) 8/30/2010**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
Cobra Vacuum Pump #3	Vacuum Pump	No	RTO	RTO1B
Cobra Vacuum Pump #4	Vacuum Pump	No	RTO	RTO1B
Drum Charging Station #1	Drum Charging Station	Yes	RTO	RTO1B
Drum Charging Station #2	Drum Charging Station	Yes	RTO	RTO1B
GL-200	Glass-Lined Vessel	No	RTO	RTO1B

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
GL-201	Glass-Lined Vessel	No	RTO	RTO1B
GL-301	Glass-Lined Vessel	No	RTO	RTO1B
GL-516	Glass-Lined Vessel	No	RTO	RTO1B
GL-520	Glass-Lined Vessel	No	RTO	RTO1B
GL-1002	Glass-Lined Vessel	No	RTO	RTO1B
GL-1003	Glass-Lined Vessel	No	RTO	RTO1B
GL-1004	Glass-Lined Vessel	No	RTO	RTO1B
Heil Scrubber	S4 Heil Scrubber	No	Atmosphere	04A
Packaging Station (S4)	Packaging Station (S4)	Yes	RTO	RTO1B
Packaging Station (S19A)	Packaging Station (S19A)	Yes	RTO	RTO1B
SS-250	Stainless Steel Vessel	No	RTO	RTO1B
SS1014	Stainless Steel Vessel	No	RTO	RTO1B
SS-1600	Stainless Steel Vessel	No	RTO	RTO1B
Wiped Film Evaporator	Wiped Film Evaporator	No	RTO	RTO1B

## 6. Fenofibric Acid

March 26, 2010

**Table 4 FFA EQUIPMENT LIST**

Equip ID	Equipment Description	New Equipment Yes/No	Control Device ID	Stack ID
SS1800	Stainless Steel Vessel	No	RTO	RTO1B
LCS	Liquid Charge System	No	RTO	RTO1B
GL2001	Glass-lined Vessel	No	RTO	RTO1B
Charge Station 1	Raw Material Drum Charge Station	No	RTO	RTO1B
GL515	Glass Lined Vessel	No	Halogen Scrubber	19??
GL1001	Glass Lined Vessel	No	RTO	RTO1B
Krauss Maffei	Centrifuge	No	RTO	RTO1B
SS300	Stainless Steel Tote	No	RTO	RTO1B
SS2012	Stainless Steel Vessel	No	RTO	RTO1B
Vacuum System	Vacuum Pump	No	RTO	RTO1B
Rotocone Dryer	Rotocone Dryer (S3)	No	RTO	RTO1B
Condenser	Rotocone Dryer (S3) Vacuum Line Condenser	No	RTO	RTO1B



## 7. Glycolic Acid 85%

November 18, 2010

Springfield/Greene County Air Quality  
227 E. Chestnut Expressway  
Springfield, MO 65802-3881  
Attn: Mr. Brian Adams  
Director of Air Quality

Re: Glycolic Acid 85%  
Notification of Actual Construction of Pre-Approved Changes

Dear Mr. Adams:

Enclosed please find a completed "Notification of Actual Construction of Pre-Approved Changes" as specified by Construction Permit Number 0906-251. The Notification is for Glycolic Acid 85% that will be processed in Building S14. Processing of Glycolic Acid 85% is scheduled to begin November 29, 2010 and continue throughout CY2011.

Should you have questions concerning any of the enclosed information, please contact me at 868-3438.

Sincerely,  
Archimica Inc.  
Nancy Luxton  
Environmental Manager

**Table 1 Glycolic Acid (85%) Processing Equipment**

Equip ID	Equipment Description	New Equipment Yes/No	Design Capacity	Control Device ID	Stack ID
Centrifuge	Heinkel Centrifuge	No	Varies	S14 Heil Scrubber	14A
Dryer	Jaygo Dryer	No	Varies	S14 Heil Scrubber	14A
HA2003	Hastelloy Reactor	No	2000 gallons	S14 Heil Scrubber	14A
GL2000	Glass-lined Reactor	No	2000 gallons	S14 Heil Scrubber	14A
GL2004	Glass-lined Reactor	No	2000 gallons	S14 Heil Scrubber	14A

Equip ID	Equipment Description	New Equipment Yes/No	Design Capacity	Control Device ID	Stack ID
GL2006	Glass-lined Reactor	No	2000 gallons	S14 Heil Scrubber	14A
SS300	Stainless Steel Vessel	No	300 Gallons	S14 Heil Scrubber	14A
SS2005	Stainless Steel Vessel	No	2000 Gallons	S14 Heil Scrubber	14A
SS2006	Stainless Steel Vessel	No	2000 Gallons	S14 Heil Scrubber	14A
SS4000	Stainless Steel Vessel	No	4000 Gallons	S14 Heil Scrubber	14A
SS6000	Stainless Steel Vessel	No	6000 Gallons	S14 Heil Scrubber	14A
Dryer Vacuum	Liquid Ring Vacuum Pump	No	Varies	S14 Heil Scrubber	14A
House Vacuum	Liquid Ring Vacuum Pump	No	Varies	S14 Heil Scrubber	14A
Heil Scrubber	Heil Scrubber with packed column, blower and recirculation pump	No	Varies	S14 Heil Scrubber	14A

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## 8. GlyPure®70

January 14, 2011

Springfield/Greene County Air Quality  
 227 E. Chestnut Expressway  
 Springfield, MO 65802-3881  
 Attn: Mr. Brian Adams  
 Director of Air Quality

Re: GlyPure®70  
 Notification of Actual Construction of Pre-Approved Changes

Dear Mr. Adams:

Enclosed please find a completed "Notification of Actual Construction of Pre-Approved Changes" as specified by Construction Permit Number 0906-251. The Notification is for Glycolic Acid 85% that will be processed in Building S19, with the final product being Glypure®70. Processing for Trial Batches of Glypure®70 is proposed to begin January 24, 2011 and continue through February 2011. After completion of the Trial Batches, Full Scale production for 1,800,000 pounds of Glypure®70 would continue throughout 2011.

Archimica is requesting approval to produce up to 1,850,000 pounds per year of Glypure®70 in Building S19.

Should you have questions concerning any of the enclosed information, please contact me at 868-3438.

Sincerely,  
 Archimica Inc.  
 Nancy Luxton  
 Environmental Manager

**Table 1 GlyPure®70 Processing Equipment in Building S19**

Equip ID	Equipment Description	New Equipment Yes No	Design Capacity	Control Device ID	Stack ID
Deionized Water Resin Beds	Deionized Water Resin Beds	Yes	Varies	NA	NA
GL2002	Glass-lined Vessel	No	2000 gallons	S19 Heil Scrubber	19A
GL3001	Glass-lined Vessel	No	3000 gallons	S19 Heil Scrubber	19A
SS751	Stainless Steel Vessel	No	750 gallons	S19 Heil Scrubber	19A
SS2002	Stainless Steel Vessel	No	2000 gallons	S19 Heil Scrubber	19A
SS2008	Stainless Steel Vessel	No	2000 gallons	S19 Heil Scrubber	19A
SS2009	Stainless Steel Vessel	No	2000 gallons	S19 Heil Scrubber	19A
SS2010	Stainless Steel Vessel	No	2000 Gallons	S19 Heil Scrubber	19A
SS2012	Stainless Steel Vessel	No	2000 Gallons	S19 Heil Scrubber	19A
SS2500	Stainless Steel Vessel	No	2500 Gallons	S19 Heil Scrubber	19A
SS2600	Stainless Steel Vessel	No	2600 Gallons	S19 Heil Scrubber	19A
SS3000	Stainless Steel Vessel	No	3000 Gallons	S19 Heil Scrubber	19A
SS6001	Stainless Steel Vessel	No	6000 Gallons	S19 Heil Scrubber	19A
SS6002	Stainless Steel Vessel	No	6000 Gallons	S19 Heil Scrubber	19A
SS6003	Stainless Steel Vessel	No	6000 Gallons	S19 Heil Scrubber	19A
SS6005	Stainless Steel Vessel	No	6000 Gallons	S19 Heil Scrubber	19A

Equip ID	Equipment Description	New Equipment Yes No	Design Capacity	Control Device ID	Stack ID
SS12001	Stainless Steel Storage Tank	No	12000 Gallons	Atmosphere	28C
SS12002	Stainless Steel Storage Tank	No	12000 Gallons	Atmosphere	28D
SS20001	Stainless Steel Storage Tank	No	20000 Gallons	Atmosphere	28F
Rosenmund Filter	Filter	No	Varies	S19 Heil Scrubber	19A
House Vacuum S19A	Vacuum Pump	No	Varies	S19 Heil Scrubber	19A
House Vacuum S19B	Vacuum Pump	No	Varies	S19 Heil Scrubber	19A
Heil Scrubber	Heil Scrubber with packed column, blower and recirculation pump	No	Varies	S19 Heil Scrubber	19A
Halogen Scrubber	Halogen Scrubber with packed column, blower and recirculation pump	No	Varies	S19 Halogen Scrubber	19K
CS7601	Carbon Steel Wastewater Storage Tank	No	7600	Atmosphere	CS7601
CS7602	Carbon Steel Wastewater Storage Tank	No	7600	Atmosphere	CS7602
S19D	Packaging Area for Drums	No	Varies	Portable Hood	NA

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## 9. Cytidine Monophosphate

May 4, 2011

Springfield/Greene County Air Quality  
227 E. Chestnut Expressway  
Springfield, MO 65802-3881  
Attn: Mr. Brian Adams  
Director of Air Quality

Re: Cytidine Monophosphate  
 Notification of Actual Construction of Pre-Approved Changes

Dear Mr. Adams:

Enclosed please find a completed "Notification of Actual Construction of Pre-Approved Changes" as specified by Construction Permit Number 0906-251. The Notification is for Cytidine Monophosphate ("CMP"), a pharmaceutical intermediate that will be processed in Buildings S3, S19A, B, C and D. Processing for CMP is proposed to begin June 8, 2011. Production will continue in yearly batch campaigns.

Should you have questions concerning any of the enclosed information, please contact me at 868-3438.

Sincerely,  
 Archimica Inc.  
 Nancy Luxton  
 Environmental Manager

**Table 1 CMP Processing Equipment in Buildings S3, S19A, B, C & D**

Building	Equip ID	Equipment Description	New Equipment Yes - No	Control Device ID	Stack ID
S3	RotoCone Dryer	Dryer	No	RTO1B	RTO1B
S3	SiHi Vacuum	Vacuum Pump	No	RTO1B	RTO1B
S19A	CS400	Carbon Steel Vessel	No	RTO1B	RTO1B
S19A	GL1012	Glass-lined Receiver	No	RTO1B	RTO1B
S19A	GL1013	Glass-lined Receiver	No	RTO1B	RTO1B
S19A	GL3000	Glass-lined Vessel	No	RTO1B	RTO1B
S19A	GL3001	Glass-lined Vessel	No	RTO1B	RTO1B
S19A	GL3003	Glass-lined Vessel	No	RTO1B	RTO1B
S19A	Rosenmund	Filter	No	RTO1B	RTO1B
S19A	SS600	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS751	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS1014	Stainless Steel Receiver	No	RTO1B	RTO1B
S19A	SS1016	Stainless Steel Receiver	No	RTO1B	RTO1B
S19A	SS1600	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS2008	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS2009	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS2010	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS2012	Stainless Steel Vessel	No	RTO1B	RTO1B

Building	Equip ID	Equipment Description	New Equipment Yes - No	Control Device ID	Stack ID
S19A	SS2500	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS6001	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS6002	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS6003	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	SS6005	Stainless Steel Vessel	No	RTO1B	RTO1B
S19A	Heil Scrubber	Scrubber	No	19A	19A
S19A	Halogen Scrubber	Scrubber	No	19K	19K
S19B	SS500	Stainless Steel Vessel	No	RTO1B	RTO1B
S19B	SS501	Stainless Steel Vessel	No	RTO1B	RTO1B
S19B	SS2004	Stainless Steel Vessel	No	RTO1B	RTO1B
S19B	SS2011	Stainless Steel Vessel	No	RTO1B	RTO1B
S19C	Centrifuge	Krauss-Maffei Centrifuge	No	RTO1C	RTO1C
S19C	SS300 Tote	Stainless Steel Centrifuge Tote	No	RTO1C	RTO1C
S19C	Drum& Tote Charging Station	Raw Material Charging	No	RTO1C	RTO1C
S19C	GL1000	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL1001	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL1005	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL1009	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL1010	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL1011	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL1014	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL2001	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	GL3002	Glass-Lined Vessel	No	RTO1C	RTO1C
S19C	SS1017	Stainless Steel Vessel	No	RTO1C	RTO1C
S19C	SS1800	Stainless Steel Vessel	No	RTO1C	RTO1C
S19C	SS2600	Stainless Steel Vessel	No	RTO1C	RTO1C
S19C	Hayward	Bag Filters	No	RTO1C	RTO1C
S19C	Niagara	Filters	No	RTO1C	RTO1C
S19D	Cobra	Vacuum Pump #1	No	RTO1C	RTO1C
S19D	Cobra	Vacuum Pump #2	No	RTO1C	RTO1C
S19D	GL513	Glass-Lined Vessel	No	RTO1C	RTO1C
S19D	GL515	Glass-Lined Vessel	No	RTO1C	RTO1C
S19D	GL516	Glass-Lined Vessel	No	RTO1C	RTO1C
S28	DC01	Solvent Distillation Column	No	RTO1C	RTO1C
S28	SS2003	Stainless Steel Vessel	No	RTO1C	RTO1C
Containment Dike 28	CS12001	Solvent Storage Tank	No	RTO1C	RTO1C
Containment Dike 3	CS14001	Sodium Hydroxide Storage Tank	No	NA	19L

<b>Building</b>	<b>Equip ID</b>	<b>Equipment Description</b>	<b>New Equipment Yes - No</b>	<b>Control Device ID</b>	<b>Stack ID</b>
Containment Dike 3	CS14002	Sodium Hydroxide Storage Tank	No	NA	19M
Containment Dike 28	SS6004	<90-Day Hazardous Waste Storage Tank	No	RTO1C	RTO1C
Containment Dike 28	SS12001	Solvent Storage Tank	No	RTO1C	RTO1C
Containment Dike 28	SS12002	Solvent Storage Tank	No	RTO1C	RTO1C
Containment Dike 28	SS20001	Solvent Storage Tank	No	RTO1C	RTO1C
S19A	SS3000	Stainless Steel Wastewater Hold Tank	No	RTO1B	RTO1B
Containment Dike 9	CS7601	Carbon Steel Wastewater Storage Tank	No	RTO1B	RTO1B
Containment Dike 9	CS7602	Carbon Steel Wastewater Storage Tank	No	RTO1B	RTO1B
	PEG	Wastewater Air Stripper	No	RTO1B	RTO1B



















EQ Vent ID	Building I.D. No.	Equipment Permit ID	Archimica Equipment Number	Service	Compliance Method	Amount of Material Processed <sup>2</sup>	Units for Material Processed <sup>2</sup>	Emission Factor <sup>3</sup>	Units for Emission Factor <sup>3</sup>	Capture Efficiency	Control Device DRE	Overall Control Efficiency <sup>4</sup>	Monthly Emissions <sup>5</sup> (tons)
RTO2 (14)	14	14-33-RTO	SS3000	<90-Day Hazardous Waste Tank	Tanks Emission Program; EPA Fugitive Emission Factors								
RTO2 (14)	14	14-31-RTO	GL1008	<90-Day Hazardous Waste Tank	Tanks Emission Program; EPA Fugitive Emission Factors								
RTO2 (14)	14	14-32-RTO	SS2900	<90-Day Hazardous Waste Tank	Tanks Emission Program; EPA Fugitive Emission Factors								
RTO3	RTO	RTO-4 RTO Fugitive Emission	RTO3	Regenerative Thermal Oxidizer	EPA Leak Emission Factors								
RTO4	RTO	RTO-5	RTO4	Quench Tower for Regenerative Thermal Oxidizer	Testing								
RTO5	RTO	RTO-6	FG500	Regenerative Thermal Oxidizer Knockout Vessel T-102	Emergency Relief Vent - Mass Balance								
WW7601	WW	WW-3-RTO	CS7601	Wastewater Tank	EPA Fugitive Emission Factors								
WW7602	WW	WW-4-RTO	CS7602	Wastewater Tank	EPA Fugitive Emission Factors								
WWAS-01	WW	WW-1-RTO	PEG Air Stripper	Air Stripper for Wastewater Treatment	Testing								
WWAS-02	WW	WW-2-RTO	Alternate Air Stripper	Air Stripper for Wastewater Treatment	Testing								

	Sum of Monthly VOC Emissions from Entire Installation <sup>6</sup>	
	12-Month VOC Emissions Total from Previous Month's Worksheet	
	Monthly VOC Emissions Total from Previous Year's Worksheet	
	Current 12-Month Total VOC Emissions <sup>7</sup>	

<sup>1</sup> The removal or addition of any equipment must be included in this list and documented on Attachment C

<sup>2</sup> Amount of VOC containing material used in conjunction with the equipment including units of measurement

<sup>3</sup> All emission factors used to demonstrate compliance with the VOC emissions limitation must be documented according to Special Condition 2

<sup>4</sup> All control efficiencies used to demonstrate compliance with the VOC emissions limitation must be documented according to Special Condition 2

<sup>5</sup> Monthly amount of VOC emissions in tons from each emission point, using the emission factor and overall control efficiency listed in Column 6 and Column 10

<sup>6</sup> Monthly amount of VOC emissions in tons from entire installation

<sup>7</sup> A current 12-month total VOC emissions of less than the PAL is in compliance.



**Table B: Emission Point Summary**

Archimica Inc.

Greene County, S29 T27N, R22W  
Permit Number:

Installation ID Number: 077-0017  
Project Number: 2009-04-033

Building LD. No.	Emission EIQ Vent ID	Equipment Permit ID	Archimica Equipment Number	In-Service :Idle or Removed	Vents To	Emissions Associated with the Unit	Make	Model	Service	MACT Applicability	Compliance Method
<b>Building S28</b>											
28	28E	28-1-RTO	CS12001	In-Service	RTO	HAPs, VOCs	Carbon Steel	12000	Solvent Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	EPA Leaks Emission Factors; Tanks Emission Program
28	28I	28-2-RTO	DC01	In-Service	RTO	HAPs, VOCs	Stainless Steel		Distillation Column	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
28	28J	28-3-RTO	SS104 (TS010010)	In-Service	RTO	HAPs, VOCs	Carbon Steel	100	Reflux Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
28	28H	28-4-RTO	SS2003 (RS200016)	In-Service	RTO	HAPs, VOCs	Carbon Steel	2000	Hazardous Waste Storage Tank <90-Day	N/A	EPA Leaks Emission Factors; Tanks Emission Program
28	28G	28-5-RTO	SS6004	In-Service	RTO	HAPs, VOCs	Carbon Steel	6000	Hazardous Waste Storage Tank <90-Day	N/A	EPA Leaks Emission Factors; Tanks Emission Program
28	28C	28-6-RTO	SS12001	In-Service	RTO	HAPs, VOCs	Stainless Steel	12000	Solvent Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	EPA Leaks Emission Factors; Tanks Emission Program
28	28D	28-7-RTO	SS12002	In-Service	RTO	HAPs, VOCs	Stainless Steel	12000	Solvent Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	EPA Leaks Emission Factors; Tanks Emission Program
28	28F	28-8-RTO	SS20000	In-Service	RTO	HAPs, VOCs	Stainless Steel	20000	Solvent Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	EPA Leaks Emission Factors; Tanks Emission Program
28	28K	28-9-ATM	GL-300	Idle	Atmosphere	HAPs, VOCs	Carbon Steel	300	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
<b>Building S-3</b>											
3	03A	3-1-ATM	Centrifuge	Idle	Atmosphere	HAPs, VOCs	Tolhurst	Centrifuge	Centrifuge with Sump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	RTO1B	3-2-RTO	Dryer	Idle	RTO	HAPs, VOCs	Nickel	BM-4	Rotary, Double Cone Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03A	3-3-ATM	SS501	Idle	Atmosphere	HAPs, VOCs	Stainless Steel	500	Emergency Relief Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
3	03A	3-4-ATM	GL200	Idle	Atmosphere	HAPs, VOCs	Glass-lined Pfaudler	200	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03A	3-5-ATM	SS105	Idle	Atmosphere	HAPs, VOCs	Stainless Steel	100	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03A	3-6-ATM	GL500	Idle	Atmosphere	HAPs, VOCs	Glass-lined Pfaudler	500	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03A	3-7-ATM	CS300	Idle	Atmosphere	HAPs, VOCs	Carbon Steel	300	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	RTO	3-8-ATM	GL2008	Idle	Atmosphere	HAPs, VOCs	Glass-lined Pfaudler	2000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	RTO	3-9-RTO	SiHi Vacuum Knock Out Vessel	Idle	RTO	HAPs, VOCs			SiHi Vacuum Knockout Pot	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03	3-10-ATM	Dryer	Idle	Atmosphere	HAPs, VOCs			Rotary Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	RTO	3-11-RTO	SiHi Vacuum	Idle	RTO	HAPs, VOCs	SiHi		Vacuum System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03	3-12-ATM	SS100	Idle	Atmosphere	Water Vapor	Stainless Steel	1000	Dryer, Hot Water Tank	NA	NA
3	RTO	3-13-RTO	S3 Lab WW Tank	Idle	RTO	HAPs, VOCs	Stainless Steel	105	Lab WW Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03A	3-14-ATM	CS501	Idle	Atmosphere	HAPs, VOCs	Carbon Steel	500	Safety Vent KO Pot	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
3	RTO	3-15-RTO	Vacuum Knockout Vessel	Idle	RTO	HAPs, VOCs			Tuthill Vacuum Knockout Pot	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
3	RTO	3-16-RTO	Tuthill Vacuum	Idle	RTO	HAPs, VOCs	Tuthill Vacuum		Vacuum System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
3	03	3-17-ATM	Heil Scrubber	Idle	Atmosphere	Acid Gases	Fiberglass		Heil Scrubber	NA	Process Evaluation
3	03	3-18-ATM		Idle	Atmosphere	Acid Gases	Stainless Steel/Kynar		NaOH Scrubbing System	NA	Process Evaluation
<b>Building S-4</b>											
4	ATM (04J)	4-1-RTO	FG102	In-Service	RTO	HAPs, VOCs	Fiberglass	100	RTO Knock-out Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
4	ATM (04A)	4-2-ATM	FG350	In-Service	Atmosphere	HAPs, VOCs	Fiberglass	350	Neutralization	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-3-RTO	GL54	In-Service	RTO	HAPs, VOCs	Glass-lined	50	Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-4-RTO	GL200	In-Service	RTO	HAPs, VOCs	Glass-lined	200	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-5-RTO	GL201	In-Service	RTO	HAPs, VOCs	Glass-lined	200	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-6-RTO	GL301	In-Service	RTO	HAPs, VOCs	Glass-lined	300	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-7-RTO	GL511	In-Service	RTO	HAPs, VOCs	Glass-lined	500	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-8-RTO	GL519	In-Service	RTO	HAPs, VOCs	Glass-lined	500	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-9-RTO	GL520	In-Service	RTO	HAPs, VOCs	Glass-lined	500	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-10-RTO	GL1002	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-11-RTO	GL1003	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation

Building L.D. No.	Emission EIQ Vent ID	Equipment Permit ID	Archimica Equipment Number	In-Service :Idle or Removed	Vents To	Emissions Associated with the Unit	Make	Model	Service	MACT Applicability	Compliance Method
4	RTO1B	4-12-RTO	GL1003 Column	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	1000	Distillation Column	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-13-RTO	GL1004	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-14-RTO	GL1004 Column	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	1000	Distillation Column	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-15-RTO	GL1006	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-16-RTO	GL1007	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-17-RTO	GL1500	In-Service	RTO	HAPs, VOCs	Glass-lined	1500	Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	04A	4-18-ATM	SIHI House Vacuum System	In-Service	ATM	HAPs, VOCs			Vacuum System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	04A	4-19-ATM	Stainless Water Level Tank	In-Service	ATM	Water Vapor	Stainless Steel		Water Tank for SIHI House Vacuum System	NA	NA
4	RTO1B	4-20-RTO	SS25	In-Service	RTO	HAPs, VOCs	Stainless Steel	25	Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-21-RTO	SS26	In-Service	RTO	HAPs, VOCs	Stainless Steel	25	Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-22-RTO	SS27	In-Service	RTO	HAPs, VOCs	Stainless Steel	25	Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-23-RTO	SS100	In-Service	RTO	HAPs, VOCs	Stainless Steel	100	Wastewater Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	ATM	4-25-ATM	SS750	In-Service	ATM	HAPs, VOCs	Stainless Steel	750	Emergency Relief	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
4	RTO1B	4-26-RTO	SS1023	In-Service	RTO	HAPs, VOCs	Stainless Steel	1000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	ATM (04J)	4-27-ATM	SS2450	In-Service	Atmosphere	Water Vapor	Stainless Steel	1000	Hot Water Tank	NA	NA
4	RTO1B	4-28-RTO	Vacuum Pump #1	In-Service	RTO	HAPs, VOCs		BUSCH	Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	RTO1B	4-29-RTO	Vacuum Pump #2	In-Service	RTO	HAPs, VOCs		BUSCH	Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	ATM (04E)	4-30-ATM	SS4501	Idle	Atmosphere	HAPs, VOCs	Stainless Steel	4500	Solvent Storage	NA	Tanks Program
4	ATM (04F)	4-31-ATM	SS4502	Idle	Atmosphere	HAPs, VOCs	Stainless Steel	4500	Solvent Storage	NA	Tanks Program
4	RTO1B (04K)	4-32-RTO	SS9802	Idle	RTO1B	HAPs, VOC	Stainless Steel	9800	Solvent Storage	NA	Tanks Program
4	RTO (04L)	4-33-RTO	SS9803	Idle	RTO1B	HAPs, VOC	Stainless Steel	9800	Solvent Storage	NA	Tanks Program
4	ATM (04H)	4-34-ATM	TF012K01	Idle	Atmosphere	Organic & Inorganic Acids	Fiberglass	13000	Acid Storage	40 CFR Part 60 Subpart Kb	Tanks Program
4	04A	4-35-ATM	FF005	In-Service	Atmosphere	HAPs, VOCs	Fiberglass		House Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	04A	4-36-ATM	FF009	In-Service	Atmosphere	HAPs, VOCs	Fiberglass		Small Sodium Hydroxide Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	04A	4-37-ATM	FG350	In-Service	Atmosphere	HAPs, VOCs	Fiberglass	350	Steam Jet Neutralization	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	04A	4-38-ATM	Prescrubber	In-Service	Atmosphere	HAPs, VOCs	Kynar		PreScrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
4	04A	4-39-ATM	FG350	In-Service	Atmosphere	HAPs, VOCs	Fiberglass	350	Steam Jet Neutralization	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
<b>Building S-19A</b>											
19A	ATM	19A-1-ATM	TC03001	Idle	ATM	Air	Continental 1 Boiler Works		Reserve Air, South	NA	NA
19A	ATM	19A-2-ATM	TC03002	Idle	ATM	Air	Continental 1 Boiler Works		Reserve Air, Center	NA	NA
19A	ATM	19A-3-ATM	TC03003	Idle	ATM	Air	Continental 1 Boiler Works		Reserve Air, North	NA	NA
19A	ATM	19A-4-ATM	TC03004	Idle	ATM	Air	Tiger Steel		Instrument Air	NA	NA
19A	ATM	19A-5-ATM	CS400	Idle	ATM	Sodium Hydroxide	Tiger Steel	400	High Pressure Sodium Hydroxide Feed	NA	NA
19A	RTO	19A-6-RTO	CS2700	Idle	ATM	HAPs, VOCs	Pressure Products	2700	Relief Tank for S19A	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
19A	RTO	19A-7-RTO	FG100	Idle	RTO	HAPs, VOCs	Viatec Hastings Engineering	100	RTO Expansion Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
19A	RTO1B	19A-8-RTO	GL1012	Idle	RTO	HAPs, VOCs	De Dietrich	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-9-RTO	GL2002	Idle	RTO	HAPs, VOCs	Pfaudler	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-10-RTO	GL3000	Idle	RTO	HAPs, VOCs	Pfaudler	3000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-11-RTO	GL3001	Idle	RTO	HAPs, VOCs	Pfaudler	3000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-12-RTO	GL3003	Idle	RTO	HAPs, VOCs	De Dietrich	3000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-13-ATM	KL300	Idle	ATM	Organic & Inorganic Acid Gases	Steel Pro Inc.	3000	Halogen Knockout Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance

Building LD. No.	Emission EIQ Vent ID	Equipment Permit ID	Archimica Equipment Number	In-Service :Idle or Removed	Vents To	Emissions Associated with the Unit	Make	Model	Service	MACT Applicability	Compliance Method
19A	RTO1B	19A-14-RTO	SS65	Idle	RTO	HAPs, VOCs	Letco	65	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-15-RTO	SS100	Idle	RTO	HAPs, VOCs	Custom Metalscraft	100	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-16-RTO	SS125	Idle	RTO	HAPs, VOCs	Murphy Company	125	Wastewater Vac Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-17-RTO	SS250	Idle	RTO	HAPs, VOCs	Letco	250	Screen Wash Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	ATM	19A-18-RTO	SS1002	Idle	ATM	Water Vapor	Stainless Steel	2000	Condensate Receiver	NA	NA
19A	RTO1B	19A-19-RTO	SS1004	Idle	RTO	Sodium Sulfite	D&W Welding	1000	Sodium Sulfite	NA	NA
19A	RTO1B	19A-20-RTO	SS1016	Idle	RTO	HAPs, VOCs	Letco	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-21-RTO	SS1600	Idle	RTO	HAPs, VOCs	Letco	1600	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-22-RTO	SS2002	Idle	RTO	HAPs, VOCs	Stainless Steel	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-23-RTO	SS2008	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-24-RTO	SS2009	Idle	RTO	HAPs, VOCs	Stainless Steel	2000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-25-RTO	SS2010	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-26-RTO	SS2012	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-27-RTO	SS3000	Idle	ATM	HAPs, VOCs	Letco	3000	Wastewater Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-28-RTO	SS6001	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-29-RTO	SS6002	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-30-RTO	SS6003	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-31-RTO	SS6005	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-32-RTO	19A-Cyclone Demister	Idle	RTO	HAPs, VOCs			Cyclone Demister	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-33-RTO	KL-1000	Idle	RTO	Organic & Inorganic Acid Gases, Cyanides		1000	Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-34-ATM	Halogen Scrubber	Idle	ATM	Organic & Inorganic Acid Gases			Halogen Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-35-ATM	GL-125	Idle	ATM	Organic & Inorganic Acid Gases			H2SO4 Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-36-RTO	GL-1013	Idle	RTO	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-37-RTO	SS-2000	Idle	RTO	HAPs, VOCs		2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-38-RTO	SS-751	Idle	RTO	HAPs, VOCs		750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-39-RTO	SS-1014	Idle	RTO	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-40-RTO	SS-203	Idle	RTO	HAPs, VOCs		200	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-41-RTO	Rosenmund	Idle	RTO	HAPs, VOCs	Stainless Steel		Filter/Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-42-ATM	SS-600	Idle	ATM	HAPs, VOCs		200	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19A	19-43-ATM	House Scrubber - T302003	Idle	Atmosphere	HAPs, VOCs, Organic & Inorganic Acids			House Scrubber	NA	NA
<b>Building S16A Boilers</b>											
16A	01A	16-1-ATM	Boiler #1	In-Service	Atmosphere	HAPs, VOCs, NOx, SOx, PM10, PM2.5, CO, NH3	Keystone	National Board Number 18867	Natural Gas Boiler	Proposed 40 CFR Part 63 Subpart DDDDD	AP-42 Sect 1.4
16A	01B	16-2-ATM	Boiler #1	In-Service	Atmosphere	VOCs, NOx, SOx, PM10, PM2.5, CO	Keystone	National Board Number 18867	Fuel Oil #2 Boiler	Proposed 40 CFR Part 63 Subpart DDDDD	AP-42 Sect 1.3
16A	02A	16-3-ATM	Boiler #2	In-Service	Atmosphere	HAPs, VOCs, NOx, SOx, PM10, PM2.5, CO, NH3	Keystone	National Board Number 18698	Natural Gas Boiler	Proposed 40 CFR Part 63 Subpart DDDDD	AP-42 Sect 1.4
16A	02B+A447	16-4-ATM	Boiler #2	In-Service	Atmosphere	VOCs, NOx, SOx, PM10, PM2.5, CO	Keystone	National Board Number 18698	Fuel Oil #2 Boiler	Proposed 40 CFR Part 63 Subpart DDDDD	AP-42 Sect 1.3
16A	01C	16-5-ATM	PVC-300	In-Service	Atmosphere	Water Vapor	Boiler Feed Tank	PVC-300	Boiler Feed Tank	NA	NA
16A	01D	16-6-ATM	Resin #1	In-Service	Atmosphere	Water Vapor	Condensate Polisher Tank	Resin #1	Condensate Polisher Tank	NA	NA
16A	01E	16-7-ATM	Resin #2	In-Service	Atmosphere	Water Vapor	Condensate Polisher Tank	Resin #2	Condensate Polisher Tank	NA	NA
16A	01F	16-8-ATM	CS1001	In-Service	Atmosphere	Water Vapor	Condensate Return Tank	CS1001	Condensate Return Tank	NA	NA
16A	01G	16-9-ATM	CS750	In-Service	Atmosphere	Water Vapor	Condensate Blow Down Tank	CS750	Condensate Blow Down Tank	NA	NA
16A	01H	16-10-ATM	Plant Air Receiver Vessel	In-Service	Atmosphere	Water Vapor	Plant Air Receiver		Plant Air Receiver	NA	NA

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<b>Building S-14</b>											
14	14M	14-1-ATM	Solids Charge System (West)	In-Service	Atmosphere	Particulates			Solids charging	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
14	14N	14-2-ATM	Solids Charge System (East)	In-Service	Atmosphere	Particulates			Solids charging	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-3-RTO	Heinkel Filter	In-Service	RTO	HAPs, VOCs	Heinkel		Filter/ Centrifuge	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-4-RTO	Jaygo Dryer	In-Service	RTO	HAPs, VOCs	Jaygo		Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	14M	14-5-ATM	MI-1	In-Service	Atmosphere	Particulates			Milling	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-6-RTO	CS60	In-Service	RTO		Carbon Steel	60	Vacuum System #1 Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	14R	14-7-ATM	CS100	In-Service	Atmosphere	HAPs, VOCs	Carbon Steel	100	Surge Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
14	RTO2	14-9-RTO	XM0071	In-Service	RTO	HAPs, VOCs	Carbon Steel		Vacuum System #3 Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	14Q	14-10-ATM	CS1000	In-Service	Atmosphere	HAPs, VOCs	Carbon Steel	1000	Emergency Relief Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
14	RTO	14-11-RTO	GL300	In-Service	RTO	Chlorides	Glass-Lined	300	Charge Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-12-RTO	GL2000	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	2000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-13-RTO	GL2004	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	2004	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-14-RTO	GL2006	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	2006	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-15-RTO	GL2007	In-Service	RTO	HAPs, VOCs	Glass-lined Pfaudler	2007	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-16-RTO	SS300	Idle	RTO	HAPs, VOCs	Stainless Steel	300	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-17-RTO	SS1000	In-Service	RTO	HAPs, VOCs	Stainless Steel	1000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-18-RTO	SS2001	In-Service	RTO	HAPs, VOCs	Stainless Steel	2000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-19-RTO	SS2005	In-Service	RTO	HAPs, VOCs	Stainless Steel	2000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-20-RTO	SS2006	In-Service	RTO	HAPs, VOCs	Stainless Steel	2000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-21-RTO	SS3000	In-Service	RTO	HAPs, VOCs	Stainless Steel	3000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-22-RTO	SS4000	In-Service	RTO	HAPs, VOCs	Stainless Steel	4000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-23-RTO	SS6000	In-Service	RTO	HAPs, VOCs	Stainless Steel	6000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-24-RTO	HA2003	In-Service	RTO	HAPs, VOCs	Hastelloy	2000	Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	14T	14-25-ATM	Pick Steam Heater	In-Service	ATM	Water Vapor	Pick		Steam Heater	NA	NA
14	RTO2	14-26-RTO	DC02	In-Service	RTO	HAPs, VOCs			Distillation Column	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-27-RTO	DC03	Idle	RTO	HAPs, VOCs			Wastewater Steam Stripper	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-28-RTO	Dryer Vacuum Pump	In-Service	RTO	HAPs, VOCs			Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	RTO2	14-29-RTO	SiHi Vacuum Pump	In-Service	RTO	HAPs, VOCs		SiHi	Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
14	14O	14-28-ATM	CS9800	Idle	Atmosphere	HAPs, VOCs	Carbon Steel	9800	Solvent Storage	NA	NA
14	14S	14-29-ATM	CS9801	In-Service	Atmosphere	HAPs, VOCs	Carbon Steel	9800	Solvent Storage	NA	NA
14	RTO2 (14I)	14-31-RTO	GL1008	In-Service	RTO2	HAPs, VOC	Glass-lined Pfaudler	1000	<90-Day Hazardous Waste Tank	40 CFR Part 63 Subpart GGG and/or Subpart FFFF, or 40 CFR Part 264 Subpart CC	Tanks Emission Program; EPA Fugitive Emission Factors
14	RTO2 (14X)	14-32-RTO	SS2900	In-Service	RTO2	HAPs, VOC	Stainless Steel	2900	<90-Day Hazardous Waste Tank	40 CFR Part 63 Subpart GGG and/or Subpart FFFF, or 40 CFR Part 264 Subpart CC	Tanks Emission Program; EPA Fugitive Emission Factors
14	RTO2 (14D)	14-33-RTO	SS3000	In-Service	RTO2	HAPs, VOC	Stainless Steel	3000	<90-Day Hazardous Waste Tank	40 CFR Part 63 Subpart GGG and/or Subpart FFFF, or 40 CFR Part 264 Subpart CC	Tanks Emission Program; EPA Fugitive Emission Factors
14	14U	14-34-ATM	SS7000	In-Service	Atmosphere	HAPs, VOCs	Stainless Steel	7000	Solvent Storage	40 CFR Part 63 Subpart GGG and/or Subpart FFFF	Tanks Emission Program; EPA Fugitive Emission Factors
14	14U	14-38-ATM	TC000005	In-Service	Atmosphere	HAPs, VOCs	Carbon Steel		Nitrogen Expansion Tank	NA	NA
14	14A	14-35-ATM	S14 Heil Scrubber	In-Service	Atmosphere	HAPs, Organic & Inorganic Acids	Fiberglass		Heil Scrubber	40 CFR Part 63 Subpart GGG and/or Subpart FFFF	Process Evaluation
14	14M	14-36-ATM	Baghouse 1 (West)	In-Service	Atmosphere	Particulates			Particulates	NA	Equipment Manufacturer's Specifications
14	14N	14-37-ATM	Baghouse 2 (East)	In-Service	Atmosphere	Particulates			Particulates	NA	Equipment Manufacturer's Specifications
<b>Building S12Lab Hood Vents</b>											
12Lab	12LabHoods-#1	12Lab-1-ATM	QC Hood #1 (Single vent/stack, North on West Roof)	In-Service	ATM	HAPs, VOCs			Quality Control Lab Hood	NA	Engineering Calculations

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12Lab	12LabHoods-#2	12Lab-2-ATM	QC Hood #2 (Double vent/stack, North on West Roof)	In-Service	ATM	HAPs, VOCs			Quality Control Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#3	12Lab-3-ATM	QC Hood #3 (Stack AF0030, South Section West Roof)	In-Service	ATM	HAPs, VOCs			Quality Control Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#4	12Lab-4-ATM	Analytical Hood #AL-1E (Stack AF0017, South on West Roof)	In-Service	ATM	HAPs, VOCs			Analytical Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#5	12Lab-5-ATM	Analytical Hood #AL-2W (Stack AF0017, South on West Roof)	In-Service	ATM	HAPs, VOCs			Analytical Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#6	12Lab-6-ATM	Chemistry Research & Development Hood #CRD-11-1 (Stack AF0050, North Quadrant East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#7	12Lab-7-ATM	Chemistry Research & Development Hood #CRD-11-2 (Stack AF0051, North Quadrant East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#8	12Lab-8-ATM	Chemistry Research & Development Hood #CRD-11-3 (Stack AF0055, North Quadrant East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#9	12Lab-9-ATM	Chemistry Research & Development Hood #CRD-11-4 (Stack AF0052, North Quadrant East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#10	12Lab-10-ATM	Chemistry Research & Development Hood #CRD-11-5 (Northeast Stack in South Quadrant, East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#11	12Lab-11-ATM	Chemistry Research & Development Hood #CRD-11-6 (Northwest Stack in South Quadrant, East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#12	12Lab-12-ATM	Chemistry Research & Development Hood #CRD-11-7 (Southeast Stack in South Quadrant, East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#13	12Lab-13-ATM	Chemistry Research & Development Hood #CRD-11-8 (Southwest Stack in South Quadrant, East Roof)	In-Service	ATM	HAPs, VOCs			Chemistry Research & Development Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#14	12Lab-14-ATM	Molecular Synthesis Hood #MSC-1 (AF0034 Stack, South on East Roof)	In-Service	ATM	HAPs, VOCs			Molecular Synthesis Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#15	12Lab-15-ATM	Molecular Synthesis Hood #MSC-2 (AF0034 Stack, South on East Roof)	In-Service	ATM	HAPs, VOCs			Molecular Synthesis Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#16	12Lab-16-ATM	Molecular Synthesis Hood #MSC-3 (AF0066 Stack, South on East Roof)	In-Service	ATM	HAPs, VOCs			Molecular Synthesis Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#17	12Lab-17-ATM	Molecular Synthesis Hood #MSC-4 (AF0067 Stack, South on East Roof)	In-Service	ATM	HAPs, VOCs			Molecular Synthesis Lab Hood	NA	Engineering Calculations
12Lab	12LabHoods-#18	12Lab-18-ATM	Molecular Synthesis Hood #MSC-5 (AF0065 Stack, South on East Roof)	In-Service	ATM	HAPs, VOCs			Molecular Synthesis Lab Hood	NA	Engineering Calculations
<b>Pilot Plant</b>											
12-PP	12A	12PP-1-ATM	Busch	In-Service	Atmosphere	HAPs = <900 kg/12-month rolling totals; VOC's = <2 tons/year			Vacuum System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-2-ATM	Centrifuge (Tolhurst)	Idle	Atmosphere	HAPs, VOCs			Centrifuge with Sump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-3-ATM	Dryer (Paul A Abbey)	Idle	Atmosphere	HAPs, VOCs			Rotary Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-4-ATM	CS10	In-Service	Atmosphere	HAPs, VOCs			Knockout Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
12-PP	ATM	12PP-5-ATM	CS70	In-Service	Atmosphere	Water Vapor			Tempered Water Bath	NA	NA

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12-PP	ATM	12PP-6-ATM	CS300	In-Service	Atmosphere	HAPs, VOCs			Emergency Relief Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
12-PP	12A	12PP-7-ATM	GL20	In-Service	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-8-ATM	GL30	In-Service	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-9-ATM	GL31	In-Service	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-10-ATM	GL32	In-Service	Atmosphere	HAPs, VOCs			Knock-out Pot	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-11-ATM	GL50	In-Service	Atmosphere	HAPs, VOCs			Scrubber System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-12-ATM	GL51	In-Service	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-13-ATM	GL52	In-Service	Atmosphere	HAPs, VOCs			Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-14-ATM	GL53	In-Service	Atmosphere	HAPs, VOCs			Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-15-ATM	GL101	In-Service	Atmosphere	HAPs, VOCs			Reactor/Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-16-ATM	GL102	In-Service	Atmosphere	HAPs, VOCs			Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-17-ATM	GL103	In-Service	Atmosphere	HAPs, VOCs			Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-18-ATM	GL301	In-Service	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-19-ATM	Halar Filter	In-Service	Atmosphere	HAPs, VOCs			Filters	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-20-ATM	Hot Oil Unit	In-Service	Atmosphere	HAPs, VOCs			Hot Oil	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-21-ATM	Neutsche Filter	In-Service	Atmosphere	HAPs, VOCs			Filter	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-22-ATM	PL20	In-Service	Atmosphere	Water Vapor			Plastic Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-23-ATM	PL50	In-Service	Atmosphere	Water Vapor			Water Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-24-ATM	Rosenmund (Hastelov)	In-Service	Atmosphere	HAPs, VOCs			Filter/Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-25-ATM	SS20 (Centrifuge Sump)	In-Service	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-26-ATM	SS30 (Apovac Receiver)	In-Service	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-27-ATM	SS50	In-Service	Atmosphere	HAPs, VOCs			Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-28-ATM	SS100	In-Service	Atmosphere	HAPs, VOCs			SiHi Vacuum Pump Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-29-ATM	SS101	In-Service	Atmosphere	HAPs, VOCs			Northwest Wastewater Holding Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	ATM	12PP-30-ATM	SS102	In-Service	Atmosphere	HAPs, VOCs			Wastewater Holding Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-31-ATM	SS505	In-Service	Atmosphere	HAPs, VOCs			Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-32-ATM	Sparkler Filter	In-Service	Atmosphere	HAPs, VOCs			Filter	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-33-ATM	Aluminum Water Reservoir	In-Service	Atmosphere	Water Vapor			WFE Feed Preheater	NA	NA
12-PP	12A	12PP-34-ATM	Tumble Bug Dryer	Idle	Atmosphere	HAPs, VOCs			Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-35-ATM	Vacuum System	In-Service	Atmosphere	HAPs, VOCs			SiHi Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-36-ATM	Tuthill	In-Service	Atmosphere	HAPs, VOCs			Vacuum System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-37-ATM	GL-33	Idle	Atmosphere	HAPs, VOCs			Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12-PP	12A	12PP-38-ATM	Wiped Film Evaporator	In-Service	Atmosphere	HAPs, VOCs			WFE Distillation Unit	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
12	12A	12PP-39-ATM	12PP Scrubber	In-Service	Atmosphere	HAPs, VOCs, Organic & Inorganic Acids			Fiberglass	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
<b>Building S-19</b>											
19	19D	19ST-1-RTO	CS8000	In-Service	RTO1B	HAPs	Carbon Steel	8000	Solvent Storage	NA	Tanks Program and LDAR Emission Factors
19	19F	19ST-2-ATM	CS12501	In-Service	Atmosphere	VOCs	Carbon Steel	12500	Solvent Storage	40 CFR Part 60 Subpart Kb	Tanks Program and LDAR Emission Factors
19	19I	19ST-3-RTO	SS10000	In-Service	RTO1B	HAPs, VOC	Stainless Steel	10000	Solvent Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and LDAR Emission Factors
<b>Building S-19A</b>											
19A	ATM	19A-1-ATM	TC03001	Idle	ATM	Air	Continental 1 Boiler Works		Reserve Air, South	NA	NA
19A	ATM	19A-2-ATM	TC03002	Idle	ATM	Air	Continental 1 Boiler Works		Reserve Air, Center	NA	NA
19A	ATM	19A-3-ATM	TC03003	Idle	ATM	Air	Continental 1 Boiler Works		Reserve Air, North	NA	NA
19A	ATM	19A-4-ATM	TC03004	Idle	ATM	Air	Tiger Steel		Instrument Air	NA	NA
19A	ATM	19A-5-ATM	CS400	Idle	ATM	Sodium Hydroxide	Tiger Steel	400	High Pressure Sodium Hydroxide Feed	NA	NA
19A	RTO	19A-6-RTO	CS2700	Idle	ATM	HAPs, VOCs	Pressure Products	2700	Relief Tank for S19A	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance

Building LD. No.	Emission EIQ Vent ID	Equipment Permit ID	Archimica Equipment Number	In-Service :Idle or Removed	Vents To	Emissions Associated with the Unit	Make	Model	Service	MACT Applicability	Compliance Method
19A	RTO	19A-7- RTO	FG100	Idle	RTO	HAPs, VOCs	Viatec Hastings Engineering	100	RTO Expansion Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
19A	RTO1B	19A-8- RTO	GL1012	Idle	RTO	HAPs, VOCs	De Dietrich	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-9- RTO	GL2002	Idle	RTO	HAPs, VOCs	Pfandler	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-10- RTO	GL3000	Idle	RTO	HAPs, VOCs	Pfandler	3000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-11- RTO	GL3001	Idle	RTO	HAPs, VOCs	Pfandler	3000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-12- RTO	GL3003	Idle	RTO	HAPs, VOCs	De Dietrich	3000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-13- ATM	KL300	Idle	ATM	Organic & Inorganic Acid Gases	Steel Pro Inc.	3000	Halogen Knockout Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
19A	RTO1B	19A-14- RTO	SS65	Idle	RTO	HAPs, VOCs	Letco	65	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-15- RTO	SS100	Idle	RTO	HAPs, VOCs	Custom Metalcraft	100	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-16- RTO	SS125	Idle	RTO	HAPs, VOCs	Murphy Company	125	Wastewater Vac Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-17- RTO	SS250	Idle	RTO	HAPs, VOCs	Letco	250	Screen Wash Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	ATM	19A-18- RTO	SS1002	Idle	ATM	Water Vapor	Stainless Steel	2000	Condensate Receiver	NA	NA
19A	RTO1B	19A-19- RTO	SS1004	Idle	RTO	Sodium Sulfite	D&W Welding	1000	Sodium Sulfite	NA	NA
19A	RTO1B	19A-20- RTO	SS1016	Idle	RTO	HAPs, VOCs	Letco	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-21- RTO	SS1600	Idle	RTO	HAPs, VOCs	Letco	1600	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-22- RTO	SS2002	Idle	RTO	HAPs, VOCs	Stainless Steel	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-23- RTO	SS2008	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-24- RTO	SS2009	Idle	RTO	HAPs, VOCs	Stainless Steel	2000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-25- RTO	SS2010	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-26- RTO	SS2012	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-27- RTO	SS3000	Idle	ATM	HAPs, VOCs	Letco	3000	Wastewater Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-28- RTO	SS6001	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-29- RTO	SS6002	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-30- RTO	SS6003	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-31- RTO	SS6005	Idle	RTO	HAPs, VOCs	Letco	6000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-32- RTO	Cyclone Demister	Idle	RTO	HAPs, VOCs			Cyclone Demister	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-33- RTO	KL-1000	Idle	RTO	Organic & Inorganic Acid Gases, Cyanides		1000	Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-34- ATM	Halogen Scrubber	Idle	ATM	Organic & Inorganic Acid Gases			Halogen Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-35- ATM	GL-125	Idle	ATM	Organic & Inorganic Acid Gases			H2SO4 Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-36- RTO	GL-1013	Idle	RTO	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-37- RTO	SS-2000	Idle	RTO	HAPs, VOCs		2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-38- RTO	SS-751	Idle	RTO	HAPs, VOCs		750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-39- RTO	SS-1014	Idle	RTO	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-40- RTO	SS-203	Idle	RTO	HAPs, VOCs		200	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	RTO1B	19A-41- RTO	Rosenmund	Idle	RTO	HAPs, VOCs	Stainless Steel		Filter/Dryer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19K	19A-42- ATM	SS-600	Idle	ATM	HAPs, VOCs		200	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19A	19A	19A-43- ATM	House Scrubber - T302003	Idle	Atmosphere	HAPs, VOCs, Organic & Inorganic Acids			House Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
<b>Building S-19B</b>											
19B	RTO1B	19B-1- RTO	SS70	Idle	RTO	HAPs, VOCs	Letco	70	Screen Wash	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-2- RTO	SS500	Idle	RTO	HAPs, VOCs	Letco	500	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-3- RTO	SS501	Idle	RTO	HAPs, VOCs	Precision Stainless	500	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-4- RTO	SS1005	Idle	RTO	HAPs, VOCs	Letco	1000	Process Vessel & Column	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-5- RTO	SS1006	Idle	RTO	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-6- RTO	SS1007	Idle	RTO	HAPs, VOCs	Letco	1000	Process Vessel & Column	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-7- RTO	SS1008	Idle	RTO	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-8- RTO	SS1009	Idle	RTO	HAPs, VOCs	Letsch	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation

Building LD. No.	Emission EIQ Vent ID	Equipment Permit ID	Archimica Equipment Number	In-Service :Idle or Removed	Vents To	Emissions Associated with the Unit	Make	Model	Service	MACT Applicability	Compliance Method
19B	RTO1B	19B-9- RTO	SS1010	Idle	RTO	HAPs, VOCs	Letsch	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-10- RTO	SS1011	Idle	RTO	HAPs, VOCs	Letco	1000	Process Vessel & Column	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-11- RTO	SS1012	Idle	RTO	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-12- RTO	SS1013	Idle	RTO	HAPs, VOCs	Custom Metalcraft	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-13- RTO	SS2004	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-14- RTO	SS2011	Idle	RTO	HAPs, VOCs	Letco	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	19B	19B-15- ATM	SS1015	Idle	ATM	HAPs, VOCs		1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-16- RTO	SS200	Idle	RTO	HAPs, VOCs		200	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-17- RTO	SS201	Idle	RTO	HAPs, VOCs		200	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	RTO1B	19B-18- RTO	SS202	Idle	RTO	HAPs, VOCs		200	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	19B	19B-19- ATM	Flaker & Filter	Idle	ATM	HAPs, VOCs			Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19B	19B	19B-20- ATM	Condensate Mover in S19B	Idle	ATM	Water Vapor	Carbon Steel		Condensate Mover	NA	NA
19B	RTO1B	19B-21- RTO	SIHi Vacuum Pump	Idle	RTO	HAPs, VOCs		SIHi	Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
<b>Building S-19C</b>											
19C	RTO1C	19C-1- RTO	Centrifuge	Idle	RTO	HAPs, VOCs	Krauss- Maffei		Centrifuge	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-2- RTO	FG101	Idle	RTO	HAPs, VOCs	Tankinetic s	100	RTO Expansion Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
19C	RTO1C	19C-3- RTO	GL1000	Idle	RTO	HAPs, VOCs	Pfautler	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-4- RTO	GL1001	Idle	RTO	HAPs, VOCs	Pfautler	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-5- RTO	GL1005	Idle	RTO	HAPs, VOCs	Pfautler	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-6- RTO	GL1009	Idle	RTO	HAPs, VOCs	Pfautler	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-7- RTO	GL1010	Idle	RTO	HAPs, VOCs	Pfautler	1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-8- RTO	GL2001	Idle	RTO	HAPs, VOCs	Pfautler	2000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-9- RTO	GL3002	Idle	RTO	HAPs, VOCs	Pfautler	3000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-10- RTO	SS53	Idle	RTO	HAPs, VOCs	Sterling/Si Hi	50	Vacuum System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	19C	19C-11- ATM	SS301	Idle	ATM	Water Vapor	Vesselcraft	300	Vent for Condensate Mover	NA	NA
19C	RTO1C	19C-12- RTO	KL-1000	Idle	RTO	HAPs, VOCs	Letco	1000		40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-13- RTO	SS1017	Idle	RTO	HAPs, VOCs	Tiger Steel	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-14- RTO	SS1800	Idle	RTO	HAPs, VOCs	Stainless Steel	1800	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-15- RTO	SS1800-Decanter	Idle	RTO	HAPs, VOCs	Stainless Steel	1800	Decanter	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-16- RTO	SS2600	Idle	RTO	HAPs, VOCs	Stainless Steel	2600	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-17- RTO	SS2600-Decanter	Idle	RTO	HAPs, VOCs	Stainless Steel	2600	Decanter	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-18- RTO	GL1011	Idle	RTO	HAPs, VOCs		1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-19- RTO	GL1014	Idle	RTO	HAPs, VOCs		1000	Reactor	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-20- RTO	SS Tote #3	Idle	RTO	HAPs, VOCs	Stainless Steel	300	Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-21- RTO	SIHi Vac Pump	Idle	RTO	HAPs, VOCs	SIHi		Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	RTO1C	19C-22- RTO	BUSCH Vac Pump	Idle	RTO	HAPs, VOCs	BUSCH		Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	19U	19C-23- ATM	Condensate Mover in S19C	Idle	ATM	Water Vapor	Stainless Steel	300	Condensate Mover	NA	NA
19C	RTO1C	19C-24- RTO	Drum Warmer	Idle	RTO	HAPs, VOCs			Drum Warmer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	19R	19C-25- ATM	Cyanide Scrubber	Idle	Atmosphere	Cyanide			Cyanide Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19C	19V	19C-26- ATM	Dust Collector for SS2600	Idle	ATM	Dust			Dust Collector for SS2600	NA	NA
<b>Building S-19D</b>											
19D	19K	19D-1- ATM	GL513	Idle	Atmosphere	Halogens, HAPs	Pfautler	500	Halogen and Raw Material Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19D	19K	19D-2- ATM	GL514	Idle	Atmosphere	Halogens, HAPs	Pfautler	500	Halogen and Raw Material Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19D	19K	19D-3- ATM	GL515	Idle	Atmosphere	Halogens, HAPs	Pfautler	500	Halogen and Raw Material Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19D	19K	19D-4- ATM	GL516	Idle	Atmosphere	Halogens, HAPs	Pfautler	500	Halogen and Raw Material Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19D	19K	19D-6- ATM	GL517	Idle	Atmosphere	Halogens, HAPs	Pfautler	500	Halogen and Raw Material Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19D	19K	19D-8- ATM	LL5000	Idle	Atmosphere	Halogens, HAPs	Kickham	Leadlined 5000	Halogen and Raw Material Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19D	19K	19D-9- ATM	LL5001	Idle	Atmosphere	Halogens, HAPs	Kickham	Leadlined 5000	Halogen and Raw Material Storage	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation



Building L.D. No.	Emission EIQ Vent ID	Equipment Permit ID	Archimica Equipment Number	In-Service :Idle or Removed	Vents To	Emissions Associated with the Unit	Make	Model	Service	MACT Applicability	Compliance Method
19D	RTO1C	19D-10-RTO	Vac Pump #1	Idle	RTO	Halogens, HAPs	BUSCH		Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19D	RTO1C	19D-11-RTO	Vac Pump #2	Idle	RTO	Halogens, HAPs	BUSCH		Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
<b>S19E</b>											
19E	RTO1B	19E-1-RTO	CS101	Idle	RTO	Methyl Chloride	GJ Oliver	100	Methyl Chloride Knockout Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
19E	RTO1B	19E-2-RTO	Expansion Chamber	Idle	RTO	Methyl Chloride	Metraflex	24 - 4.3gal	Methyl Chloride Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19E	RTO1B	19E-3-RTO	CS1600	Idle	RTO	Methyl Chloride	Carbon Steel	1600	Emergency Relief Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
19E	RTO1B	19E-4-RTO	CS12002	Idle	RTO	Methyl Chloride	GJ Oliver	12000	Methyl Chloride Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
19E	ATM	19E-5-ATM	Tempered Water Tank for 19C	Idle	Atmosphere	Water Vapor	Letco		Tempered Water Tank for 19C	NA	NA
<b>Building S19-O</b>											
19O	19O	19O-1-ATM	Hot Oil Unit #1	Idle	Atmosphere	VOC			A-Line Heating System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	19O	19O-2-ATM	Hot Oil Unit #2	Idle	Atmosphere	VOC			B-Line Heating System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	19O	19O-3-ATM	Hot Oil Unit #3	Idle	Atmosphere	VOC			C-Line Heating System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	19O	19O-4-ATM	Hot Oil Unit #4	Idle	Atmosphere	VOC			D-Line Heating System	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-5-RTO	Vacuum Pump	Idle	RTO	VOCs			A-Line Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-6-RTO	Oil Reservoir	Idle	RTO	VOCs			A-Line Oil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-7-RTO	Waste Oil Reservoir	Idle	RTO	VOCs			A-Line WasteOil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-8-RTO	Vacuum Pump	Idle	RTO	VOCs			B-Line Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-9-RTO	Oil Reservoir	Idle	RTO	VOCs			B-Line Oil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-10-RTO	Waste Oil Reservoir	Idle	RTO	VOCs			B-Line WasteOil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-11-RTO	Vacuum Pump	Idle	RTO	VOCs			C-Line Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-12-RTO	Oil Reservoir	Idle	RTO	VOCs			C-Line Oil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-13-RTO	Waste Oil Reservoir	Idle	RTO	VOCs			C-Line WasteOil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-14-RTO	Vacuum Pump	Idle	RTO	VOCs			D-Line Vacuum Pump	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-15-RTO	Oil Reservoir	Idle	RTO	VOCs			D-Line Oil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-16-RTO	Waste Oil Reservoir	Idle	RTO	VOCs			D-Line WasteOil Reservoir	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
19O	RTO1O	19O-17-RTO	Knock Out Pot for A,B,C Line compressors	Idle	RTO	VOCs			Knock Out Pot for A,B,C Line compressors	40 CFR Part 63 Subpart GGG and Subpart FFFF	Mass Balance
<b>Building S22</b>											
22	22C	22-8-ATM	Propane Tank	In-Service	Atmosphere	VOCs (Fugitives)	Carbon Steel	500	Propane Tank	NA	SCC 40781605 Petroleum & Solvent Evaporation--Pressure Tanks--Propane--Withdrawal Losses
22	22D	22-9-ATM	Parts Washer/Degreaser	In-Service	Atmosphere	VOCs (Fugitives)	Safety-Kleen		Parts Washer/Degreaser	NA	SCC 40100251 Petroleum & Solvent Evaporation General Degreasing Units
22	22E1	22-10-ATM	Emergency Electrical Power Generator #1	In-Service	Atmosphere	PM2.5, PM10, SOx, NOx, VOC, CO	Caterpillar	3306T	Emergency Electric Power Generator (Fuel Oil No.2)	NA	AP-42 Sect 1.3
22	22E2	22-11-ATM	Emergency Electrical Power Generator #2	In-Service	Atmosphere	PM2.5, PM10, SOx, NOx, VOC, CO	Onan		Emergency Electric Power Generator (Fuel Oil No.2)	NA	AP-42 Sect 1.3
22	22G	22-12-ATM	Maintenance Spray Hood	In-Service	Atmosphere	HAPs, VOCs			Maintenance Spray Hood	NA	SCC 402001100 Petroleum & Solvent Evaporation Surface Coating
22	22H	22-13-ATM	Nitrogen System	In-Service	Atmosphere	N2			S-3, PSA - Nitrogen Generation System	NA	NA
22	22I	22-14-ATM	Chiller (S39)	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Vilter		Chiller	NA	AP-42 Sect 13.1
22	22J	22-15-ATM	CS2300 Chiller Tank	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Carbon Steel	2300	Chiller Tank	NA	AP-42 Sect 13.2
22	22K	22-16-ATM	Chiller (S14)	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Vilter		Chiller	NA	AP-42 Sect 13.3
22	22L	22-17-ATM	CS5000 Chiller Tank	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Carbon Steel	Tiger Steel	Chiller Tank	NA	AP-42 Sect 13.4
22	22M	22-18-ATM	Ventilation System #1 for Maintenance Welding	In-Service	Atmosphere	PM2.5, PM10, Welding Fumes	Fred Junior		Ventilation for Maintenance Welding	NA	SCC3090550 Fabricated Metal Products --Electrogas Welding
22	22N	22-19-ATM	Ventilation System #2 for Maintenance Welding	In-Service	Atmosphere	PM2.5, PM10, Welding Fumes			Ventilation for Maintenance Welding	NA	SCC3090550 Fabricated Metal Products --Electrogas Welding
22	22O	22-20-ATM	Nitrogen Tank & Evaporators	In-Service	Atmosphere	Nitrogen			North Nitrogen Tank	NA	NA

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22	22P	22-21-ATM	Nitrogen Tank & Evaporators	In-Service	Atmosphere	Nitrogen			South Nitrogen Tank	NA	NA
<b>Building S-25</b>											
25	25C	25-1-TO	103	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-2-TO	105	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	1000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-3-TO	106	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-4-TO	108	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	1750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-5-TO	109	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	1750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-6-TO	201	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	1750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-7-TO	202	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	700	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-8-TO	203	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-9-TO	204	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-10-TO	205	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	500	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-11-TO	206	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	250	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-12-TO	207	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	250	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-13-TO	208	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	250	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-14-TO	209	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-15-TO	210	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	SS-750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-16-TO	T-211	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-17-TO	212	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	900	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-18-TO	213	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	750/Column	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-19-TO	214	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	400	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-20-TO	T-215	Idle	Thermal Oxidizer	HAPs, VOCs	Carbon Steel	750	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-21-TO	T-218	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	500	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-22-TO	T-219	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	300	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-23-TO	222	Idle	Thermal Oxidizer	HAPs, VOCs	Stainless Steel	900	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-24-TO	T262	Idle	Thermal Oxidizer	HAPs, VOCs	Tiger Steel	2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-25-TO	T268	Idle	Thermal Oxidizer	HAPs, VOCs	Tiger Steel	CS2000	Process Vessel	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25C	25-26-TO	CS2500	Idle	Thermal Oxidizer	HAPs, VOCs	Tiger Steel	2500	Emergency Relief Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25T	25-27-ATM	Hot Water Bath by SW Corner	Idle	Atmosphere	Water		200	Hot Water Bath by SW Corner	NA	NA
25	25U	25-28-ATM	Electric Heater	Idle	Atmosphere	NA	Fulton Electric Heater		Process Heater (Electric)	NA	NA
25	25V	25-29-ATM	Chiller Unit	Idle	Atmosphere	PM2.5, PM10			Skid Mounted Chiller Unit	NA	AP-42 Sect 13.4
25	25D1	25-30-ATM	Glycol Heater #1	Idle	Atmosphere	Natural Gas Usage Dependant: NOx, SOx, PM2.5, PM10, HAPs, VOC, CO, NH3	Bryan Boiler		Process Heater (Natural Gas)	NA	AP-42 Sect 1.4
25	25D2	25-31-ATM	Glycol Heater #2	Idle	Atmosphere	Natural Gas Usage Dependant: NOx, SOx, PM2.5, PM10, HAPs, VOC, CO, NH3	Bryan Boiler		Process Heater (Natural Gas)	NA	AP-42 Sect 1.4
25	25Q	25-32-ATM	T265 (NO LABEL)	Idle	Atmosphere	Air	Carbon Steel	265	Plant Air Receiver	NA	NA
25	25U	25-33-ATM	Pressure Tank #1	Idle	Atmosphere	HAPs, VOC			Knock-out Vessel for TO	40 CFR Part 63 Subpart GGG and Subpart FFFF	Process Evaluation
25	25E	25-34-ATM	CS10001 (T252)	Idle	Atmosphere	HAPs, VOC	Tiger Steel	Carbon Steel 10000	Solvent Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and EPA Leaks Emission Factors
25	25F	25-35-ATM	CS11000 (T255)	Idle	Atmosphere	HAPs, VOC	Custom Fabrication	Carbon Steel 11000	Solvent Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and EPA Leaks Emission Factors
25	25G	25-36-ATM	CS10002 (T253)	Idle	Atmosphere	HAPs, VOC	Tiger Steel	Carbon Steel 10000	Solvent Storage Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and EPA Leaks Emission Factors
25	25I	25-37-ATM	CS6006 (T254)	Idle	Atmosphere	HAPs, VOC	Crown Tank	Carbon Steel 6000	Solvent Storage Tank	NA	Tanks Program and EPA Leaks Emission Factors
25	25J	25-38-ATM	SS6005 (T250)	Idle	Atmosphere	HAPs, VOC	Crown Tank	Stainless Steel 6000	Solvent Storage Tank	NA	Tanks Program and EPA Leaks Emission Factors
25	25R	25-39-ATM	T260 (NO LABEL)	Idle	Atmosphere	HAPs, VOC	Carbon Steel	260	Hot Glycol Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and EPA Leaks Emission Factors
25	25S	25-40-ATM	T261 (NO LABEL)	Idle	Atmosphere	HAPs, VOC	Carbon Steel	260	Low Temperature Glycol Storage Receiver	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and EPA Leaks Emission Factors
25	25X	25-41-ATM	Raw Material Receiver	Idle	Atmosphere	HAPs, VOC			Raw Material - Small on scales	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and EPA Leaks Emission Factors

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25	25Y	25-42-ATM	T258	Idle	Atmosphere	HAPs, VOC	Carbon Steel	11000	Raw Material - Large	40 CFR Part 63 Subpart GGG and Subpart FFFF	Tanks Program and EPA Leaks Emission Factors
25	25Z	25-43-ATM	Propane Tank	Idle	Atmosphere	HAPs, VOC	Carbon Steel	1000	Propane tank for Thermal Oxidizer	NA	SCC 40781605 Petroleum & Solvent Evaporation--Pressure Tanks--Propane--Withdrawal Losses
25	25A	25-44-ATM	Bag Filter	Idle	Atmosphere	PM2.5, PM10			Solids Filter	NA	Manufacturer's Specifications
25	25A	25-45-ATM	S25 East Scrubber	Idle	Atmosphere	HAPs, Organic & Inorganic Acids	MetPro		Scrubber	NA	Mass Balance
25	25C	25-46-TO	Thermal Oxidizer	Idle	Atmosphere	Natural Gas Usage Dependant: NOx, SOx, HAPs, VOC, PM2.5, PM10, CO, NH3	Canavan		Thermal Oxidizer	NA	AP-42 Sect 1.4
<b>Cooling Towers</b>											
22	22F1	22-1-ATM	Cooling Tower (S-8)	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Marley	250	Cooling Tower	NA	AP-42 Sect 13.4
22	22F3	22-2-ATM	Cooling Tower (S-14)	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Marley	250	Cooling Tower	NA	AP-42 Sect 13.5
22	22F4	22-3-ATM	Chiller (S-40)	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Marley	1100	Chiller	NA	AP-42 Sect 13.6
22	22F5	22-4-ATM	Cooling Tower (S19)	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Marley	500	Cooling Tower	NA	AP-42 Sect 13.7
22	22F6	22-5-ATM	Cooling Tower (S25)	Idle	Atmosphere	PM2.5, PM10, Water Vapor	Marley	150	Cooling Tower	NA	AP-42 Sect 13.8
22	22F4	22-6-ATM	CS-1600	In-Service	Atmosphere	PM2.5, PM10, Water Vapor	Carbon Steel	1600	Surge Tank	NA	NA
<b>Drum Steamer/Washer 13A</b>											
13	13A	13-1-ATM	Drum Steamer/Washer	In-Service	Atmosphere	HAPs = <900 kg/12-month rolling totals; VOCs = <2 tons/year	Stainless Steel		Drum Steamer and Washer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Engineering Calculations
13	13A	13-2-ATM	Heil Scrubber	In-Service	Atmosphere	HAPs, VOCs	Fiberglass		Scrubber	40 CFR Part 63 Subpart GGG and Subpart FFFF	NA
<b>Fuel Oil Tanks</b>											
22	22A	22-6-ATM	CS8300	In-Service	Atmosphere	VOCs	Carbon Steel	8300	Fuel Oil #2 Storage Tank	NA	Tanks Emissions Program
22	22A	22-7-ATM	CS4000	In-Service	Atmosphere	VOCs	Carbon Steel	4000	Fuel Oil #2 Storage Tank	NA	Tanks Emissions Program
<b>Groundwater Treatment System Equipment</b>											
GWS	GWS	GWS-1-ATM	Air Stripper	In-Service	Atmosphere	HAPs = <0.5 tons/year VOCs = <0.5 tons/year	Carbon Steel		Air Stripper for Wastewater Treatment	NA	Engineering Calculations
GWS	GWS	GWS-2-ATM	CS200	Idle-damaged	Atmosphere	HAPs = <0.1 tons/year VOCs = <0.1 tons/year	Carbon Steel	200	Splitter for IT04 Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-3-ATM	CS300	Idle	Atmosphere	HAPs = <0.1 tons/year VOCs = <0.1 tons/year	Carbon Steel	300	Wastewater Tank	NA	Engineering Calculations
GWS	GWS	GWS-4-ATM	HDPE-4500-1	In-Service	Atmosphere	HAPs = <0.1 tons/year VOCs = <0.1 tons/year	High Density Polypropylene	4500	Holding Tank for Pumped Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-5-ATM	HDPE-4500-2	Idle - Uninstalled	Atmosphere	HAPs = <0.1 tons/year VOCs = <0.1 tons/year	High Density Polypropylene	4500	Holding Tank for Pumped Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-6-ATM	SS-180-1	In-Service	Atmosphere	HAPs = <0.1 tons/year VOCs = <0.1 tons/year	Stainless Steel	180	Splitter for IT06 Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-7-ATM	SS-180-2	In-Service	Atmosphere	HAPs = <0.1 tons/year VOCs = <0.1 tons/year	Stainless Steel	180	Splitter for SXD1 Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-8-ATM	SS-180-3	Idle	Atmosphere	HAPs = <0.1 tons/year VOCs = <0.1 tons/year	Stainless Steel	180	Splitter for Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-9-ATM	ST-8	In-Service	Atmosphere	Water Vapor	Concrete		Holding Tank for Treated Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-10-ATM	ST-9	In-Service	Atmosphere	Water Vapor	Concrete		Holding Tank for Treated Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-11-ATM	ST-10	In-Service	Atmosphere	Water Vapor	Concrete		Holding Tank for Treated Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-12-ATM	ST-11	In-Service	Atmosphere	Water Vapor	Concrete		Holding Tank for Treated Groundwater	NA	Engineering Calculations
GWS	GWS	GWS-13-ATM	Green Poly Tank	In-Service	Atmosphere	Water Vapor	Poly	425	Miscellaneous ground water treatment tank	NA	Engineering Calculations
GWS	GWS	GWS-14-ATM	New Poly Tank	Idle	Atmosphere	Water Vapor	Poly	525	Holding Tank for Treated Groundwater by S-29	NA	Engineering Calculations
<b>Regenerative Thermal Oxidizer</b>											
RTO	RTO1A	RTO-1-Natural Gas	RTO1A	In-Service	Post Scrub	NOx, SOx, PM2.5, PM10, CO, NH3, HAPs, VOCs	Reeco	E-22000	Regenerative Thermal Oxidizer	NA	AP-42 Sect 1.4

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RTO	RTO1B	RTO-2- Process Emissions (S19, S28, S4, S3)	RTO1B	In-Service	O Post Scrub	HAPs, VOCs	Reeco	E-22000	Regenerative Thermal Oxidizer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Testing
RTO	RTO2	RTO-3- Process Emissions (S14)	RTO2	In-Service	O Post Scrub	HAPs, VOCs	Reeco	E-22000	Regenerative Thermal Oxidizer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Testing
RTO	RTO3	RTO-4 RTO Fugitive Emission	RTO3	In-Service	gitive Emissi	HAPs, VOCs	Reeco		Regenerative Thermal Oxidizer	40 CFR Part 63 Subpart GGG and Subpart FFFF	EPA Leak Emission Factors
RTO	RTO4	RTO-5	RTO4	In-Service	O Post Scrub	HAPs, VOCs,	Letco	Hasteloy	Quench Tower for Regenerative Thermal Oxidizer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Testing
RTO	RTO5	RTO-6	FG500	In-Service	Atmosphere	HAPs, VOCs	Fiberglass	500	Regenerative Thermal Oxidizer Knockout Vessel - T-102	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emergency Relief Vent - Mass Balance
RTO	RTO1B, RTO1C, RTO2	RTO-6	RTO Post Scrubber	In-Service	Atmosphere	HAPs, VOCs, Organic & Inorganic Acids	Reeco	E-22000	Regenerative Thermal Oxidizer	40 CFR Part 63 Subpart GGG and Subpart FFFF	Testing
<b>Tank 05A Wastewater</b>											
5	05A	05-1-ATM	CS30000	In-Service	Atmosphere	HAPs, VOCs	Carbon Steel	30000	Process Wastewater Tank (neutralization and equalization)	40 CFR Part 60 Subpart Kb	Tanks Emission Programs and Emission Factors
<b>Wastewater Treatment Equipment</b>											
WW	WWAS-01	WW-1- RTO	PEG Air Stripper	In-Service	RTO	HAPs, VOCs, Water Vapor	NEEP	3651	Air Stripper for Wastewater Treatment	40 CFR Part 63 Subpart GGG and Subpart FFFF	Testing
WW	WWAS-02	WW-2- RTO	Alternate Air Stripper	In-Service	RTO	HAPs, VOCs, Water Vapor	NEEP	41251	Air Stripper for Wastewater Treatment	40 CFR Part 63 Subpart GGG and Subpart FFFF	Testing
WW	WW7601	WW-3- RTO	CS7601	In-Service	RTO	HAPs, VOCs, Water Vapor	Carbon Steel	7600	Wastewater Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	EPA Fugitive Emission Factors
WW	WW7602	WW-4- RTO	CS7602	In-Service	RTO	HAPs, VOCs, Water Vapor	Carbon Steel	7600	Wastewater Tank	40 CFR Part 63 Subpart GGG and Subpart FFFF	EPA Fugitive Emission Factors
<b>Uninstalled Spare Equipment</b>											
29	NA	29X-1- ATM	SS-3010	Removed	Atmosphere	NA	Stainless Steel, Watson	3000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
29	NA	29X-2- ATM	GL-3010	Removed	Atmosphere	NA	Glass Lined Carbon Steel	3000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
29	NA	29X-3- ATM	GL-110	Removed	Atmosphere	NA	Glass Lined Carbon Steel, Ceramic Coatings Co.	100	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
29	NA	29X-4- ATM	SS-1019	Removed	Atmosphere	NA	Stainless Steel	1000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
29	NA	29X-5- ATM	SS-201	Removed	Atmosphere	NA	Stainless Steel	200	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
29	NA	29X-6- ATM	GL-3020	Removed	Atmosphere	NA	Glass Lined Carbon Steel	3000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
29	NA	29X-7- ATM	GL-1020	Removed	Atmosphere	NA	Glass Lined Carbon Steel, Pfaudler	1000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
29	NA	29X-8- ATM	GL-1030	Removed	Atmosphere	NA	Glass Lined Carbon Steel, DeDietrich	1000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
25	NA	25X-1- ATM	CS-12010	Removed	Atmosphere	NA	Carbon Steel	12000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
25	NA	25X-1- ATM	GL-3022	Removed	Atmosphere	NA	Glass Lined Carbon Steel	3000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
25	NA	25X-1- ATM	TS020002	Removed	Atmosphere	NA	Stainless Steel	200	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
25	NA	25X-1- ATM	GL-3020	Removed	Atmosphere	NA	Glass Lined Carbon Steel, Pfaudler	3000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass
25	NA	25X-1- ATM	GL-510	Removed	Atmosphere	NA	Glass Lined Carbon Steel, Pfaudler	500	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance Mass

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25	NA	25X-1-ATM	GL-2010	Removed	Atmosphere	NA	Glass Lined Carbon Steel, DeDietrich	2000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance      Mass
25	NA	25X-1-ATM	GL-520	Removed	Atmosphere	NA	Glass Lined Carbon Steel	500	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance      Mass
25	NA	25X-1-ATM	GL-530	Removed	Atmosphere	NA	Glass Lined Carbon Steel	500	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance      Mass
25	NA	25X-1-ATM	GL-540	Removed	Atmosphere	NA	Glass Lined Carbon Steel	500	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance      Mass
25	NA	25X-1-ATM	SS-520 Scrubber	Removed	Atmosphere	NA	Stainless Steel	500	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance      Mass
25	NA	25X-1-ATM	RS-12010	Removed	Atmosphere	NA	Resin	12000	None	40 CFR Part 63 Subpart GGG and Subpart FFFF	Emission Factors/ Balance      Mass

## Attachment A: Compliance Calculations and Worksheet

Archimica Inc.  
Greene County, S29 T27N, R22W  
Project Number: 2009-04-033  
Installation ID Number: 077-0017  
Permit Number:

The calculation methods for demonstrating compliance with Special Condition 2 (A) are described below. Table A provides an example worksheet that will be used to identify the sources of pollutant emissions, the emissions calculations method used, and the monthly emissions (tons). In the event of a discrepancy between any emissions calculation methodology listed in Table A and those in 40 CFR Part 63 Subpart GGG, *National Emission Standards Pharmaceuticals Production*, and Subpart FFF, *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing*, combined with any EPA or Air Pollution Control Program policies, shall take precedence.

In the event more than one emission factor is available for compliance, Archimica Inc. shall use the most accurate emission factor in the order presented: (1) most recent stack tests results, (2) mass balance, (3) emission factors approved by the Air Pollution Control Program, (4) most recent AP-42 compilation.

### **Recordkeeping – Process Evaluation for VOC Emissions**

On each day of operation, the Permittee shall record and maintain records of the total quantity of all materials used at the emission units identifying “process evaluation” as the emissions calculation method in Table A. The Permittee may request an extension of the record completion date by submitting the request in writing to the Staff Director. The request must be received at least ten days prior to the 20<sup>th</sup> of the month and must state if an exceedance of the PAL limit is expected. If a request is not made, by the 20<sup>th</sup> of the month, the Permittee shall calculate and record emissions based on one of the following methods:

1. Mass Balance
  - A. The total usage of VOC containing materials for the previous calendar month using the daily VOC emission records. The record shall also include the VOC content of each material as determined by (1) Material Safety Data Sheet, (2) laboratory test data or (3) product specification information, which ever is most representative for each material used; the record shall indicate the source of VOC content for each material used. Other alternative methods approved by the Director may be used. The Director reserves the right to require the Permittee to determine the VOC contents of any material according to EPA reference methods. The amount of VOC emissions for each month shall be determined by multiplying the amount of VOC containing materials used by the VOC content of each material.

- B. The VOC emissions for each emissions unit and the total facility for the previous month. VOC emissions shall be determined from the total VOC containing materials used for each emissions unit multiplied by one minus the capture efficiency for each emissions unit multiplied by the control efficiency of the control device used, as represented in the following equation:

$$\text{VOC emissions} = \text{VOC used} (1 - \text{capture efficiency} \times \text{control efficiency})$$

Where:

- VOC emissions are expressed as pounds (or tons)
- VOC used is expressed as pounds (or tons)
- Capture efficiency is expressed as a fraction (i.e., percent capture divided by 100)
- Control efficiency is expressed as a fraction (i.e., percent capture divided by 100)

Total facility VOC emissions shall be calculated by summing the VOC emissions from each emissions unit.

- C. The twelve month rolling sum VOC emission for the previous twelve month period. This will be accomplished by summing the monthly VOC emissions data for the previous twelve months. This number shall be used to demonstrate compliance with Special Condition 2(A).

2. **MACT Compliance**

The VOC emissions for each emissions unit shall be determined as described in MACT Subpart GGG §63.1257 through §63.1259 and/or MACT Subpart FFFF §63.2450 through §63.2535 for Compliance, Monitoring and Recordkeeping. Total facility VOC emissions shall be calculated by summing the VOC emissions from each emissions unit. The twelve month rolling sum VOC emission shall be determined for the previous twelve month period. This will be accomplished by summing the monthly VOC emissions data for the previous twelve months. This number shall be used to demonstrate compliance with Special Condition 2(A).

VOC emissions shall be recorded and maintained in a written or electronic form at the facility for a period of ten years.

**Recordkeeping – Emission Factors Based on EPA Documents**

On each day of operation, the Permittee shall record and maintain records of the total quantity of materials used or hours of operation for each emissions unit. The Permittee may request an extension of the record completion date by submitting the request in

writing to the Staff Director. The request must be received at least ten days prior to the 20<sup>th</sup> of the month and must state if an exceedance of the PAL limit is expected. If a request is not made, by the 20<sup>th</sup> of the month, the Permittee shall calculate and record the following:

1. The total usage of VOC containing materials or hours of operation for the previous calendar month using the daily production records. The record shall indicate which of the following emission factors were used to demonstrate compliance with Special Condition 2(A).
  - a. AP-42, *Compilation of Air Pollutant Emission Factors*
  - b. Protocol for Equipment Leak Emission Estimates (EPA-435/R-95-017) or LDAR program
  - c. TANKS Emissions Estimation Software, Version 4.09D
2. Emission factors obtained from the most recent edition of AP-42, *Compilation of Air Pollutant Emission Factors*, or other EPA document, must be approved by the Air Pollution Control Program prior to use in any compliance demonstrations to ensure that the most representative emission factor is being used. The emission factors listed in Table C are approved for use with the appropriate emission units. Documentation sufficient to support the emission factors must accompany Attachment A required by Special Condition 2(B).
3. The VOC emissions for each emissions unit and the total facility for the previous month. VOC emissions shall be determined by multiplying the quantity of materials used or hours of operation by an emissions factor, as represented in the following equation:

$$VOC\ emissions = Materials\ Used\ or\ Hours\ of\ Operation \times Emission\ Factor$$

A control or capture efficiency may be taken into account only if the emission factor used to determine the emissions is based on uncontrolled emissions.

Total facility pollutant emissions shall be calculated by summing the VOC emissions from each emissions unit.

4. The twelve month rolling sum of VOC emission for the previous twelve month period. This will be accomplished by summing the monthly VOC emissions data for the previous twelve months. This number shall be used to demonstrate compliance with Special Condition 2(A).

Emissions shall be recorded and maintained in a written or electronic form at the facility for a period of ten years.

#### **Recordkeeping – Emission Factor Obtained from Testing or Manufacturer’s Data**



On each day of operation, the Permittee shall record and maintain records of the total quantity of materials used or hours of operation for each emissions unit. The Permittee may request an extension of the record completion date by submitting the request in writing to the Staff Director. The request must be received at least ten days prior to the 20<sup>th</sup> of the month and must state if an exceedance of the PAL limit is expected. If a request is not made, by the 20<sup>th</sup> of the month, the Permittee shall calculate and record the following:

1. The total usage of VOC containing materials or hours of operation for the previous calendar month using the daily production records. The record shall indicate the emission factor used to demonstrate compliance with Special Condition 2(A).
  - a. Emission factors must be obtained from the most recent test performance as specified under Special Condition 10 and 11. Emission factors must be approved by the Air Pollution Control Program prior to use in any compliance demonstrations. The emission factors listed in Table C are approved for use with the appropriate emission units. A copy of the approved test results must accompany Attachment A required by Special Condition 2(B).
  - b. Emission factors obtained from manufacturer's data must be approved by the Air Pollution Control Program prior to use in any compliance demonstrations. The emission factors listed in Table C are approved for use with the appropriate emission units. A copy of the manufacturer's data must accompany Attachment A required by Special Condition 2(B).
2. The VOC emissions for each emissions unit and the total facility for the previous month. VOC emissions shall be determined by multiplying the quantity of materials used or hours of operation by an emissions factor, as represented in the following equation:

$$\text{VOC emissions} = \text{Materials Used or Hours of Operation} \times \text{Emission Factor}$$

Total facility VOC emissions shall be calculated by summing the VOC emissions from each emissions unit.

3. The twelve month rolling sum of VOC emission for the previous twelve month period. This will be accomplished by summing the monthly VOC emissions data for the previous twelve months. This number shall be used to demonstrate compliance with Special Condition 2(A).

Emissions shall be recorded and maintained in a written or electronic form at the facility for a period of ten years.

### **Recordkeeping – Engineering Calculations for VOC Emissions**

On each day of operation, the Permittee shall record and maintain records of the total quantity of all materials used at the emission units identifying “engineering calculations”

as the emissions calculation method in Table A. The Permittee may request an extension of the record completion date by submitting the request in writing to the Staff Director. The request must be received at least ten days prior to the 20<sup>th</sup> of the month and must state if an exceedance of the PAL limit is expected. If a request is not made, by the 20<sup>th</sup> of the month, the Permittee shall calculate and record the following:

1. The total usage of VOC containing materials for the previous calendar month using the daily VOC emission records. The record shall also include the VOC content of each material as determined by (1) Material Safety Data Sheet, (2) laboratory test data or (3) product specification information, which ever is most representative for each material used; the record shall indicate the source of VOC content for each material used. Other alternative methods approved by the Director may be used. The Director reserves the right to require the Permittee to determine the VOC contents of any material according to EPA reference methods. The amount of VOC emissions for each month shall be determined by multiplying the amount of VOC containing materials used by the VOC content of each material.
2. The VOC emissions for each emissions unit and the total facility for the previous month. VOC emissions shall be determined from the total VOC containing materials used for each emissions unit multiplied by one minus the capture efficiency for each emissions unit multiplied by the control efficiency of the control device used, as represented in the following equation:

$$VOC\ emissions = VOC\ used (1 - capture\ efficiency \times control\ efficiency)$$

Where:

- VOC emissions are expressed as pounds (or tons)
- VOC used is expressed as pounds (or tons)
- Capture efficiency is expressed as a fraction (i.e., percent capture divided by 100)
- Control efficiency is expressed as a fraction (i.e., percent capture divided by 100)

Total facility VOC emissions shall be calculated by summing the VOC emissions from each emissions unit.

3. The twelve month rolling sum VOC emission for the previous twelve month period. This will be accomplished by summing the monthly VOC emissions data for the previous twelve months. This number shall be used to demonstrate compliance with Special Condition 2(A).

## Attachment B: Pre-Approved Changes

Archimica Inc.

Greene County, S29 T27N, R22W

Project Number: 2009-04-033

Installation ID Number: 077-0017

Permit Number:

Pre-Approved Change			Regulated Substance	Applicable Standards	
				Federal	State of Missouri
1	Install	(a) Pharmaceutical process equipment [2], [3]	VOC, HAP	MACT: 40 CFR Part 63 Subpart GGG	10-CSR 10-6.075
		(b) Miscellaneous Organic NESHAP process equipment [4], [5]	VOC, HAP	MACT: 40 CFR Part 63 Subpart FFFF	10-CSR 10-6.075
		(c) Fixed Roof Storage Tank to support Pharmaceutical manufacturing.	VOC, HAP	If >10,000 gallons -- MACT: 40 CFR 63 Subpart GGG and NSPS: 40 CFR 60 Subpart Kb	10-CSR 10-6.075  10-CSR 10-6.070
		(d) Fixed Roof Storage Tank to support Miscellaneous Organic manufacturing.	VOC, HAP	If >10,000 gallons -- MACT: 40 CFR 63 Subpart FFFF and NSPS: 40 CFR 60 Subpart Kb	10-CSR 10-6.075  10-CSR 10-6.070
2	Modify	(a) Pharmaceutical manufacturing equipment [2], [3]	VOC, HAP	MACT: 40 CFR 63 Subpart GGG	10-CSR 10-6.075
		(b) Miscellaneous Organic NESHAP manufacturing equipment [4], [5]	VOC, HAP	MACT: 40 CFR 63 Subpart FFFF	10-CSR 10-6.075
		(c) Fixed Roof Storage Tank to support Pharmaceutical manufacturing.	VOC, HAP	If >10,000 gallons -- MACT: 40 CFR 63 Subpart GGG and NSPS: 40 CFR 60 Subpart Kb	10-CSR 10-6.075  10-CSR 10-6.070
		(d) Fixed Roof Storage Tank to support Miscellaneous Organic NESHAP manufacturing.	VOC, HAP	If >10,000 gallons -- MACT: 40 CFR 63 Subpart FFFF and NSPS: 40 CFR 60 Subpart Kb	10-CSR 10-6.075  10-CSR 10-6.070
3	Relocate	(a) Pharmaceutical manufacturing equipment.	VOC, HAP	MACT: 40 CFR 63 Subpart GGG	10-CSR 10-6.075
		(b) Miscellaneous Organic NESHAP manufacturing equipment.	VOC, HAP	MACT: 40 CFR 63 Subpart FFFF	10-CSR 10-6.075
		(c) Fixed Roof Storage Tank to support Pharmaceutical manufacturing.	VOC, HAP	If >10,000 gallons -- MACT: 40 CFR 63 Subpart GGG and NSPS: 40 CFR 60 Subpart Kb	10-CSR 10-6.075  10-CSR 10-6.070
		(d) Fixed Roof Storage Tank to support Miscellaneous Organic NESPAH manufacturing.	VOC, HAP	If >10,000 gallons -- MACT: 40 CFR 63 Subpart FFFF and NSPS: 40 CFR 60 Subpart Kb	10-CSR 10-6.075  10-CSR 10-6.070
4	Change Materials	(a) Use of new raw materials or ingredients in Pharmaceutical manufacturing.	VOC, HAP	MACT: 40 CFR 63 Subpart GGG	10-CSR 10-6.075
		(b) Use of new raw materials or ingredients in Miscellaneous Organic NESHAP manufacturing.	VOC, HAP	MACT: 40 CFR 63 Subpart FFFF	10-CSR 10-6.075
5	Install	Insignificant sources utilizing natural gas.	VOC, HAP, combustion products		

## Notes:

[1]	The terms <i>install</i> , <i>construct</i> , and <i>modify</i> , for purposes of this table, have operational rather than regulatory meaning. For example, in some cases one or more of the listed Pharmaceutical manufacturing projects might meet the regulatory definition of a <i>modification</i> rather than <i>construction</i> , according to its applicable regulation.
[2]	<p>The term <i>Pharmaceutical product</i> means: <i>40 CFR 63.1251 – Definitions</i></p> <p>“Any of the following materials, excluding any material that is a nonreactive solvent, excipient, binder, or filler, or any material that is produced in a chemical manufacturing process unit that is subject to the requirements of subparts F and G of this Part 63:</p> <ol style="list-style-type: none"> <li>(1) Any material described by the standard industrial classification (SIC) code 2833 or 2834; or</li> <li>(2) Any material whose manufacturing process is described by North American Industrial Classification System (NAICS) code 325411 or 325412; or</li> <li>(3) A finished dosage form of a drug, for example, a tablet, capsule, solution, etc.; or</li> <li>(4) Any active ingredient or precursor that is produced at a facility whose primary manufacturing operations are described by SIC code 2833 or 2834; or</li> <li>(5) At a facility whose primary operations are not described by SIC code 2833 or 2834, any material whose primary use is an active ingredient or precursor.” </li></ol>
[3]	<p>The term <i>Pharmaceutical Process</i> means: <i>40 CFR 63.1251 -Definitions</i></p> <p>“All equipment which collectively function to produce a pharmaceutical product or isolated intermediate (which is also a pharmaceutical product). A process may consist of one or more unit operations. For the purposes of <u>this subpart</u>, process includes any, all, or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a pharmaceutical isolated intermediate. Cleaning operations conducted are considered part of the process. Nondedicated solvent recovery operations located within a contiguous area within the affected source are considered single processes. A storage tank that is used to accumulate used solvent from multiple batches of a single process for purposes of solvent recovery does not represent the end of the process. Nondedicated formulation operations occurring within a contiguous area are considered a single process that is used to formulate numerous materials and/or products. Quality assurance and quality control laboratories are not considered part of any process. Ancillary activities are not considered a process or part of any process. Ancillary activities include boilers and incinerators (not used to comply with provisions of 63.1253, 63.1254, or 63.1256(h)), chillers and refrigeration systems, and other equipment and activities that are not directly involved (i.e., they operate within a closed system and materials are not combined with process fluids) in the processing of raw materials or the manufacturing of a pharmaceutical product.”</p>
[4]	The term <i>relocate</i> means the change in physical location of the Pharmaceutical manufacturing equipment or fixed roof storage tanks within the Facility.
[5]	The term <i>change materials</i> means the change in raw materials, additives and/or solvents used in the Pharmaceutical manufacturing processes.

## Attachment C: Processes Added/Removed/Modified from PAL Compliance Worksheet

Archimica Inc.  
Greene County, S29 T27N, R22W  
Project Number: 2009-04-033  
Installation ID Number: 077-0017  
Permit Number:

This sheet covers the period from \_\_\_\_\_ to \_\_\_\_\_.

Emission Point (Note 1)	Equipment Description (Note 1)	Pre-Approved Change Category (Note 1)	Equipment Action (Note 2)	Date of Action (Note 3)

- Note1: Description of equipment being added/removed/modified including emission point identification and category of pre-approved change. This log shall include any equipment/process that is added or removed from the calculation of annual VOC emissions as listed in Attachment A.
- Note 2: Any equipment being added, removed, or modified from the emissions calculation sheet (Attachment A) must be listed.
- Note 3: If equipment is being added, list date of commencement of operation (including startup). If equipment is being removed, list date of removal from installation.

**Attachment D: Calculation of Potential to Emit of Non-VOC Pollutants for Pre-Approved Changes Worksheet**

Archimica Inc.  
 Greene County, S29 T27N, R22W  
 Project Number: 2009-04-033

Installation ID Number: 077-0017  
 Permit Number:

This sheet covers the period from \_\_\_\_\_ to \_\_\_\_\_.

Emission Point (Note 1)	Equipment Description (Note 1)	Pre-Approved Change Category (Note 1)	Potential Emissions of Equipment (Note 2)		Total Potential Emissions (Note 3)							
			Pollutant	PTE (tons)	PM (tons)	PM <sub>10</sub> (tons)	PM <sub>2.5</sub> (tons)	SO <sub>x</sub> (tons)	NO <sub>x</sub> (tons)	CO (tons)	GHG (tons)	

- Note1: Description of equipment including emission point identification and category of pre-approved change. This log shall include any equipment with potential emissions of pollutants other than VOC.
- Note 2: Calculation of the potential to emit for the equipment grouped by pollutant.
- Note 3: The summation of non-VOC potential emissions for all equipment. For potential emissions greater than de minimis levels, Archimica must comply with de minimis limitations as set forth in Special Condition 22.



**Comments and Responses on the Final Draft Version of the Plantwide  
Applicability Limit (PAL) New Source Review Permit for Archimica, Inc. in  
Springfield, Missouri**

**Project Number 2009-04-033**

This document responds to comments made to the final draft version of the PAL permit. The numbers of the Special Conditions in the comments may have changed. The numbers referenced in the response reflect the final Special Condition numbering in the issued construction permit.

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The following comments were submitted by the Environmental Protection Agency on September 8, 2011.

*Comment 1 – Superseding Permit:*

The permit should clarify that the PAL permit issued to Archimica, Inc by Springfield-Greene County Health Department Air Quality Control (Springfield AQC) is void. Springfield AQC does not have authority under the EPA approved State Implementation Plan to issue PALs.

Page 3, Special Conditions 1, Superseding Condition states this PAL supersedes all previously issued permits. PALs are meant to regulate one pollutant, and specifically, this PAL only establishes a limit for VOCs. Because the source emits a wide range of pollutants beyond VOCs, this PAL cannot void all previous permits issued to the facility. To the extent previous permits established limits for pollutants other than VOCs, then those permits cannot be superseded by this PAL.

*Air Pollution Control Program Response:*

The permit has been revised to include clarifying statements about the permit issued by Springfield AQC.

The Air Pollution Control Program agrees that limits established for pollutants other than VOC cannot be superseded by the VOC PAL. Special Condition 1 does in fact supersede all previously issued construction permits, including conditions that limit non-VOC pollutants. However, those conditions that affected non-VOC pollutants were re-established in this permitting activity. In particular, Special Conditions 23 and 24 are conditions that were carried over from previous construction permits for non-VOC pollutants. The Air Pollution Control Program believes that all other conditions superseded under this construction permit qualify for removal under 40 CFR 52.21(aa)(1)(ii)(c).

*Comment 2 – 18 Months to Construct:*

Page 2, Standard Conditions states the PAL may be revoked if the facility fails to begin construction within 18 months of receiving this permit. Understandably, permits written under the Prevention of Significant Deterioration (PSD) portion of



Missouri's 10 CSR 10-6.060 usually have a requirement to construct within 18 months. The reason for limiting the time to begin actual construction is to ensure the control technology review stays current. See 40 CFR §52.21(j). The PAL for Archimica does not include a control technology review, so the requirement to construct within 18 months may not apply. In addition, the effective period for a PAL is 10 years, meaning the source will be allowed to make physical changes or changes in operation beyond 18 months of issuance. See 40 CFR §52.21(aa)(2)(vii) and Special Condition 14 in the permit.

*Air Pollution Control Program Response:*

The Air Pollution Control Program agrees that the requirement to construct within 18 months does not apply for this permitting activity. The standard condition has been removed from the permit.

*Comment 3 – Annual Limitation:*

Page 3, Special Condition 2, Annual Emission Limitation - PAL should note that Archimica has the obligation of showing emissions from each unit in the PAL are kept below 116.8 tons of VOC collectively for the first 11 months following issuance of the PAL. This demonstration should be recorded monthly. See 40 CFR §52.21(aa)(4)(a).

*Air Pollution Control Program Response:*

The Air Pollution Control Program agrees. Special Condition 2.A has been revised to address compliance during the first 11 months following the issuance of the PAL.

*Comment 4 – 10 Year Actuals PAL Level:*

Page 3, Special Condition 2, Annual Emission Limitation - PAL establishes a limit of 116.8 tons of VOC per 12 month rolling period. The limit was developed based on actual emissions from 1997 through 1998 plus 39.9 tons per year (tpy), the applicable significance level of VOC. Baseline actual emissions need to be established following 40 CFR §52.21(b)(48) which requires a baseline to be set using, "...the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Administrator (emphasis added). "In this case, MDNR is the Administrator for PSD permitting, not Springfield AQC. The 10 year look back period to establish a baseline should be based on when MDNR received a complete permit application. This will likely exclude the 1997 and 1998 timeframes. In addition, the permit application had to be revised beyond 2006, so 1997 data could not be evaluated for a correct baseline period in any event.

In addition, if construction or decommissioning of emission units took place after the baseline period chosen, then those emissions need to be included or excluded from the established PAL level. For an example, see 67 FR 80214.

Moreover, when setting a PAL, the applicable limit should take into account regulatory requirements, like National Emission Standards for Hazardous Air

Pollutants (NESHAPS) that came into effect during the baseline or will come into effect during the effective period of the PAL. In 2002, Archimica, Inc became subject to NESHAP GGG for Pharmaceutical Production. Therefore, if any actual emissions were used prior to 2002 to establish a baseline, then those emissions would need to be evaluated in comparison to NESHAP GGG. For instance, if a process unit is required to meet 50% destruction efficiency and that process unit had 0% destruction efficiency prior to 2002, then the emissions that would not have been emitted if the standard were in place need to be reduced from the baseline actual emissions. Page 21, Project Description states that Archimica, Inc “contends” that emissions were unchanged in light of the 2002 NESHAP. MDNR shouldn’t accept Archimica’s contention but rather MDNR has the obligation to confirm that each emission unit was meeting the emission standards in NESHAP GGG prior to 2002 (if a pre-2002 baseline is used).

Evaluating post 2002 emissions as provided, it looks like the highest emitting 24-month period would be around 2004. Using this timeframe would establish a PAL around 75 tpy (yearly average of 36 tpy plus 39 tpy significance level), at which point, Archimica, Inc would no longer be a major source for VOC emissions. EPA Region 7 questions whether any source is eligible for a PAL to limit their emissions below PSD major source thresholds and if MDNR has approved authority to use PALs to limit sources out of PSD. To avoid the necessity of addressing this issue, EPA recommends that a Federally Enforceable State Operating Permit would be best to reduce source’s potential to emit below major source levels. For instance, Archimica could seek an Intermediate Operating Permit from MDNR to establish limit for VOC below the major source level.

*Air Pollution Control Program Response:*

In 2006, Archimica submitted an application for a PAL permit with the intention of receiving a PAL permit. Based on that permit application, the Springfield AQC issued what they believed was a PAL permit. It was later determined that the Springfield AQC did not have the authority to issue a PAL and the permit issued as a PAL by Springfield AQC was invalid. Archimica submitted their application to whom they believed to be their permitting authority. It was then the responsibility of the Springfield AQC to include the Air Pollution Control Program in this permitting activity, as required by contract. The Air Pollution Control Program does not believe this failure on the part of the Springfield AQC invalidates Archimica’s original submittal of their PAL application. Therefore, the Air Pollution Control Program believes it is appropriate to start the 10-year look-back period from the date of the original permit application submittal.

Under the Installation Description section, the PAL permit indicates that “Archimica was required to resubmit their PAL application for re-review”. This statement was poorly worded such that it wrongfully implied a new application was required. This statement was revised to emphasize that the review of the PAL permit was not yet complete and that additional review would be required for the issuance of a valid PAL permit. This revision should help reduce confusion as to when the original application was submitted.

In addition, the Air Pollution Control Program believes we have met our obligation to confirm that the emission units affected by the emission standards in NESHAP GGG were meeting the emission standards prior to 2002. As stated in the permit, Archimica Inc. submitted test reports and data for the emissions from the thermal oxidizer, which is a required control device for compliance with Subpart GGG. The Air Pollution Control Program determined that the requirements placed on the thermal oxidizer in a construction permit issued in 1993 were adequately sufficient to meet the standards required by Subpart GGG. Therefore, no adjustment to the baseline emissions for the thermal oxidizer was made. In addition, all other emission units that are subject to the Subpart GGG employed emissions calculations techniques similar to those required by Subpart GGG. The Air Pollution Control Program believes that the review of the baseline emissions taking into account the federal standard requirements of Subpart GGG meet the State's obligation under 40 CFR 52.21(aa)(6) when setting the PAL. Additional narrative has been added to the Project Description section to help clarify this issue.

Comment 5 – Emission Factors:

Page 3, Special Conditions 2, Annual Emission Limitation - PAL lists emission factors that Archimica, Inc is required to use and document to meet their annual emission limitation. MDNR should rank the emission factors in order of most preferred to least preferred. For example, most accurate emission factors usually would be ranked as follows: (1) most recent stack tests results, (2) mass balance, (3) alternatively approved MDNR method, (4) most recent AP-42 compilation.

When using emission factors to certify a PAL is being met, provisions in 40 CFR §52.21(aa)(12)(vi) apply. Specifically, emission factors need to be adjusted according to the level of uncertainty to ensure limits are being met. It's unclear in this permit if Archimica, Inc is required to properly adjust their emission factors/limitations based on known uncertainties. In addition, when emission factors are used to set limits in a PAL they need to be validated to ensure that emission factor is correct for the specific site. This permit did not include Archimica's obligation to validate emission factors used to meet the PAL.

52.21(aa)(12)(vi)	(vi) Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
52.21(aa)(12)(vi)(a)	(a) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;
52.21(aa)(12)(vi)(b)	(b) The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and

52.21(aa)(12)(vi)(c)	(c) If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the Administrator determines that testing is not required.
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*Air Pollution Control Program Response:*

The Air Pollution Control Program agrees that the emission factors should be preferentially ranked based on their accuracy in representing actual emissions. Attachment A has been revised to include a requirement to use the most accurate emission factor available when demonstrating compliance with the PAL. The emission factors were ranked as suggested by EPA.

Attachment A outlines the compliance methods and emission factor determination Archimica Inc. must use with the PAL. The compliance method/emission factors specific to each emission unit are listed in Table A and Table B. Although no adjustments have been made to any of the emission factors, the emission factors listed in Table A and Table B have been evaluated for use with the PAL. For emission units, such as the thermal oxidizer, where testing was used to determine the emission factor, validation testing has been included in the special conditions of this permit.

In addition, to demonstrate compliance with the PAL, Archimica Inc. is required to use only the emission factors listed in Table B, which are the emission factors used in setting the PAL. If the emission factors change during the course of the PAL, only the emission factors listed in Table B may be used for compliance demonstrations until the new emission factor is approved via Special Condition 2.B. The Air Pollution Control Program feels this adequately addresses provisions in 40 CFR §52.21(aa)(12)(vi).

*Comment 6 – PM:*

Page 16, Special Conditions 22, Emission Limitation for Non-VOC pollutants lists tpy limitations for all criteria pollutants from all equipment at the facility. In error, MDNR forgot to include a 25.0 tpy limit for total particulate matter (PM) as listed in 10 CSR 10-6.020(3)(A)Table 1-De Minimis Emission Levels.

*Air Pollution Control Program Response:*

The Air Pollution Control Program agrees that the limit for PM was inadvertently omitted from the list of Non-VOC pollutants limitations in Special Condition 22. The condition has been revised to include a 25.0 ton per year limit for PM.

Ms. Nancy Luxton  
Environmental Manager  
Archimica Inc.  
2460 West Bennett Street  
Springfield, MO 65807

RE: New Source Review Permit - Project Number: 2009-04-033

Dear Ms. Luxton:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Emily Wilbur, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:ewl

Enclosures

c: Springfield/Greene County Air Quality  
PAMS File: 2009-04-033

Permit Number: