

7 April 2005

Mr. Michael Annarummo  
Public Works Director  
City of Woonsocket  
15 Cumberland Hill Road  
Woonsocket, RI 02895

Dear Mr. Annarummo:

The Department of Environmental Management, Office of Air Resources, has reviewed and approved your applications for the installation of new air pollution control equipment and the modification of existing air pollution control equipment at your 15 Cumberland Hill Road facility in Woonsocket.

Enclosed are two minor source permits issued pursuant to our review of your application (Approval Nos. 1064 & 1837).

I can be reached at 222-2808, extension 7011, if you have any questions.

Sincerely,

Douglas L. McVay  
Associate Supervising Engineer  
Office of Air Resources

cc: Woonsocket Building Official  
Joseph Megale- Synagro  
Glenn Almquist - ESS

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

MINOR SOURCE PERMIT

*CITY OF WOONSOCKET*

APPROVAL NO. 1064

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

*City of Woonsocket*

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For the following:

*Modification of the packed bed scrubber (Approval No. 1064) which will treat emissions generated from sewage sludge dewatering and handling operations prior to discharge to the atmosphere.*

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Located at: *15 Cumberland Hill Road, Woonsocket*

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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 the *City of Woonsocket* 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.

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Stephen Majkut, Chief  
Office of Air Resources

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Date of issuance

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

Permit Conditions and Emission Limitations

**CITY OF WOONSOCKET**

**APPROVAL NO. 1064**

(revised April 2005)

A. Emission Limitations

1. Any air contaminant or combination of air contaminants discharged to the atmosphere from the packed bed scrubber shall not create an objectionable odor beyond the property line of this facility.

B. Operating Requirements

1. Odorous air from the sludge cake receiving building, fluidized bed combustor (FBC) building multiple hearth furnace (MHF) building and sludge dewatering building shall be captured and treated by the packed bed scrubber (S 501) prior to discharge to the atmosphere.
2. The packed bed scrubber shall be operated according to its design specifications whenever the emission points vented to it are emitting air contaminants.

C. Continuous Monitoring

1. The owner/operator shall continuously monitor the pH and ORP (oxidation reduction potential) of the scrubbing liquid for the packed bed scrubber. In the case of a malfunction of the instrumentation to continuously monitor pH and/or ORP, the permittee shall periodically sample the scrubbing liquid to determine pH and ORP.
2. Pressure drop across the packed bed scrubber shall be monitored and indicated continuously.

D. Recordkeeping and Reporting

1. The permittee shall record the pH and ORP (oxidation reduction potential) of the scrubbing liquid for the packed bed scrubber a minimum of once per shift and the date, time, and measurement shall be recorded.

2. The pressure drop across the packed bed scrubber shall be checked a minimum of once per day and the date, time and reading shall be recorded.
3. The owner/operator shall notify the Office of Air Resources, in writing, of the date of actual initial start-up of the modified packed bed scrubber (S501) no later than fifteen days after such date.
4. 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.
5. The owner/operator must notify the Office of Air Resources no later than 24 hours after an exceedance of an emission limitation is discovered.
6. The Office of Air Resources shall be notified, in writing, of any planned physical or operational change to the packed bed scrubber or the equipment vented to the packed bed scrubber that would:
  - a. Change the representation of the facility in the permit 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 the 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.

Any such a change shall be consistent with the appropriate regulation and have the prior approval of the Director.

7. 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.

E. 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. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all 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.
3. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the equipment 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.

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 reasonably be expected to continue for longer than 24 hours and if the owner or 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 Section 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 control 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 air pollution control equipment, lack of preventative maintenance, careless or improper operation, or operator error;
  - b. The malfunction was not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
  - c. Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable.
  - d. All possible steps were taken to minimize emissions during the period of time that the 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 impractical to cease the source operation during said period.
  - g. The owner/operator's action in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources, in writing, 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.

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

MINOR SOURCE PERMIT

*CITY OF WOONSOCKET*

APPROVAL NO. 1837

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

*City of Woonsocket*

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For the following:

*Installation of a packed bed scrubber (Approval No. 1837) which will treat emissions generated from sewage sludge blending tanks and handling operations prior to discharge to the atmosphere.*

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Located at: *15 Cumberland Hill Road, Woonsocket*

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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 the *City of Woonsocket* 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.

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Stephen Majkut, Chief  
Office of Air Resources

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Date of issuance

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

Permit Conditions and Emission Limitations

**CITY OF WOONSOCKET**

**APPROVAL NO. 1837**

A. Emission Limitations

1. Any air contaminant or combination of air contaminants discharged to the atmosphere from the packed bed scrubber shall not create an objectionable odor beyond the property line of this facility.

B. Operating Requirements

1. Odorous air from the liquid sludge receiving building, sewage sludge blending tanks and laboratory in the sludge thickening building shall be captured and treated by the packed bed scrubber (S 502) prior to discharge to the atmosphere.
2. The packed bed scrubber shall be operated according to its design specifications whenever the emission points vented to it are emitting air contaminants.

C. Continuous Monitoring

1. The owner/operator shall continuously monitor the pH and ORP (oxidation reduction potential) of the scrubbing liquid for the packed bed scrubber. In the case of a malfunction of the instrumentation to continuously monitor pH and/or ORP, the permittee shall periodically sample the scrubbing liquid to determine pH and ORP.
2. Pressure drop across the packed bed scrubber shall be monitored and indicated continuously.

D. Recordkeeping and Reporting

1. The permittee shall record the pH and ORP (oxidation reduction potential) of the scrubbing liquid for the packed bed scrubber a minimum of once per shift and the date, time, and measurement shall be recorded.

2. The pressure drop across the packed bed scrubber shall be checked a minimum of once per day and the date, time and reading shall be recorded.
3. The owner/operator shall notify the Office of Air Resources, in writing, of the date of actual initial start-up of the new packed bed scrubber (S502) no later than fifteen days after such date.
4. 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.
5. The owner/operator must notify the Office of Air Resources no later than 24 hours after an exceedance of an emission limitation is discovered.
6. The Office of Air Resources shall be notified, in writing, of any planned physical or operational change to the packed bed scrubber or the equipment vented to the packed bed scrubber that would:
  - e. Change the representation of the facility in the permit application.
  - f. Alter the applicability of any state or federal air pollution rules or regulations.
  - g. Result in the violation of any terms or conditions of the permit
  - h. 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.

Any such a change shall be consistent with the appropriate regulation and have the prior approval of the Director.

7. 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.

E. 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. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all 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.
3. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the equipment 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.
4. No later than 60 days after startup of the packed bed scrubber, the owner/operator shall quantify emissions of hydrogen sulfide discharged to the atmosphere from the entire facility and provide a report of these findings to the Office of Air Resources. If potential emissions of hydrogen sulfide exceed 10 pounds per year, the owner/operator shall amend the air toxics operating permit application currently on file with the Office of Air Resources to include hydrogen sulfide.

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 reasonably be expected to continue for longer than 24 hours and if the owner or 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 Section 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 control 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 air pollution control equipment, lack of preventative maintenance, careless or improper operation, or operator error;
  - b. The malfunction was not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
  - c. Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable.
  - d. All possible steps were taken to minimize emissions during the period of time that the 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 impractical to cease the source operation during said period.
  - g. The owner/operator's action in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources, in writing, 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.