

4 March 2008

Mr. Drew Peters
Senior Associate, EH&S
Immunex Rhode Island Corporation, a subsidiary of Amgen, Inc.
40 Technology Way
West Greenwich, RI 02817

Dear Mr. Peters:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your request for the installation of air pollution control equipment at your facility located at 40 Technology Way, West Greenwich, RI.

Enclosed is a minor source permit issued pursuant to our review of your request (Approval No. 2023).

I can be reached at 222-2808, extension 7011 if there are any questions.

Sincerely,

Douglas L. McVay
Associate Supervising Engineer
Office of Air Resources

cc: West Greenwich Building Official

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

MINOR SOURCE PERMIT

IMMUNEX RHODE ISLAND CORPORATION, A SUBSIDIARY OF AMGEN INC.

APPROVAL NO. 2023

Pursuant to the provisions of Air Pollution Control Regulation No. 9, this minor source permit is issued to:

IMMUNEX RHODE ISLAND CORPORATION, A SUBSIDIARY OF AMGEN INC.

For the following:

Installation of a Siemens Model No. LP-2000-S single stage, packed bed wet scrubber to treat ammonia emissions from a covered wastewater equalization tank.

Located at: *40 Technology Way, West Greenwich*

This permit shall be effective from the date of its issuance and shall remain in effect until revoked by or surrendered to the Department. This permit does not relieve *Immunex Rhode Island Corporation, a subsidiary of Amgen Inc.* from compliance with applicable state and federal air pollution control rules and regulations. The design, construction and operation of this equipment shall be subject to the attached permit conditions and emission limitations.

Stephen Majkut, Chief

Date of Issuance

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

Permit Conditions and Emission Limitations

IMMUNEX RHODE ISLAND CORPORATION, A SUBSIDIARY OF AMGEN INC.

APPROVAL NO. 2023

A. Emission Limitations

1. Ammonia

- a. Ammonia emissions generated from the wastewater equalization tank shall be reduced by 90% or greater before discharge to the atmosphere when the ammonia inlet concentration to the scrubber is less than or equal to 10 ppmv.
- b. Ammonia emissions generated from the wastewater equalization tank shall be reduced by 99% or greater before discharge to the atmosphere when the ammonia inlet concentration to the scrubber is greater than 10 ppmv.
- c. The total quantity of ammonia emissions discharged to the atmosphere from the wastewater treatment process shall not exceed 400 pounds in any consecutive 12-month period.

2. Opacity

There shall be no visible emissions from the scrubber exhaust. Where the presence of uncombined water is the only reason for failure to meet this requirement, such failure shall not be a violation of this requirement.

3. Odors

Any air contaminant or combination of air contaminants discharged to the atmosphere from the facility shall not create an objectionable odor beyond the property line of this facility. Odor evaluations shall be conducted according to the provisions of Air Pollution Control Regulation No. 17.

B. Operating Requirements

1. Ammonia emissions generated from the wastewater equalization tank shall be captured, contained and routed to the scrubber for treatment prior to discharge to the atmosphere.

2. The pH of the scrubber liquid shall not exceed 4.0.
3. The scrubber shall be operated according to its design specifications whenever the wastewater equalization tank is emitting air contaminants.

C. Monitoring

1. The pH of the scrubbing liquid shall be monitored continuously and checked a minimum of twice per day and the date, time, and measurement shall be recorded.
2. The pressure drop across the packed bed scrubber and mist eliminator shall be monitored continuously and checked a minimum of twice per day and the date, time, and measurement shall be recorded.
3. The scrubbing liquid supply pressure shall be monitored continuously and checked a minimum of once per day and the date, time, and measurement shall be recorded.
4. The monitoring devices used for the measurement of pH, pressure drop and scrubbing liquid supply pressure shall be calibrated periodically consistent with the manufacturer's recommendations.

D. Stack Testing

1. Within 180 days of startup of the scrubber, performance testing shall be conducted to demonstrate compliance with the emission limitations for ammonia.
2. The owner/operator shall provide the Office of Air Resources at least 30 days prior notice of the performance test.
3. All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emissions limitations.
4. A final report of the results of stack testing shall be submitted to the Office of Air Resources no later than 60 days following completion of testing.

E. Record Keeping and Reporting

1. The owner/operator shall, on a monthly basis, no later than 15 days after the first of the month, determine the total quantity of ammonia discharged to the atmosphere from the scrubber. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.
2. The owner/operator shall notify the Office of Air Resources in writing, within 15 days, whenever the total quantity of ammonia emissions discharged to the

atmosphere from the scrubber exceeds 400 pounds in any consecutive 12-month period.

3. The owner/operator shall maintain records of the pH, pressure drop and scrubbing liquid supply pressure measurements for the scrubber.
4. The owner/operator shall maintain records of the dates and length of time that the scrubber is bypassed to perform maintenance.
5. The owner/operator shall notify the Office of Air Resources, in writing, of the date of actual initial start-up of the scrubber no later than fifteen days after such date.
6. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance with the terms of this permit or any other applicable air pollution control rules and regulations.
7. The owner/operator shall notify the Office of Air Resources in writing of any planned physical or operational change to any equipment that would:
 - a. Change the representation of the facility in the application.
 - b. Alter the applicability of any state or federal air pollution rules or regulations.
 - c. Result in the violation of any terms or conditions of this permit.
 - d. Qualify as a modification under APC Regulation No. 9.

Such notification shall include:

- Information describing the nature of the change.
 - Information describing the effect of the change on the emission of any air contaminant.
 - The scheduled completion date of the planned change.
8. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information:
 - a. The name and location of the facility;
 - b. The subject source(s) that caused the noncompliance with the permit term;
 - c. The time and date of first observation of the incident of noncompliance;

- d. The cause and expected duration of the incident of noncompliance;
 - e. The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate;
 - f. The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance.
9. All records required in this permit shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Office of Air Resources upon request.

F. Malfunctions

1. Malfunction means a sudden and unavoidable breakdown of process or control equipment. In the case of a malfunction of any air pollution control system, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of an air pollution control system is expected or may be reasonably expected to continue for longer than 24 hours and if the owner/operator wishes to operate the source on which it is installed at any time beyond that period, the Director shall be petitioned for a variance under 23-23-15 of the General Laws of Rhode Island, as amended. Such petition shall include, but is not limited to, the following:
- a. Identification of the specific air pollution system and source on which it is installed;
 - b. The expected period of time that the air pollution control system will be malfunctioning or out of service;
 - c. The nature and quantity of air contaminants likely to be emitted during said period;
 - d. Measures that will be taken to minimize the length of said period;
 - e. The reasons that it would be impossible or impractical to cease the source operation during said period.
2. The owner/operator may seek to establish that a malfunction of any air pollution control system that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the owner/operator must demonstrate to the Office of Air Resources that:
- a. The malfunction was not attributable to improperly designed equipment, lack of preventative maintenance, careless or improper operation or operator error;

- b. The malfunction is not part of a recurring pattern indicative of inadequate design, operation or maintenance;
- c. Repairs were performed in an expeditious fashion.
- d. All reasonable steps were taken to minimize emissions during the period of time that repairs were performed.
- e. Emissions during the period of time that the repairs were performed will not:
 - (1) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and
 - (2) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard.
- f. The reasons that it would be impossible or impracticable to cease the source operation during said period.
- g. The owner/operator's actions in response to the excess emissions by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources within two working days of the time when the malfunction occurred and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken.

The owner/operator shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction.

G. Other Permit Conditions

- 1. To the extent consistent with the requirements of this permit and applicable federal and state laws, the facility shall be designed, constructed and operated in accordance with the representation of the facility in the permit application.
- 2. There shall be no bypassing of the scrubber during times when ammonia emissions are being discharged to the device. As an exception to this prohibition, bypassing of the scrubber to perform maintenance on the equipment is allowed if:
 - a. It is impossible or impractical to cease operation of the source during the period of time that maintenance is to be performed; and,

- b. The pH of the wastewater in the equalization tank shall be maintained at 8.5 or less.

Maintenance is to be performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such maintenance is completed as expeditiously as practicable.

Bypassing of the scrubber to perform maintenance on the equipment shall not exceed twelve (12) hours per quarter or thirty-six (36) hours per year.

3. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all reasonable times for the purpose of inspecting any air pollution source, investigating any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.
4. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.