

LEASE

THIS AGREEMENT is made as of August 29, 2006, by and between Seneca Meadows, Inc., a New York corporation with an office at 1786 Salcman Road, Seneca Falls, New York (the "Lessor") and Seneca Energy II, LLC., a New York company with an office at 2917 Judge Road, Oakfield, New York, 14125 (the "Lessee").

WITNESSETH:

WHEREAS, on even date herewith the parties entered into a Gas Sale Agreement (hereinafter referred to as the "Gas Agreement") for the sale of landfill gas from Lessor's landfill to Lessee's electric generation plant; and

WHEREAS, the Lessee intends to build an electrical generation facility on property described in Schedule "A" hereinafter referred to as the "Leased Premises"; and

NOW, THEREFORE, in consideration of their mutual covenants set forth below and other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the Lessor and Lessee hereby agree as follows:

1. **Definitions.** For purposes of this Agreement, the following terms shall have the respective meaning set forth below:

(a) **Environment.** All air, water, or water vapor, including surface water and ground water, any land, including land surface or subsurface, and includes all fish, wildlife, biota and all other natural resources or as defined in any local, state, federal law, rule, regulation, zoning ordinance, order, permit, approval, or authorization.

(b) **Generation Operations.** All generation, work and other operations related to the generation of electricity at the Leased Premises through landfill gas recovered from the Landfill and all work and operations related to the processing, production, transportation and sale of any such electricity and the installation of buildings, facilities and equipment at the Leased Premises and Landfill (exclusive of the landfill gas located thereon) incident to such purposes;

(c) **Governmental Agencies.** All federal, state, local and municipal agencies, authorities or individual officers or representatives thereof having jurisdiction or legal authority over or with respect to the Landfill, to the generation of electrical power either from landfill gas recovered from the Landfill or generated from alternative fuel sources or to the sale of any such electricity;

(d) **Hazardous Materials.** Any oil or other petroleum products, pollutants, contaminants, toxic or hazardous substances or materials (including, without limitation, asbestos and PCBs), and any hazardous wastes or other materials from time to time regulated under any applicable statutes, regulations, or ordinances governing pollution or the protection of the

environment including, but not limited to, the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Resource Conservation and Recovery Act of 1976, the Toxic Substances Control Act of 1976, and New York law, all as may be amended from time to time;

(e) Landfill. That certain landfill owned by the Lessor and located in the Town of Seneca Falls, County of Seneca, State of New York, as described in the Gas Agreement;

(f) Laws: Any local, state or federal law, rule, regulation, zoning ordinance, order, permit (including but not limited to all permits held by Lessor for the operation of the Landfill and the Seneca Site and all permits held by the Lessee for the operation of the Generation Operations), approval, or authorization.

2. Basic Lease. The Lessor does hereby lease the Leased Premises to the Lessee for the Generation Operations and all uses incident thereto including the fulfillment of the Lessee's obligation under the Gas Agreement and, in addition thereto, hereby gives to the Lessee a nonexclusive right to:

(a) Enter upon and use the Landfill for the Generation Operations and for all lawful purposes incident to performing its obligations here under and under the Gas Agreement;

(b) Use the surface of the Landfill for all lawful purposes incident to the Generation Operations, with the right of ingress and egress to and from the Landfill at all reasonable times for such purposes, including the right to construct, maintain and use such roads and improvements and such pipelines as may be necessary for the Generation Operations;

(c) Construct and maintain such buildings, facilities and equipment on the Leased Premises and on the Landfill as may be reasonably necessary for the Generation Operations, including installation of all utility lines, pipes, conduits, and the like to service the Leased Premises, provided Lessee uses reasonable care in avoiding any material interference with Lessor's adjacent premises;

(d) Prior to Lessee commencing construction of any buildings or other improvements upon the Leased Premises, Lessee shall (i) obtain any and all municipal permits, consents and/or approvals for the proposed construction, (ii) submit to Lessor for review all final building and site plans. Lessor shall have fifteen (15) days in which to advise the Lessee of its comments with respect to such building and site plan.

(e) Lessee shall not suffer any mechanics or other lien to be filed against the Leased Premises or the Landfill by reason of work, labor services or materials performed at Lessee's request or to anyone holding the Leased Premises and/or the Landfill through or under the Lessee. If any such mechanic's lien shall at any time be filed against the Leased Premises and/or the Landfill, the Lessee shall forthwith cause the same to discharge of record by payment, bond, order of a court of competent jurisdiction or otherwise. If the Lessee shall

fail to cause such lien to be discharged within 30 days after being notified of the filing thereof and before judgment or sale thereunder, then in addition to any other right or remedy of the Lessor, the Lessor may, but shall not be obligated to, discharge the same by paying the amount claimed to be due or by posting a bond in the amount due, and the amount so paid by the Lessor and/or all actual costs and expenses, including reasonable attorney's fees incurred by the Lessor in procuring the discharge of such lien, shall be deemed to be additional rent for the Leased Premises and shall be due and payable by the Lessee to the Lessor on the first day of the next following month. It is acknowledged between Lessor and Lessee that the Lessee's failure to remove or bond any such lien within thirty days after notice of filing thereof, shall in and of itself constitute damage to the Lessor in the amount of said lien and any expenses incurred to remove the same, including reasonable attorney's fees. Any bond issued pursuant to this paragraph shall be issued by a recognized insurance company or surety company authorized to do business in the State of New York. Nothing in this Lease shall be construed as a consent on the part of Lessor to subject the Lessor's estate in the Leased Premises and/or the Landfill to any lien or liability under the mechanics lien law or other law of the State of New York.

(f) Lessee assumes the sole responsibility for the operation and maintenance of the Leased Premises except as otherwise set forth in this Agreement. Lessor shall have no responsibility with respect thereof and shall have no liability for damage to the property of Lessee of any tenant, subtenant, or occupant of the Leased Premises or any portion thereof on any account or for any reason whatsoever, except as caused by the acts or omissions of the Lessor, its agents, employees or invitees. Lessee shall take good care of the Leased Premises at its expense and make as and when needed all necessary repairs to the improvements located thereon. Lessee shall also maintain in a condition suitable for the operation of its business the exterior of any building or improvements constructed by Lessee upon the Leased Premises.

3. Access. The Lessor hereby grants unto the Lessee, its agents and invitees, the exclusive easement described in Schedule "B" attached hereto for purposes of ingress and egress to the Leased Premises and the Landfill.

4. Term. Except as otherwise expressly provided for herein, this Lease shall be for a term coterminous with the term of the Gas Agreement.

5. Protection of Landfill. The Lessee agrees that the terms of this Lease (including, without limitation, Section 2 hereof are subject to the condition that the Lessee shall not engage in any activities that may impair the effectiveness of the cap that presently covers the Landfill or violates any condition of any applicable permit or cause any materials contained therein to leak on to property adjoining the Landfill, or otherwise impair any of Lessor's obligations under any Law or permit. Notwithstanding anything herein to the contrary, the Lessor acknowledges that the Lessee shall have no liability with respect to any condition on the Leased Premises involving the Environment including the removal or remediation thereof unless such condition, and its removal or remediation, results solely from Lessee's activities on the Leased Premises.

6. Insurance. At all times during the term hereof, the Lessee agrees to maintain comprehensive general liability insurance on an all-risk basis with respect to its obligations under this Lease and the Gas Agreement. Lessor shall be named as an additional insured on all of the above described policies. Prior to the commencement of the term of this Lease and thereafter within five (5) days of request from Lessor, Lessee will deliver proof of coverage for the above described policies.

7. Compliance with Laws. The Lessee agrees that, in connection with the Generation Operations on the Landfill and its use of the Leased Premises, the Lessee shall comply with all applicable Laws and good industry practice and (b) obtain all prior approvals, consents and waivers from Governmental Agencies required by all applicable Laws and/or necessary for the Generation Operations. Lessee's only obligation with respect to the Environment will be to remove or remediate any environmental damage caused by it and required by law to be remediated.

8. Rents/Consideration. This Lease is granted by Lessor to Lessee in consideration of the Gas Agreement. With respect to the Leased Premises described in Schedule "A" Lessee shall, pay as additional rent all increases in taxes and assessments over those of the base year of 2006 for local, district and special district improvements that may be assessed against or become a lien upon such Leased Premises or any part thereof by virtue of any present or future law or regulation of a governmental authority and resulting from the improvements which the Lessee constructs on such Leased Premises ("Impositions"). Lessee shall pay all interest and penalties imposed on a late payment of any Impositions caused by Lessee's late payment of the same. If Lessee shall fail to pay for 10 days after written notice and demand by Lessor to Lessee to pay any Impositions on or before the last day upon which the same may be paid without interest or penalty, then Lessor may pay the same with all interest and penalties lawfully imposed upon the late payment thereof, and the amount so paid by Lessor shall thereupon be additional rent due and payable by Lessee to Lessor with the next monthly payment.

Lessee shall also pay all utility charges for water, gas, fuel, oil and electricity consumed on the Leased Premises or otherwise used in connection with the Generation Operations.

Lessee shall pay as additional rent of any and all sums expended by Lessor to cure or fulfill or perform any obligation of Lessee under this Lease including but not limited to reasonable attorneys' fees.

9. Memorandum of Lease. Lessor and Lessee agree that simultaneously with the execution of this Lease, a memorandum of this Lease shall be executed in proper form for recording and, at the option of Lessee, shall be recorded in the Clerk's office of the County in which the Leased Premises are located. Such Lease memorandum shall contain such provisions and information as may be reasonably agreed upon between Lessor and Lessee but shall not contain a rental provision.

10. Maintenance and Repair. Unless otherwise specifically set forth in the Gas Agreement, Lessee shall also be responsible for the repair and maintenance of all equipment, facilities and improvements on the Leased Premises and for the maintenance and repair of the Generation Operations.

11. Warranties and Representations.

(a) Lessor warrants and represents that it has not received any notice that the Leased Premises are currently in violation of any environmental laws, rules, regulations, or orders having application to the Leased Premises. Lessor agrees to indemnify Lessee from any liability, cost, loss, expense or claims brought against Lessee or the Leased Premises by virtue of any misrepresentation with respect to the foregoing warranty and representation.

(b) Lessor warrants and represents that it has good and clear title to the Leased Premises subject only to the liens and encumbrances set forth on the attached Schedule "C". Lessor has full lawful authority to execute this Agreement and the execution of this Agreement has been authorized by the board of directors of Lessor and is not in contravention of the certificate of incorporation, by-laws, rules, or regulations applicable to Lessor.

(c) Lessor warrants and represents to Lessee that the Leased Premises which are the subject of this Agreement are properly zoned for the uses described in this Agreement, including the Generation Operations subject to the issuance of all necessary and/or appropriate permits of Government Agencies.

(d) Lessee warrants and represents to Lessor that Lessee is a duly formed limited liability company, in good standing and authorized to do business in the State of New York and will remain so during the term hereof and that it has been in all respects duly authorized by all necessary limited liability company and/or member action and approval to enter into, perform and guarantee the terms and conditions of this Lease.

(e) Lessor warrants and represents to Lessee that Lessor is a duly formed corporation, in good standing and authorized to do business in the State of New York and will remain so during the term hereof and that it has been in all respects duly authorized by all necessary corporate and/or shareholder action and approval to enter into, perform and guarantee the terms and conditions of this Lease.

(f) Lessee, in its use of the Leased Premises, shall comply with any and all federal, state and local rules, laws, statutes, ordinances and orders regulating the Environment which will affect the use and occupation of the Leased Premises and the Landfill. Lessee shall only be responsible for compliance with environmental Laws that are related to its use and occupation of the Leased Premises and under no circumstances shall the Lessee be responsible for compliance with any environmental Laws or for conducting any investigatory, removal or remediation actions (as those terms are defined in CERCLA), which results from activities not caused by the Lessee. Lessor hereby indemnifies Lessee from any claims, losses or expenses which it may suffer including, but not limited to,

reasonable attorneys' fees as a result of compliance with any environmental law or state law with respect to the Leased Premises which may be required by any entity or party as a result of the acts or omissions of persons or entities other than Lessee, its agents, servants, subcontractors, employees or invitees. Lessee shall, however, not be responsible to abate any nuisance or cure any trespass which may result from the actions or omissions of parties or entities other than Lessee.

12. Lessee's Performance of Lessor's Obligations. In the event the Lessor shall fail to discharge any duties and obligations hereunder imposed upon Lessor, the Lessee shall after giving Lessor written notice of at least thirty (30) days have the right, but not the obligation, to perform such duties or obligations and in such event, the Lessee and its agents shall be entitled to reimbursement from Lessor within thirty (30) days of Lessor's receipt of paid invoices of the total cost and expenses including reasonable attorneys' fees incurred by Lessee with respect thereto. The thirty (30) day notice requirement is hereby waived in circumstances wherein the sooner performance of the Lessor's obligations by Lessee is necessary for the continued efficient operation of the Generation Operations. In such event, Lessee shall give Lessor as much notice as is practical under the circumstances.

13. Lessor's Performance of Lessee's Obligations. In the event the Lessee shall fail to discharge any duties and obligations hereunder imposed upon Lessee, the Lessor shall after giving Lessee written notice of at least thirty (30) days have the right, but not the obligation, to perform such duties or obligations and in such event, the Lessor and its agents shall be entitled to reimbursement from Lessee within thirty (30) days of Lessee's receipt of paid invoices of the total cost and expenses including reasonable attorneys' fees incurred by Lessor with respect thereto.

14. Certifications, Estoppel Certificates. Lessor and Lessee shall execute at the request of the other within 5 days thereof, instruments evidencing the validity of this Lease Agreement, and as often as reasonably requested shall sign estoppel certificates setting forth the date said Lease commenced, the termination date of the Lease, whether or not there is any claim, defense or offset to the enforcement of the Lease, any knowledge that any default or breach by the other party exists, that the Lease is in full force and effect, except as to modifications, agreements or amendments thereto, copies of each of which shall be attached to the Certificate, and such other matters as Lessor or Lessee may reasonably request.

15. Casualty. In the event of the total or partial destruction of the improvements on the Leased Premises by fire or other casualty insured under Lessee's casualty insurance referred to in Section 6 hereof, Lessee shall have the right, but not the obligation, to promptly restore and repair the improvements on the Leased Premises using the proceeds of such insurance. In the event that the improvements on the Leased Premises are so destroyed that they cannot be repaired or rebuilt within one hundred eighty (180) days after the date of the damage or destruction, then and in that event, Lessee may, upon sixty (60) days' prior written notice to Lessor, terminate and cancel this Lease and all obligations hereunder shall thereupon cease and terminate. Any proceeds not utilized by Lessee in restoring or repairing the Leased Premises shall be and remain the sole property of the Lessee. In the event that the

Lessee cancels this Lease pursuant to its rights hereunder, the Gas Agreement shall simultaneously terminate.

16. Eminent Domain. In the event all or any part of the Leased Premises shall be acquired by the exercise of eminent domain by any public or any quasi-public body in such manner that the Leased Premises shall become unusable by the Lessee for the purposes for which it is then using the Leased Premises, then and in that event, this Lease will terminate after possession of the Leased Premises or part thereof is so taken. If Lessor is unable to provide a reasonable alternative site in all respects satisfactory to the Lessee, the Lessor shall have no claim against the Lessee or other person, firm, corporation or governmental authority on account of any such acquisition for the value of the unexpired Lease remaining after possession of the Leased Premises or part thereof is so taken. All damages awarded therefore shall belong to the Lessee except for amounts allocated to the land upon which the Lessee's facilities are located and any amounts allocated to Lessor's income, profit and production tax credits.

17. Party's Non-Liability. The Lessee shall not be liable for damage to any person or property due to any condition of the Leased Premises caused by the Lessor or by reason of the occurrence any accident in or about the Leased Premises due to any act or neglect of the Lessor or its agents, employees, and licensees. The Lessor shall be responsible and liable to the Lessee for any damage ed by it or any other person acting by, through, or under it and for any act done thereon by the Lessor or any other person acting by, through or on behalf of the Lessor.

The Lessor shall not be liable for damage to any person or property due to any condition of the Leased Premises caused by the Lessee or by reason of the occurrence of any accident in or about the Leased Premises due to any act or neglect of the Lessee or its agents, employees, and licenses. The Lessee shall be responsible and liable for any damage to the Leased Premises and for any act done thereon by the Lessee or any other person acting by, through, or under Lessee.

18. Covenant of Quiet Enjoyment. Lessor agrees that if the Lessee shall perform all of the covenants and agreements herein provided to be performed on Lessee's part, the Lessee shall at all times during the term of this Lease have the peaceable and quiet enjoyment and possession of the Leased Premises without any manner of hindrance from the Lessor or any persons lawfully claiming under the Lessor.

19. Notices. Any notice required or permitted to be given or served by either party to this Lease shall be deemed to be given or served when made in writing, by certified or registered mail, return receipt requested, or by Federal Express or other similar overnight delivery service on a national basis with charges prepaid, which notice shall be deemed to be given three (3) days after delivery to the U.S. Postal Service or one (1) day after delivery to Federal Express or other similar overnight carrier addressed as provided in the Gas Agreement.

20. Possession. Lessor agrees that Lessee shall have possession of the Leased Premises and access thereto immediately upon the effective date of the Gas Agreement.

21. Brokers. Lessor and Lessee warrant that they have had no dealings with any real estate broker or agent in connection with the negotiation of this Agreement and that they know of no broker or agent who is or might be entitled to a commission in connection with this Agreement. Lessor and Lessee hereby indemnify each other and hold each other harmless from and against any and all claims for any such commissions or fees claimed by any real estate broker or agent claiming by, through or under said party.

22. Contingencies. The obligations of the Lessee hereunder with respect to the Leased Premises are subject to the construction and operation of a 17.6 Mw electric generation plant on or before December 31, 2007. In the event the plant is not constructed and operating on or before said date, this Agreement shall be null and void and of no further force and effect.

23. Lease Binding on Successors. All provisions of this Lease shall inure to the benefit of the parties hereto and their respective successors and legal representatives. This Lease and each of the rights and obligations of the parties hereunder may not be assigned without the prior written consent of the other party, which consent may not be unreasonably withheld or delayed.

24. Default. It is hereby mutually agreed that: (a) If Lessee shall fail to keep and perform each and every material covenant, condition and agreement contained in the Lease and on the part of Lessee to be kept and performed, including payment of any rent and additional rent due hereunder; or (b) if Lessee shall abandon the Leased Premises or the Generation Operations; or (c) an execution or attachment shall be issued against Lessee whereupon the Leased Premises or the Generation Operations shall be taken or occupied by someone other than Lessor; or (d) if Lessee shall petition to be declared bankrupt or insolvent according to law; or (e) if a receiver or other similar officer shall be appointed to take charge of any part of the property or to wind up the affairs of Lessee, and it is not discharged within sixty (60) days; or (f) if any assignment shall be made of Lessee's property for the benefit of creditors; or (g) if a petition shall be filed for Lessee's reorganization under Chapter 7 or 11 of the Bankruptcy Code; or (h) an Event of Default, as defined in the Gas Agreement by Lessee occurs, then in each and every such case, Lessee shall be in default under the terms of this Lease. If Lessee shall be in default as said term is defined herein, and such default shall continue for a period of thirty (30) days after written notice thereof to Lessee from Lessor, then Lessor at its sole option may terminate this Lease, provided that if Lessee proceeds with due diligence during such thirty (30) day period to cure such default is unable by reason of the nature of the work involved to cure the same, within said thirty (30) days, its time to do so shall be extended for an additional thirty (30) day period, or such longer period during which such work could reasonably be accomplished with due diligence and continuity, provided however, that the time to cure shall not exceed the time permitted in the Gas Agreement for the cure of an Event of Default. It is understood and agreed that if Lessee fails to cure an Event of Default in the Gas Agreement, Lessor, in addition to any other rights, may terminate this Lease. On default of Lessee, Lessor shall be entitled to the possession (of the Leased Premises and to remove any and all persons and property

therefrom and to re-enter the Leased Premises without further demand of rent or demand of possession, either with or without process of law and without becoming liable to prosecution therefore, and a notice to quit or of intention to re-enter being hereby expressly waived by Lessee, and in the event of any such re-entry or retaking by Lessor, Lessee shall nevertheless remain in all events liable and answerable for the full rental until the date of retaking or re-entry. Lessee expressly agrees to reimburse Lessor for any expenses, including reasonable attorney's fees, Lessor may incur in enforcing the Lessor's rights against Lessee under this Lease, including but not limited to, the collection of rent and securing of possession of the Leased Premises and/or the Landfill.

If Lessee shall breach any of the covenants or provisions of this Lease, Lessor shall have the right of injunction and the right to invoke any remedy allowed at law or in equity as if re-entry, summary proceedings and other remedies were not herein provided for. Any mention in this Lease of any particular remedy shall not preclude Lessor from any other remedy it may have in law or in equity. It is expressly covenanted that, the various rights and remedies given to Lessor in this Lease, including the right to remove Lessee by summary proceeding are distinct, separate, nonexclusive and cumulative remedies. Lessee hereby expressly waives any and all right of redemption granted by or under any present or future law if Lessee is evicted or dispossessed for any cause, or if Lessor obtains possession of the Leased Premises by reason of the violation of Lessee of any of the covenants and conditions of this Lease or otherwise. The words "re-entry" and "reenter" as used in this Lease are not restricted to their technical legal meaning.

Whenever in this Lease any sum, item or charge shall be designated or considered as additional rent, Lessor shall have the same rights and remedies for the non-payment thereof as Lessor would have for the non-payment of the rent reserved herein and provided for to be paid by Lessee.

25. No Waiver. No waiver of any default of Lessee hereunder shall be implied from omission by Lessor to take any action on account of such default. One or more waivers of any covenant or condition by Lessor shall not be construed as a waiver of a subsequent breach of the same or any other covenant or condition, and the consent or approval by Lessor to or of any act by Lessee requiring Lessor's consent or approval shall not be construed to waive or render unnecessary Lessor's consent to or approval of any subsequent similar act by Lessee. The receipt by Lessor of rent with knowledge of the breach of any covenant of this Lease shall not be deemed a waiver of such breach. No provision of this Lease shall be deemed to have been waived by Lessor unless such waiver by in writing signed by Lessor. No payment by Lessee or receipt by lessor of a lesser amount than the monthly rent or the additional rent herein provided for shall be deemed to be other than on account of the earliest stipulated rent or additional rent, nor shall any endorsement or statement on any check or any letter accompanying any check or payment be deemed an accord and satisfaction, and Lessor may accept such check or payment without prejudice to Lessor's right to recover the balance of such rent or additional rent or pursue any other remedy Lessor may have pursuant to this Lease, at law or equity.

26. Termination. Upon expiration or termination of this Lease, all equipment used to generate electricity on the Leased Premises including, but not limited to, the electrical generators and all other personal property and leasehold improvements (except the Generating Facility as that term is defined in the Gas Agreement) used in connection with the Generation Operations shall remain the property of Lessee. Lessee shall remove such equipment, personal property or leasehold improvements within six (6) months after the termination of this Lease. In the event Lessee shall fail to remove same within six (6) months of the termination of this Lease, then such equipment, personal property and leasehold improvements shall be deemed abandoned. Subsequent to the expiration of the aforementioned six (6) month period, the Generating Facility shall remain and become the property of Lessor.

27. General. This Agreement shall be governed by and construed in accordance with the laws of the State of New York. This Agreement contains the entire agreement and understanding of the parties hereto with reference to the subject matter hereof and supersedes all prior negotiations, discussions, commitments and understandings, whether written or oral. This Agreement may be modified, waived or discharged only by an instrument in writing signed by the party against which enforcement of such modification, waiver or discharge is sought.

28. Holdover by Lessee. Except for Lessee's rights under Article 27, if Lessee shall not immediately surrender possession of the Leased Premises upon any termination of this Lease, Lessee, at the option of the Lessor, shall thereafter become a tenant from month-to-month at a monthly rental equal to the sum of (i) the monthly rent, and (ii) the average monthly amount of all other items of rent payable hereunder during the then most recent year, subject to all other conditions, provisions and obligations of this Lease insofar as the same are applicable to a month-to-month tenancy and Lessee shall indemnify Lessor against Loss or liability resulting from Lessee's delay in so surrendering the Leased Premises and/or the Landfill.

29. Cross-Default. A default under the Gas Agreement shall constitute a default hereunder.

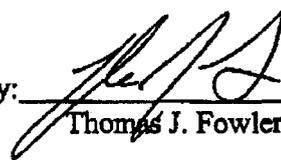
30. Force Majeure. In the event either Lessor or Lessee shall be delayed or hindered in or prevented from the performance of any act required under this Lease by reason of fire, casualty, strikes, lockouts, labor trouble, inability to procure materials, permits or supplies, failure of power, governmental authority, riots, insurrection, war or other reason of like nature, where such delay, hindrance or prevention of performance shall not be within the reasonable control of the Lessor or the Lessee, and shall not be avoidable by diligence, then, the Lessor or the Lessee shall thereupon be excused for such period of delay.

31. Lessor's Access. Lessor shall have access to the Leased Premises at all times during the term hereof provided that such access shall not interfere with the Lessee's use and enjoyment of the Leased Premises. Lessor's access shall be limited to those matters which relate to its operation of the Landfill.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by its duly authorized representative as of the date first above written.

SENECA MEADOWS, INC.

By: _____



Thomas J. Fowler, Vice President

SENECA ENERGY II, LLC

By: _____



Schedule "A"

EASEMENT DESCRIPTION (Parcel No. 1)

Property of

**SENECA MEADOWS, INC.
New York State Route No. 414
Town of Seneca Falls
County of Seneca
State of New York**

Deed Reference: Liber 674, Page 227

BEGINNING at a point on the south side of a 60 foot right of way at the northwest corner of said easement to be conveyed, said point being **N 87°09'43" E** along the south line of said right of way a distance of 760.37 feet from a point in the centerline of New York State Route No. 414, said point being northerly along the centerline of New York State Route No. 414 a distance of 1676 feet more or less from the intersection of the centerline of New York State Route No. 414 with the centerline of Salcman Road.

THENCE running **N 87°09'43" E** along the south line of said right of way and the north line of herein easement a distance of 451.61 feet to a point.

THENCE running on a curve to the right for an ARC distance of 31.42 feet to a point, said course being on a Chord of **S 47°50'17" E** a distance of 28.28 feet.

THENCE running **S 02°50'17" E** along the west line of said right of way and along the east line of herein easement a distance of 657.27 feet to a point, said point being the southeast corner of herein easement.

THENCE running **S 87°09'43" W** along the south line of herein easement a distance of 471.61 feet to a point, said point being the southwest corner of herein easement.

THENCE running **N 02°50'17" W** along the west line of herein easement a distance of 677.27 feet to the point of **BEGINNING** and containing 7.331 acres of land more or less.

Schedule "B"

RIGHT OF WAY DESCRIPTION

Property of

SENECA MEADOWS, INC.
New York State Route No. 414
Town of Seneca Falls
County of Seneca
State of New York

Deed Reference: Liber 674, Page 227

BEGINNING at a point on the apparent east highway boundary of New York State Route No. 414 at the southwest corner of right of way to be conveyed, said point being $N 87^{\circ}09'43'' E$ a distance of 40.8 feet from a point in the centerline of New York State Route No. 414, said point being northerly along the centerline of New York State Route No. 414 a distance of 1676 feet more or less from the intersection of the centerline of New York State Route No. 414 with the centerline of Saleman Road.

THENCE running $N 87^{\circ}09'43'' E$ along the south line of said right of way a distance of 1171.18 feet to a point, said point being an angle in said right of way.

THENCE running on a curve to the right for an ARC distance of 31.42 feet to a point, said course being on a chord of $S 47^{\circ}50'17'' E$ a distance of 28.28 feet.

THENCE running $S 02^{\circ}50'17'' E$ along the west line of said right of way a distance of 160.00 feet to a point, said point being a southwest corner of said right of way.

THENCE running $N 87^{\circ}09'43'' E$ along the south line of said right of way a distance of 60.00 feet to a point, said point being a southeast corner of said right of way.

THENCE running $N 02^{\circ}50'17'' W$ along the east line of said right of way a distance of 240.00 feet to a point, said point being the northeast corner of said right of way.

THENCE running $S 87^{\circ}09'43'' W$ along the north line of said right of way a distance of 1251.79 feet to a point on the apparent east highway boundary of New York State Route No. 414.

THENCE running $S 03^{\circ}25'39'' E$ along the apparent east highway boundary of New York State Route No. 414 a distance of 60.00 feet to the point of **BEGINNING** and containing 1.974 acres of land more or less.

Schedule "C"
Liens and Encumbrances

NONE

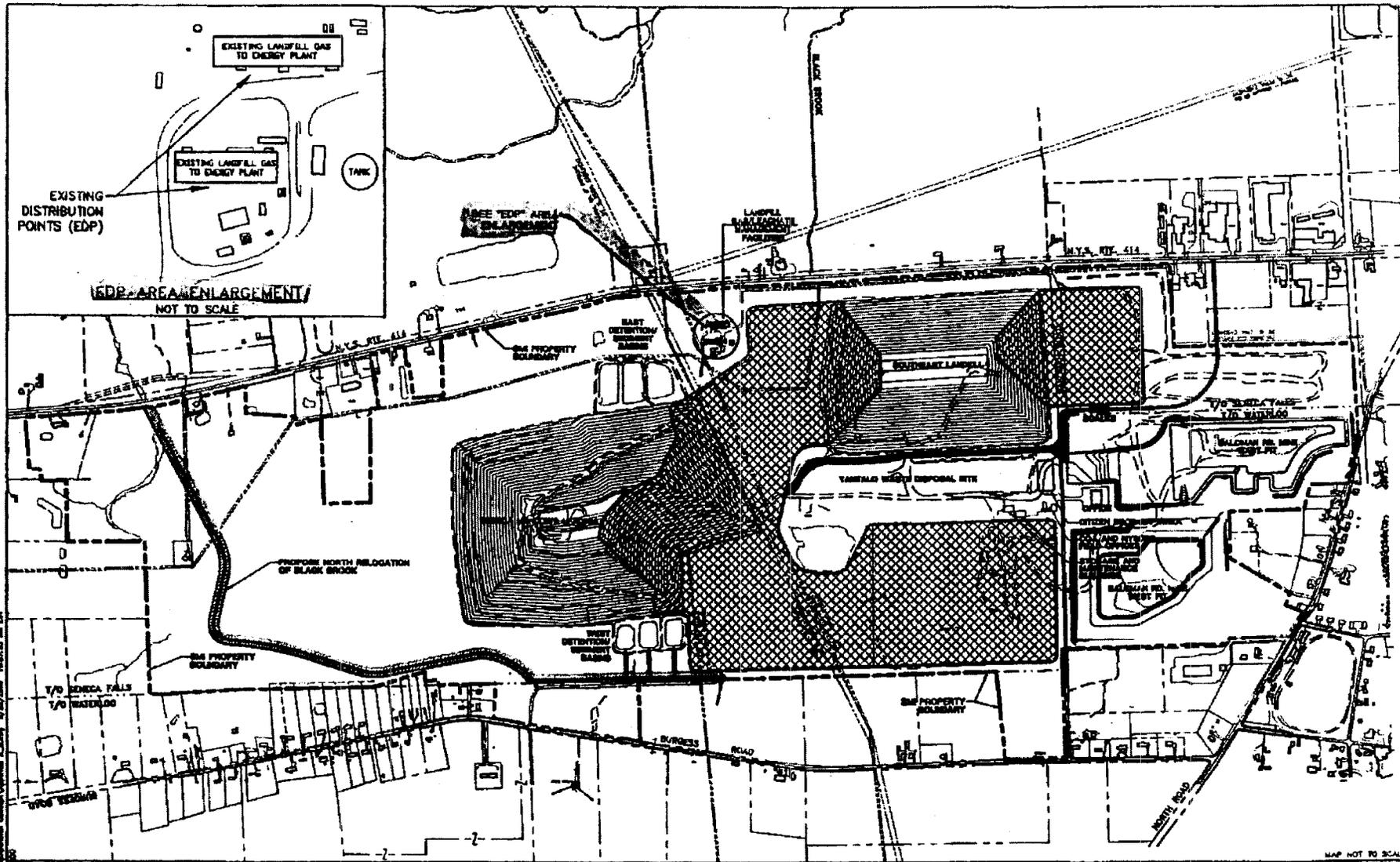


EXHIBIT C - SUR

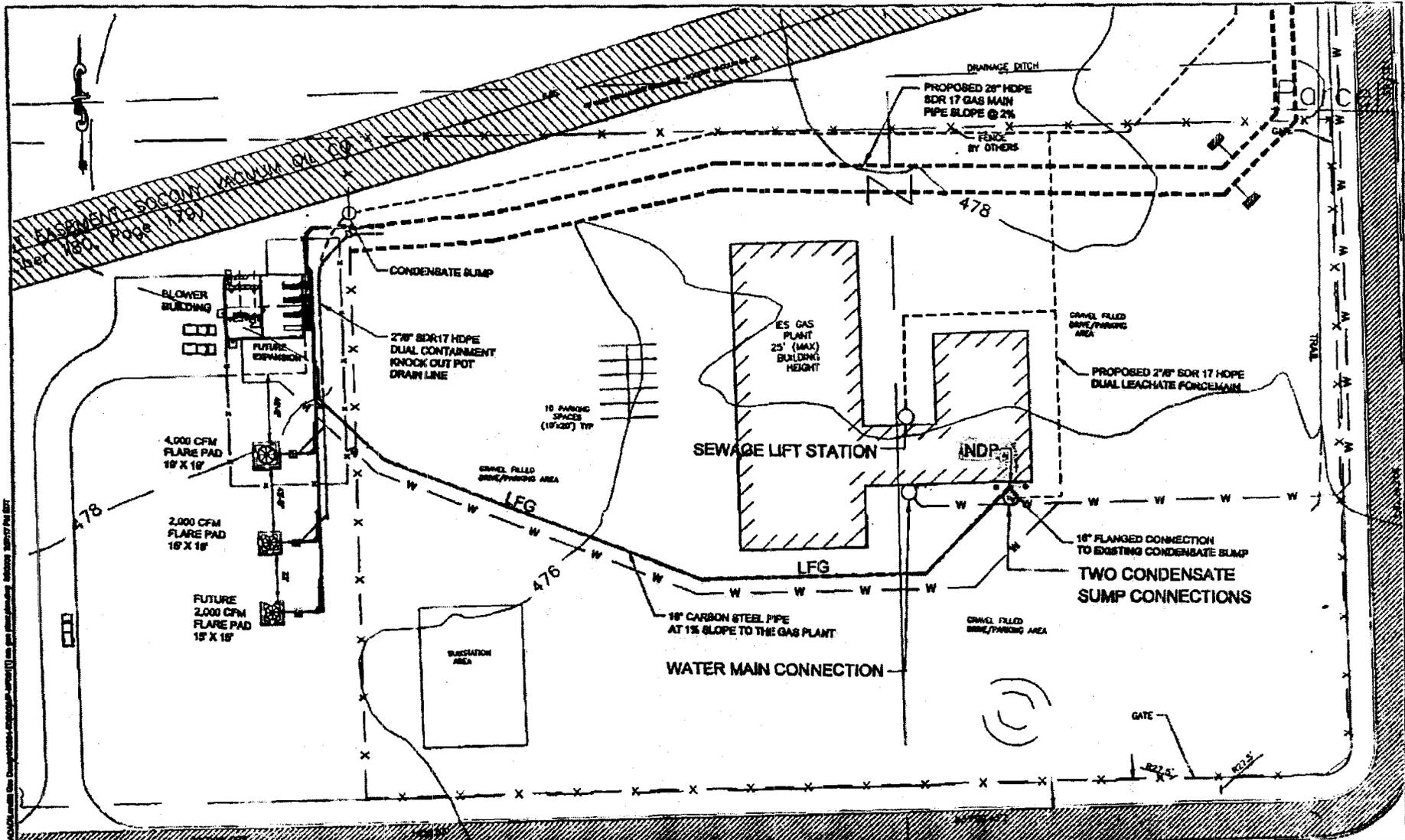
MAP LEGEND:

- INDICATES LANDFILL EXPANSION AREA
- INDICATES TOWN BOUNDARY LINE
- INDICATES SENECA MEADOWS PROPERTY BOUNDARY



Seneca Meadows, Inc.
Seneca Meadows Landfill

EXHIBIT A
LANDFILL BOUNDARY
LANDFILL GAS AGREEMENT



DATE: 11-11-11



Seneca Meadows Incorporated

DESIGNED BY	
DRAWN BY	
CHECKED BY	

SCALE: 1" = 40'

PROJECT: RENEWABLE RESOURCE PARK
 SENeca FALLS SENeca COUNTY NEW YORK

PROPOSED GAS COLLECTION SYSTEM

P-1 SH-1

"ΣΧΗΜΑ Ε"

**Seneca Energy II, LLC
Landfill Gas to Energy Facility - Expansion / Relocation
Construction Work Breakdown Structure
Cost Detail**

PHASE	TASK	DESCRIPTION OF WORK	BUDGET COST	Allocated to the Relocation
1000	1000	GENERAL CONDITIONS		
	1010	Water Supply (City/Well) - Municipal Fees		
	1020	Sewer/septic - Municipal Fees		
	1030	Interconnect Costs		
	1040	Permit Fee's		
	1050	Interest on Advances from Bank (July - October)		
	1060	Attorney Fees		
	1070	Engineering / Design		
	1080	Construction Project Manager (AGI)		
	1090	Construction Management Fee / Startup		
	1100	Relocation of Existing Plants I & II (phase II and III)		
2000	2000	SITE PREPARATION		
	2010	Site Grading		
	2020	Building Excavation		
	2030	Crushed Stone Driveway/Rip-Rap/Final Grading		
2500	2500	PLUMBING		
	2510	Plumbing Contractor		
	2520	Owner Supplied Plumbing / Drain (BM-600)		
	2530	Owner Supplied Misc. Plumbing (BM-502)		
3000	3000	CONCRETE		
	3010	Concrete Contractor		
4000	4000	MASONRY		
	4010	Masonry Contractor		
	4020	Roof Joist Installation		
5000	5000	STEEL		
	5010	Misc. Steel (BM-504)		
	5020	Misc Steel Installation Cost (see Mechanical)		
	5030	Fabricated Items (not included GSS System) - mist & blow down on BM200		
	5040	Overhead Crane (included in misc. steel pkg.)		

6000	6000	CARPENTRY
	6010	Rough Carpentry Labor
	6020	Cabinets & Counter Top Labor (materials under Misc. 14010)
	6030	Drywall/Ceilings/Wall Framing - materials / labor
7000	7000	ROOFING
	7010	Roofing Contractor
	7020	Owner Roofing Labor
	7030	Owner Supplied Roofing Materials (BM-400)
8000	8000	DOOR
	8010	Door Contractor (Hardware - mandors/overheads/frames)
	8020	Door Contractor Installation
	8030	Glass (observation room) - Materials & Labor
9000	9000	FINISHING
	9010	Paint Contractor
	9020	Fencing Contractor
10000	10000	ASTs
	10010	All ASTs Captured in Owner Supplied Mechanical 15020.
11000	11000	RIGGING
	11010	Rigging Contractor
12000	12000	GAS SCRUBBING SYSTEM
	12010	GSS Fabrication Cost
	12020	Owner Supplied GSS Equipment to Field (BM-300)
	12030	Owner Supplied GSS Equipment to Fabricator (BM-301)
13000	13000	INSULATION
	13010	Insulation Contractor
14000	14000	MISC.
	14010	Owner Supplied (BM-501)
	14020	Misc. Instrumentation - Dell Computer (BM-503)
15000	15000	MECHANICAL
	15010	Mechanical Contractor
	15020	Owner Supplied Mechanical (BM-200)
15500	15500	CAT PACKAGE
	15510	BM-1000 (4 engine generator sets 6.4 mW nameplate)
16000	16000	ELECTRICAL
	16010	Electrical Contractor
	16020	Owner Supplied Electrical (BM-100)
	16030	Owner Supplied Substation (BM-700)
	16040	Misc. Electrical (NYSEG meter/RTD) (BM-505)
	16050	Relay testing

	16060	Technical Review NYSEG	
17000	17000	Consumables	
	17010	Ethelene Glycol (Antifreeze)	
	17020	Triethelene Glycol(Reconskid)	
	17030	Lube Oil (one tank full)	

PROJECT TOTALS

Amount of relocation costs to be paid by Seneca Meadows Landfill

Seneca Energy II LLC amount to finance _____

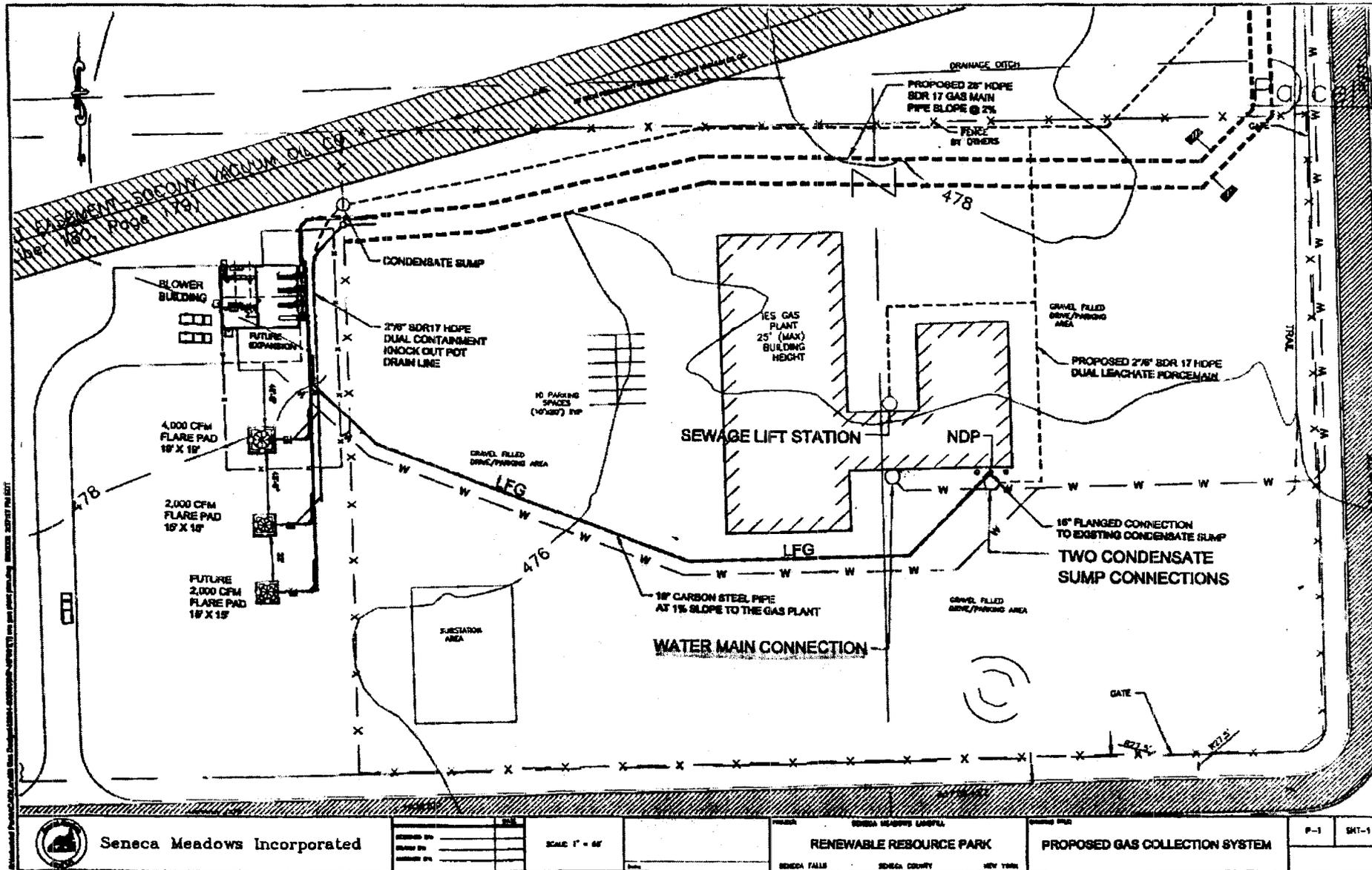


Exhibit "F" - Water Tap

 Seneca Meadows Incorporated

REVISION NO.	DATE	BY	CHKD.

SCALE 1" = 40'

SENeca MEADOWS LANDCO.
RENEWABLE RESOURCE PARK
 SENeca FALLS SENeca COUNTY NEW YORK

PROPOSED GAS COLLECTION SYSTEM

P-1 SHT-1

G



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

MAR 02 2010

Peter H. Zeliff
Innovative Energy Systems Inc.
2999 Judge Road
Oakfield, NY 14125-9771

Re: Prevention of Significant Deterioration and Ozone Nonattainment Area - New Source
Review Air Permit Application for Seneca Energy LFGTE Facility at Seneca Meadows
SWMF Landfill, Seneca Falls, Seneca County, New York, DEC ID: 8453200075

Dear Mr. Zeliff:

The Region 2 Office of the U.S. Environmental Protection Agency (EPA) has reviewed the April 13, 2009 Prevention of Significant Deterioration (PSD) and Ozone Nonattainment Area New Source Review (NAANSR) air permit application for the proposed major modification at an existing major stationary source. The proposed project consists of an electricity generation capacity expansion project from 17.92 megawatts (MW) to 24.32 MW, which will include the addition of four (4) identical Caterpillar (CAT) G3520C internal combustion (IC) landfill gas (LFG) engines. Also, the applicant proposes to increase the carbon monoxide (CO) emissions rates and the landfill gas consumption rates for the fourteen (14) CAT G3516 and four (4) CAT G3520C identical existing LFG engines. This letter is to inform you that your application is incomplete and EPA needs additional information in order to conduct our applicability review.

Single "Stationary Source" under PSD regulations

According to EPA's definition of a stationary source, "a building, structure, facility, or installation means all the pollutant -emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)."¹

Since, Seneca Energy LFGTE Facility (Seneca Energy) is located on Seneca Meadows SWMF Landfill (Seneca Meadows) property; the two facilities are located on "adjacent or continuous properties." In addition, they belong to the same industrial grouping. Nevertheless, EPA presumes one facility located within another facility establishes a "control" relationship. As stated by Seneca Energy, their engines will be fueled exclusively with methane-rich gas generated by the Seneca Meadows and "natural gas is not, and will not be, used to fuel the internal combustion engines operations". Thus, EPA presumes that the owner of the Seneca Meadows has control over the electricity generation operations of the Seneca Energy.

¹ 40 CFR 52.21(b) (5) and (6); New Source Review, Workshop Manual, Draft October 1990, page 4

We have not seen any information in your application that overcomes the presumption that Seneca Energy and Seneca Meadows are under common control. Consequently, EPA considers that the two facilities are to be treated as a single source for Clean Air Act permitting purposes.²

Therefore, please submit a revised application that would include all pollutant –emitting activities at Seneca Meadows and Seneca Energy.

Potential to emit

Please update your application to include the following information:

- Seneca Energy potential to emit of all criteria pollutants (all emitting sources combined) before this project as of its current title V permit. Also, please provide a list with all emitting sources, including “exempt” or “trivial” sources. Please indicate the permitted date, commencement of operation date, and the potential to emit for each emitting source.
- Seneca Meadows potential to emit of all criteria pollutants (all emitting sources combined) as of its current title V permit. Also, please provide a list with all emitting sources, including “exempt” or “trivial” sources. Please indicate the permitted date, commencement of operation date, and the potential to emit for each emitting source. Additionally please provide the maximum landfill gas generation rate estimated to occur during the life of the landfill.

Please provide all the calculations and assumptions that support the potential to emit. Also, please include: (1) an electronic version of the LandGEM used to predict the landfill gas generation rate; and (2) the description and the basis of the LandGEM model inputs (i.e., waste acceptance rates, methane generation rate, potential methane generation rate, non-methane organic compounds concentration, methane content, landfill waste design capacity and landfill open and closure year).

Seneca Energy “Major Stationary Source”

We note that the proposed project has been treated as a major modification to an existing major stationary source relative to PSD. However, based on your application it is unclear when the facility has become a major source.

Please provide the following information:

- Title V permit number and effective date that first acknowledged Seneca Energy as a major stationary source under the PSD and NAANSR regulations;
- Detailed description of previous modifications subject to PSD review;

² PSD, Nonattainment NSR, and title V programs

Request to increase the CO hourly emissions limits for the permitted LFG engines

Seneca Energy requests to increase the CO hourly emissions limits for the existing LFG engines as follows: (1) A limit of 2.6 grams per horse power hour (g/BHP-hr) for the fourteen (14) CAT G3516(operational since 2004); and (2) A limit of 3.3 g/BHP-hr for the four (4) CAT G3520C (operational since 2007). As a result, the CO tons per year (tpy) will increase from the permitted level of 522.9 tpy to 688 tpy. It is worth noting that Seneca Energy's title V permit contains no CO hourly emissions limits for these engines.

EPA's analysis of these engines' actual CO hourly emissions obtained during the May 18, 2007 and respectively November 9, 2009 stack tests reveals that CO actual emissions(i.e., per each run and the average)are way below Seneca Energy's requested limits. In addition, the CAT G3516 engines' actual CO emissions limit calculated based on the highest mean (that was recorded during the May 18, 2007 stack test), and 99.7% standard deviation, is 2.28 g/BHP-hr; the CAT G3520C engines' CO actual emissions calculated based on the highest mean (that was recorded during the November 9, 2009 stack test), and 99.7% standard deviation, is 2.30 g/BHP-hr. Therefore, in order for EPA to make a decision on the applicant's request to increase the CO hourly emissions, Seneca Energy must substantiate their application by providing supporting documentation on the need to increase the CO emissions limits.

Project's Emissions Increases and Net Emissions Increases

Please update your application to address the following:

- Actual emissions increases(i.e., all criteria pollutants) from the existing and modified CAT G3516 and CAT G3520C LFG engines attributable to the increase of their LFG consumption rates;
- Actual emissions increases and decreases, that occurred at both Seneca Energy and Seneca Meadows, during the contemporaneous period. These emissions changes should also include the actual emissions changes associated with "exempt" and or "trivial" emitting sources;
- Project's net emissions increases and comparison with the PSD significant threshold(i.e., in a table format);

Sulfur dioxide (SO₂) emissions

Project's Potential to emit of SO₂

Seneca Energy proposed SO₂ emissions from the four (4) new CAT G3520C LFG engines are at 39.7 tpy, whereas the significant applicable PSD threshold is 40 tpy. However, after including the: (1) SO₂ actual emissions associated with the increases of the LFG consumption rates of the existing and modified LFG engines; and (2) actual emissions changes in the contemporaneous period, it is more likely that the proposed net emissions increases, and the significant net emissions increases will exceed the significant SO₂ PSD threshold.

Therefore, please update your application to address SO₂ BACT analysis.

Sulfur content in landfill gas

Since the sulfur content in landfill gas can vary considerably over time, EPA has determined that the result of analyses of a single set of the sulfur-bearing compounds in the landfill gas is neither relevant nor satisfactory to guarantee that the proposed project sulfur dioxide annual emission limit will not be exceeded.

Therefore, please perform additional landfill gas sampling and supplement the data already available to better characterize the actual sulfur content of the Seneca Meadows Landfill's landfill gas.

New Source Performance Standard for Municipal Solid Waste Landfill, Subpart WWW

Please amend your application to include a compliance demonstration with the applicable provisions of Subpart WWW.

Condensable Particulate Matter (CPM)

Please update your application to include the following:

- Explanation whether the CPM were considered in the PSD applicability determination (i.e., emissions from the proposed project, contemporaneous emissions changes);
- In the event CPM were not included, it is EPA's position that Seneca Energy should include CPM in their PSD applicability determination. Correspondingly, please provide all the calculations, assumptions, reference materials used to arrive to the proposed CPM emissions;

Best Available Control Technology (BACT)

BACT Emission Limit for CO

Seneca Energy established a CO BACT limit of 3.3 g/BHP- hr for the new and existing CAT G3520C LFG engines. This limit is above the maximum limit specified by US EPA RBLC (RBLC) of 3.0 g/BHP- hr for engines without the use of add on controls (NSCR or CO)³ or siloxanes removal technologies. In addition, the CO BACT limit is above the new engines' manufacturer's guarantees limit of 2.5 g/BHP-hr; this limit has been established for similar LFG engines at Greenville Gas Producers, SC in conjunction with the use of a siloxanes removal technology.

Furthermore, for the CAT G3516 engines, the applicant established a CO BACT limit of 2.6 g/BHP- hr. This limit is at midpoint between the maximum and minimum limits specified by RBLC for engines without the use of add on controls (NSCR or CO)³ or siloxanes removal technologies.

³ SCR: Selective Catalytic Reduction, NSCR: Non Selective Catalytic Reduction, and CO: Catalytic Oxidation

BACT Emission Limit for NO_x

Seneca Energy established a NO_x BACT limit of 0.6 g/BHP- hr for the new CAT G3520C engines. This limitation is within the range specified by RBLC of 0.50 to 2.0 g/BHP- hr for engines without the use of add on controls (SCR, NSCR)³ or siloxanes removal technologies. NO_x BACT limit is above the manufacturer's guarantee value of 0.5 g/BHP-hr; this limit has been established for similar LFG engines at Greenville Gas Producers, SC in conjunction with the use of a siloxanes removal technology.

Since, NO_x is precursor to ozone and the project's potential to emit exceeds the NYCRR Subpart 231- Nonattainment significant threshold, the control technology for NO_x must also meet the more stringent requirements for Lowest Achievable Emission Rate (LAER). As a result, the applicant has proposed LAER for their NO_x emissions and not BACT. NO_x LAER and other project's requirements relative to the NAANSR are reviewed by NYSDEC under applicable state programs. However, since NO_x BACT for the proposed project must equate NO_x LAER, for the purposes of this applicability review EPA would refer to NO_x BACT.

BACT Emission Limit for PM_{2.5} and PM₁₀

Seneca Energy established a PM_{2.5} and PM₁₀ BACT limit of 0.24 g/BHP- hr for the new CAT G3520C engines. This limitation is within the range specified by RBLC of 0.05 to 0.34 g/BHP- hr (for engines without siloxanes removal technologies). The applicant has established this limit based on the highest actual stack data (plus a 20 % uncertainty factor) from a larger LFG engine CAT Model 3616 operated at an unidentified facility. Note that the 0.24 g/BHP-hr BACT limit is above the AP 42 emissions factors value for particulate matter from LFG engines.

EPA's Comments on the proposed BACT emissions limits

In spite of their extensive list of RBLC facilities with lower CO, NO_x, PM_{2.5}, and PM₁₀ emission limits than their BACT limits, Seneca Energy rejects lower NO_x and CO limits on the theory the siloxanes in landfill gas damages the engines and makes technical infeasible the utilization of add on controls. Additionally, the applicant claims that their proposed NO_x, PM_{2.5} and PM₁₀ limits fall among RBLC's determinations range.

Based upon information collected by EPA, siloxanes removal technologies are commercially available and are employed by similar facilities (i.e., Greenville Gas Producers, SC; Keller Canyon, CA; Half Moon Bay, CA; Rhode Island Central Genco, RI; Calabasas Landfill, CA). In addition, Half Moon Bay, CA has installed add on controls consisting of catalytic oxidation and selective catalytic reduction systems for their LFG engines. These systems are still experimental; however actual stack test data indicated compliance with the 0.15 g/BHP-hr NO_x and 0.52 g/BHP-hr CO BACT limits. Seneca Energy's findings reveal that LFG engines similar with their engines without the use of siloxanes removal technologies or add on controls were permitted at lower BACT emissions level. Additionally, based on EPA review, there are examples of permitted minor sources with lower NO_x, CO, PM_{2.5} and PM₁₀ emissions limits. (e.g., Warren County Landfill, NJ; Atlantic County Landfill, NJ; Greenville Gas Producers, SC). Nevertheless, for all these sources the emissions achieved in practice are much lower. Also, while Seneca Energy establishes their PM_{2.5} and PM₁₀ BACT limit at 0.24 g/BHP- hr based on a CAT Model 3616 LFG engine's emissions, EPA's research shows that for a similar engine operated since 1998 at MM Tajiguas Energy LLC, CA the PM₁₀ BACT limit is at 0.066 g/BHP-hr.

As previously noted, EPA's review of Seneca Energy's CO actual stack data from their existing CAT G3516 and CAT G3520C engines indicates an excellent performance of these engines. Also, the CAT G3520C engine's actual NOx emissions limit calculated based on the highest mean (that was recorded during the November 9, 2009 stack test run), is 0.26 g/BHP-hr. Furthermore, the CAT G3520C engine's actual PM emissions determined based on the 99.7 % standard deviation is 0.10 g/BHP-hr.

Accordingly, EPA recommends that while establishing BACT limits, Seneca Energy should rely on their actual data rather than on data from a different site with a different landfill gas composition and engines' operating conditions. In addition, EPA believes that under no circumstances, should BACT emissions limits be established: (1) based on a small number of non complaint runs; and (2) at a higher level than the AP 42 emission factors.

EPA's review of Seneca Energy's linear regression models reveals that the model did not perform well for either CO or NOx. While, regression coefficient's values close to "1" (i.e., greater than 0.9) are an evidence of a strong linear relationship between the two variables (i.e., operating hours, and CO or NOx emissions), Seneca Energy's regression coefficients of 0.7 for CO and 0.47 for NOx suggest that there is not a strong relationship between the CO and NOx emissions, and the engines' operating hours. Whereas, we agree that there is a link between the concentrations of siloxanes and other impurities in landfill gas and the engines' wear, Seneca Energy's linear regression estimations for both CO and NOx and engines' operating hours are rather weak. Thus, in our judgment, Seneca Energy should disregard the CO and NOx emissions projected by the regression models.

In conclusion, by limiting its BACT analysis to emissions limits that are "among the best" Seneca Energy fails to satisfy the BACT requirements. Furthermore, another agency's determination that a given emission level is achievable, is by itself sufficient to conclude that is feasible for Seneca Energy, absent a clear demonstration that circumstances exist at Seneca Energy which distinguish it from the other sources with lower limits. (See, EPA's Draft NSR Workshop Manual (October 1990, p. B.29). Only after examination of all technologies, methods and processes of minimizing the emissions at "maximum degree of reduction" that is achievable, the applicant might claim that economic or other factors render a technology or lower emissions limits not achievable.

Therefore, please revise your application to include a BACT analysis following the "top-down approach" and addressing all the above-described issues.

Other Issues

Fuel usage, heating value and air contaminants emission calculations

Based on your application, the air contaminant emission rates calculations were based on a maximum landfill gas consumption rate of 719 cfm for each engine and a minimum landfill gas lower heating value of 350 British Thermal Units (BTU) per cfm (BTU/cf). However, for the same landfill gas usage rate (cfm/engine) and higher landfill gas heating values, the engine's

BHP, the emission factors (g/BHP-hr) of air pollutants, and respectively the emissions rates may increase significantly. Please explain how you propose to ensure that the heating value of the landfill gas used for the engines will not exceed 350 BTU/cf. Please be as specific as possible.

Landfill Gas Heating Value

Please explain why Seneca Energy did not use the actual (measured) landfill gas heating value of 502 BTU/cf for their emission calculations, but a lower heating value of 350 BTU/cf was used instead.

Volatile Organic Compounds

Please revise the VOC emission rates calculations (pounds per hour lb/hr and tpy) using the actual VOC's concentration in the landfill gas sent to the engines and the engine's destruction efficiency. Also, please submit manufacturer's guarantees for the VOC estimated destruction efficiency.

Maximum Landfill Gas Usage Rate

The maximum landfill gas fuel usage rate of 719 cfm for each engine at 350 BTU/cf heating value of landfill gas, exceeds the manufacturer's maximum fuel rate for the same heating value. Please provide the manufacturer's guarantee that the emission factors will remain the same despite of increasing the fuel consumption rate.

Characterization of the landfill gas

The application specifies that Seneca Energy "uses methane -rich gas (exclusively) to fuel its engines (i.e., LFG that is generated by the Seneca Meadows Landfill). What is the methane content that makes the fuel a "methane-rich gas"? Does Seneca Energy receive only "methane rich gas"?

Startup and Shut -down periods

Please provide: (1) the duration (minutes) of each startup and shut down event; (2) the number of startup and shut down events /year /engine; and (3) the manufacturer's emission factors for the startup and shut down periods. However, if it has been determined that the LFG engines at the facility have the physical and operational ability of achieving continuous compliance with the emissions standards during the startup or shut down, please provide the manufacturer's guarantees showing that the engines are capable of complying with the same emission standards during startup or shut down as for 100 % load.

Design of Seneca Energy's engines

Please indicate whether Seneca Energy's engines, both new and existing, are adapted for landfill gas utilization. (i.e., low-energy-fuel engines). Also, please clarify whether the engines are equipped with spark/torch timing and duration controls, and turbocharged and intercooled induction air systems.

Siloxanes in landfill gas

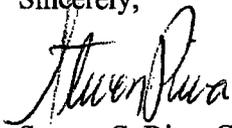
Please provide all available tests that support the actual siloxanes content in the landfill gas prior to combustion by Seneca Energy's engines.

Manufacturer's fuel quality specifications

Please submit a copy of the manufacturer's recommended maximum level of contaminants (i.e., siloxanes, sulfur compounds, halide compounds, particulates, etc.) in the fuel that would make possible to maintain optimum operating conditions for Seneca Energy's engines.

Once the above requested information is submitted to EPA, we will resume the PSD applicability review of this proposed project. If you wish to discuss any of the above issues or have any questions, please call Ms. Viorica Petriman of my staff at (212) 637-4021.

Sincerely,



Steven C. Riva, Chief
Permitting Section
Air Programs Branch

cc: Peter A. Lent
NYSDEC- Region 8
Division of Environmental Permits
6274 East Avon Lima Road
Avon, NY 14414-9519

Michele Kharroubi
NYSDEC- Region 8
Division of Environmental Permits
6274 East Avon Lima Road
Avon, NY 14414-9519

H



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

May 1, 2002

Gary E. Graham
Environmental Engineer
Commonwealth of Virginia
Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glenn Allen, Virginia 23060

Re: Common Control for Maplewood Landfill, also known as Amelia Landfill, and Industrial Power Generating Corporation

Dear Mr. Graham:

In your June 11, 2001, e-mail, you requested that the U.S. Environmental Protection Agency ("EPA") review the proposed project in which USA Waste of Virginia, Inc. (Maplewood's owner/operator) will sell its landfill gas to Industrial Power Generating Corporation ("INGENCO"), a power generating company. Your overarching question was whether Maplewood and INGENCO are under "common control" for purposes of determining whether Maplewood and INGENCO are a single stationary source under PSD and Title V. You also stated that landfill gas will comprise up to 70 percent of the INGENCO's fuel and want to know whether this is relevant to a common control determination.

Before addressing the question of common control, however, EPA would like to address compliance with the landfill gas regulations at 40 CFR Part 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills because a common control or source determination under PSD or Title V does not limit Maplewood's and INGENCO's obligations under Subpart WWW. EPA has consistently concluded that landfills are ultimately responsible for controlling landfill gas. (*See, e.g.*, the attached June 21, 2000, letter to Robert Koster, Lane County Air Pollution Authority from Douglas E. Hardesty, EPA, Region 10). If the landfill gas is sold, responsibility for compliance is not sold as well. Moreover, compliance responsibility cannot be apportioned according to the percentage of gas burned at each facility. If EPA determines that landfill gas is not being controlled in compliance with Subpart WWW, EPA would consider taking enforcement action against Maplewood and INGENCO, no matter which company is burning the gas.

Your common control question goes to the larger question of whether the Maplewood Landfill and the INGENCO power generation facility should be considered a single stationary source under PSD and Title V. The PSD regulations define a stationary source as all of the pollutant-emitting activities that belong to the same industrial grouping, are located on one or



more adjacent or contiguous properties, and are under the control of the same person. 40 C.F.R. 51.166(b)(5) &(6). The Title V regulations adopt a similar definition. (See 40 C.F.R. 70.2) As the INGENCO facility will be located on Maplewood property, the two facilities are located on "adjacent or contiguous properties." Thus, if the INGENCO facility and Maplewood also belong to the same industrial grouping and are under common control, then they would constitute a single source for purposes of PSD and Title V.

EPA has provided a great deal of guidance to States and sources regarding determinations of this nature since 1980. Issues of common control, in particular, have been discussed in EPA a September 18, 1995, letter to Peter Hamlin, Iowa Department of Natural Resources, from William Spratlin, U.S. EPA ("Hamlin letter," copy enclosed). Other EPA guidance and correspondence can be found at:

<http://www.epa.gov/region07/programs/artd/air/policy/search.htm>

EPA's assessment of the question of common control is based on its understanding of the arrangement between INGENCO and Maplewood. Under the terms of the landfill gas purchase agreement, Maplewood has agreed to sell to INGENCO all of its landfill gas. INGENCO is obligated to pay for all of the gas that Maplewood provides, even if INGENCO does not use the gas. Consistent with the landfill gas purchase agreement, it is our understanding that INGENCO has built an electricity generating plant on undeveloped property, leased from Maplewood, and located next to the landfill. This plant is owned and operated by INGENCO. The engines at the INGENCO facility are to run on various types of liquid fuel, including diesel, supplemented by Maplewood's landfill gas. INGENCO has asserted that its engines can run solely on these liquid fuels, but cannot be operated using only landfill gas. Therefore, EPA understands that INGENCO must have fuel vendors other than Maplewood Landfill in order to operate the electricity generating plant.¹ Nonetheless, up to 70% of INGENCO's fuel needs could be met by Maplewood's landfill gas.

As explained in the Hamlin letter, the fact that INGENCO will be located on property owned by Maplewood creates a presumption of common control. Moreover, the fact that Maplewood's entire output of landfill gas will be purchased by INGENCO further supports this presumption, as does the likelihood that a high percentage of INGENCO's fuel needs will be met by Maplewood's landfill gas. However, determinations of this nature are very source-specific, and in a situation such as this the permitting authority may find it necessary to look carefully at the contracts or lease agreements between the parties, and other relevant information before reaching a determination. (See, e.g. the August 2, 1996, memorandum from John S. Seitz, "Major Source Determinations for Military Installations under the Air Toxics, New Source Review, and Title V Operating Permit Programs of the Clean Air Act"). Thus, in answer to one

¹ For purposes of PSD and Title V, INGENCO's potential to emit should be based on an air emissions "worst case scenario" and the type of fuel used at the facility. Similarly, the calculation of Maplewood's potential to emit should reflect the fact that the landfill may flare all of the landfill gas it produces.

of your questions, the percentage of Maplewood's landfill gas that INGENCO burns relative to some other type of fuel may have some significance to a determination of common control, but is only one of many factors to be considered.

There are a number of factors supporting a determination that INGENCO and Maplewood are *not* under common control. Under the terms of the agreement between INGENCO and Maplewood, INGENCO is responsible for all capital improvements on the leased property to create the electricity generating plant. Maplewood, in turn, will continue to own and operate the landfill gas collection system and the flare that burns the landfill gas. If the landfill gas is not used or resold by INGENCO, the gas will be flared at the Maplewood facility. INGENCO will control the valve that shunts the landfill gas to the electricity generating engines or to Maplewood's flare.

In addition, based on statements in correspondence from Maplewood and INGENCO, conversations with a representative of USA Waste of Virginia, Inc., and a review of Dun and Bradstreet's reports, EPA has concluded that Maplewood and INGENCO have no financial interest in one another. EPA has found no indication that the companies have common employees, officers, or members of their respective governing boards, or that they share equipment (including pollution control equipment), payroll activities, employee benefits, health plans, or other administrative functions. Also, neither facility has control over the other's compliance responsibilities. The landfill and INGENCO do not share intermediates, products, byproducts, manufacturing equipment, or property other than as explained above. That is, INGENCO has leased property from Maplewood and will purchase some percentage of its fuel from Maplewood. Maplewood, however, currently receives its power through a local power utility and there is no indication that it will receive power directly from INGENCO. There are also no arrangements for Maplewood to accept INGENCO's municipal solid waste. Finally, neither facility is dependent on the other; if either Maplewood or INGENCO shuts down, the other facility can continue to operate at full capacity.

Your request for EPA's opinion also referred to EPA's February 11, 1998, letter to Terry Godar, VADEQ that addressed common control for another Virginia landfill. In its letter to EPA, VADEQ noted that "The gas collection and the control system ... [landfill gas energy recovery]... will be located on the landfill property *and will be used exclusively to collect emissions from the landfill and to control those emissions through energy recovery.*" (emphasis added). EPA cited this interdependence between the landfill and the gas collection and control system as an indication that the two facilities were under common control.

In contrast to the situation outlined in the original letter from VADEQ, INGENCO's facility does not need landfill gas to operate; the engines at use at the facility can run exclusively on liquid fuels such as diesel. In addition, Maplewood owns and controls its gas collection system and will continue to maintain its own flare. Maplewood accordingly does not need INGENCO to destroy the landfill gas as required by 40 CFR part 60, subpart WWW. Based on our understanding of the facts of this situation, it appears that the purpose of the USA Waste of Virginia, Inc./INGENCO purchase agreement is to allow INGENCO to purchase landfill gas to either run its engines or to sell to other purchasers; not to destroy nonmethane organic

compounds ("NMOC"). These are important differences from the situation described in the letter to Mr. Godar.

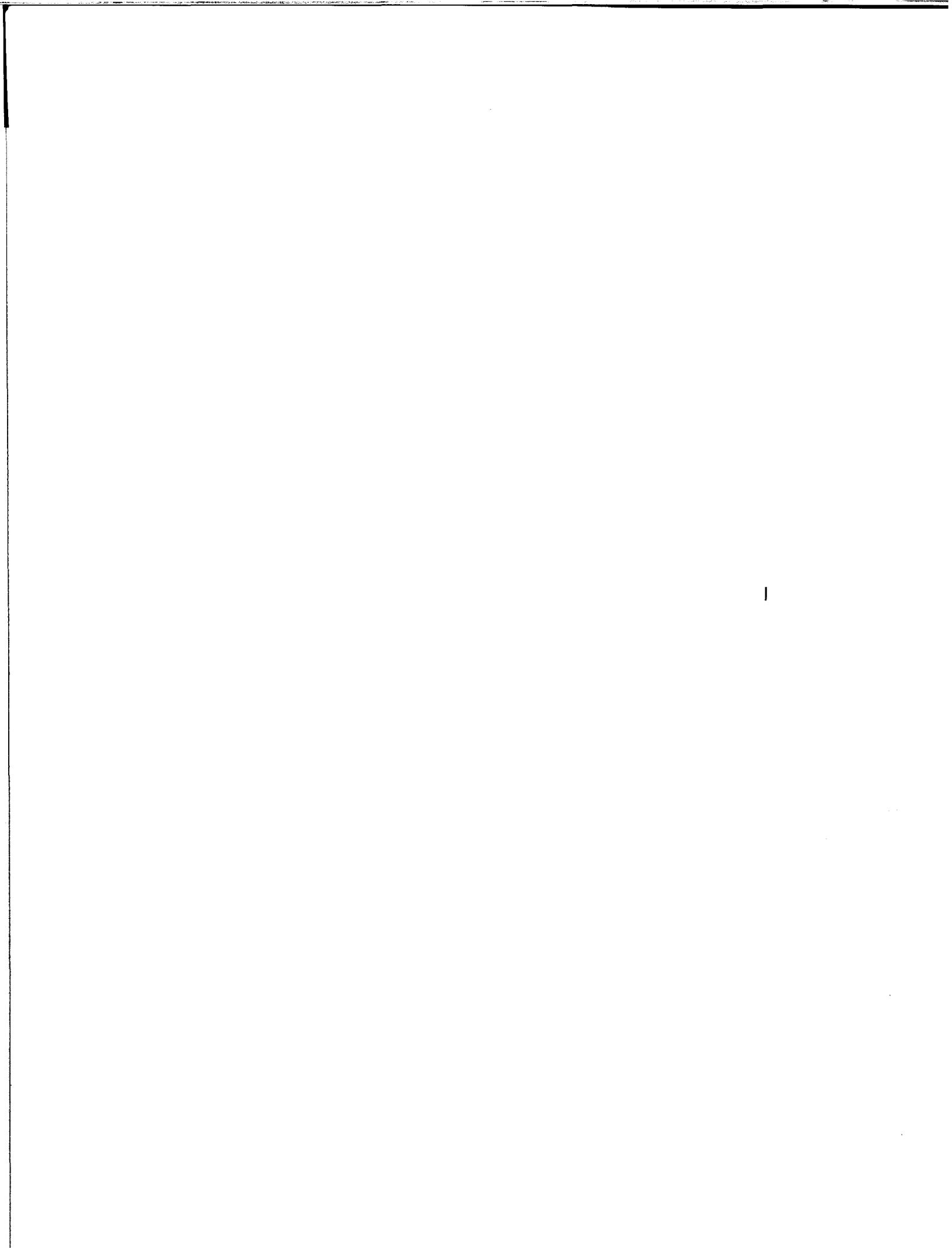
The Commonwealth of Virginia has been granted full approval of the PSD and Title V operating permits programs. As the permitting authority, you must ultimately determine whether Maplewood and INGENCO are under common control for purposes of implementing your PSD and Title V programs. However, if EPA were making the determination, we would find, based on the facts outlined above, that Maplewood and INGENCO are not under common control. Despite the presumption of common control discussed above, the "major" indicators of common control (*see* Hamlin letter at 2) do not point towards such a finding. Therefore, EPA would not consider these two facilities to be one source under PSD or Title V.

If you have additional questions about this, or other issues, call Bowen (Chip) Hosford at (215) 814-3158.

Sincerely,

Judith M. Katz, Director
Air Protection Division

- Enclosures:
- 1) Letter to Robert Koster, Lane County Air Pollution Authority from Douglas E. Hardesty, EPA, Region 10, June 1, 2000
 - 2) Letter to Peter Hamlin, Iowa Department of Natural Resources, from William Spratlin, U.S. EPA, September 18, 1995
 - 3) Memo from John S. Seitz, EPA, "Major Source Determinations for Military Installations under the Air Toxics, New Source Review, and Title V Operating Permit Programs of the Clean Air Act," August 2, 1996
 - 4) Letter to Terry Godar, Virginia Department of Environmental Quality, from Makeeba A. Morris, EPA, February 11, 1998





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

February 11, 1998

Terry Godar, P.E.
Manager
Virginia Department of Environmental Quality
Northern Virginia Regional Office
Woodbridge, VA 22193

Air Permit

Dear Mr. Godar:

Thank you for your April 28, 1997 letter regarding the applicability of Title V requirements for municipal solid waste (MSW) landfills under 40 CFR part 60, subpart WWW new source performance standards (NSPS).

The questions raised in your letter are similar to ones raised in a November 1996 letter by the Maryland Air and Radiation Management Administration (MARMA) to EPA. Because of the relevance of MARMA's questions and EPA's responses to them, we have enclosed a copy of our response letter, including the enclosures, for your use and information. The EPA letter to MARMA addresses questions relating to classifying MSW landfill emissions as non-fugitive emissions, the calculation of potential emissions at a landfill, and determining whether a landfill is a major source under title V of the Clean Air Act (CAA). As with the MARMA letter, your letter raises complex questions that involve ongoing EPA Headquarters policy decisions. For this reason, we have not been able to provide you with a more timely response.

As you may know, since the Summer of 1996, EPA has been involved in litigation over the requirements of the MSW landfill rule. On November 13, 1997, in accordance with section 113(g) of the CAA, EPA issued a notice in the Federal Register (62 FR 60898) of a proposed settlement in National Solid Wastes Management Association v. Browner, et al., No. 96-1152 (D.C. Cir). It is important to note that the proposed settlement does not vacate or void the existing landfill rule. Accordingly, the currently promulgated MSW landfill rule, the Title V rule at 40 CFR part 70, EPA Region 3's letter to MARMA, and other EPA guidance documents serve as a basis for this response. This response has been coordinated with staff in the Office of Air Quality Planning and Standards, the Office of Enforcement and Compliance Assurance, and the Office of General Counsel in order to help assure completeness and accuracy. Given below is our response to your questions, and, as necessary, comments on your "given" statements preceding each question in your letter.

Question #1

Given Department of Environmental Quality (DEQ) Statements/EPA Comments:

Statement # 1. Minor NSPS sources may be deferred from initial part 70 permitting. (Virginia has adopted this option).

EPA Comment: Certain nonmajor sources, i.e., area sources, have been deferred from initial part 70 permitting; others have not.

First, section 502(a) of the CAA requires sources, including nonmajor sources, that are subject to standards or requirements under section 111 or 112 of the CAA to obtain Title V permits. If a promulgated section 111 or 112 standard is silent on whether nonmajor sources under the standard are to be permitted, then the nonmajor sources are by default required to get Title V permits. However, it is important to note two exceptions to this statement:

- 1) Nonmajor sources subject to section 111 and 112 standards which were promulgated **prior** to July 21, 1992 have been deferred from permitting until EPA completes a rulemaking to determine how the Title V program should be structured for nonmajor sources and the appropriateness of any permanent exemptions [section 70.3(b)(1)]. (The MSW landfill rule was promulgated on March 12, 1996 and is therefore not affected by this part 70 provision.)
- 2) Through rulemaking actions (proposed December 13, 1995; promulgated June 3, 1996), EPA decided to defer or exempt nonmajor sources subject to certain section 112 standards promulgated after July 21, 1992 from Title V permitting. These rulemaking actions did not, however, address NSPS standards, including the landfill rule.

Nevertheless, nonmajor MSW landfills which have a design capacity *less than* 2.5 million megagrams or 2.5 million cubic meters have been exempted from the requirement to apply for a Title V permit as a result of 40 CFR part 60, subparts Cc and WWW. However, if these landfills are subject to Title V for other reasons, they are still required to obtain a Title V permit.

Second, it is important to remember that an MSW landfill of any size could be considered a major source under the CAA. Major source status is based on what a source emits or has the potential to emit. For part 70 permitting purposes, a landfill could be classified as a major source under one or more of three major source definitions in Title V: (1) section 112, (2) section 302, or (3) part D of Title I.

Statement # 2. Subpart WWW states that all MSW landfills with a design capacity greater than 2.5 million megagrams are subject to part 70 permitting (section 60.752(b)).

EPA Comment: We agree. It should be noted that section 60.752(b) also stipulates a 2.5 million cubic meters applicability threshold. A MSW landfill with a design capacity *greater than or equal to* either of these thresholds is subject to part 70 permitting.

Statement # 3. A landfill that has a design capacity greater than 2.5 million megagrams may be a minor source. (Preamble to final subpart WWW).

EPA Comment: Assuming that a minor source is equivalent to a nonmajor source, this statement is true. However, section 60.752(b) states that the owner or operator of an MSW landfill subject to subpart WWW with a design capacity *greater than or equal to* 2.5 million megagrams or 2.5 million cubic meters is subject to part 70 permitting requirements; this subpart WWW requirement is independent of any potential to emit requirement.

Statement # 4. The regulated pollutant for landfills is landfill gas, measured as NMOC. Landfill gas contains VOCs and HAPs. Emissions of NO_x, SO₂, PM, etc., from the control device are "secondary emissions" (preamble to final subpart WWW) which are not included in determining major source status ((draft new source review (NSR) workbook)).

EPA Comment: In regard to your first statement, it is important to note that a landfill can be a major source for one or more pollutants, of which NMOC is but one. Under the section 112 major source definition, the pollutants of concern are listed in section 112(b) of the Act and codified in 42 U.S.C. 7412(b)(1). (The codified list contains any modifications to the 112(b) list.) Under section 302 and part D of Title I, a landfill could be a major source for any of the non-HAP pollutants listed in the proposed NSR rule of July 23, 1996 (61 FR 38250, 38310).

The third sentence of your statement is **not** correct. For NSR and Title V applicability purposes, EPA classifies emissions as being either fugitive or non-fugitive, whether or not they are controlled or uncontrolled. There is no definition of "secondary emissions" in 40 CFR part 70, the General Provisions for part 60, or subpart WWW of part 60. In the context of NSR requirements, secondary emissions are defined as emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but **do not come from the major stationary source or major modification itself.** [Emphasis added.] (See for example the definition of secondary emissions in 40 CFR 52.21.) Therefore, emissions of NO_x, SO₂, PM, etc. which results from the application of control devices to the source itself (in this case a landfill) are not considered secondary emissions, and must be counted in major source determinations and are subject to all applicable requirements.

Statement # 5. Until an existing landfill installs a collection and control system, the emissions are fugitive and do not count towards determining major status for NSR or part 70 permitting. (John Seitz October 21, 1994 guidance pertaining to existing landfills.)

EPA Comment: For any designated facility (i.e., existing landfill) under subpart Cc, the MSW Landfill Emission Guidelines, the given statement is **not** correct. Emissions which are **reasonably collectable** are non-fugitive emissions and must be counted in determining the potential to emit for a landfill. **What is considered reasonably collectable is based on what similar landfills are collecting regardless of whether the landfill in question actually captures emissions or not.** For purposes of the NSR program, EPA has concluded that it is reasonable to assume that landfill gas can be collected at landfills constructed, or expanded

beyond their currently-permitted capacity¹, on or after October 21, 1994. Please see the enclosed October 21, 1994 memo from John Seitz, Director, Office of Air Quality Planning and Standards, entitled "Classification of Emissions from Landfills for NSR Applicability Purposes." For landfills constructed or expanded prior to October 21, 1994, if the applicability determinations made for these landfills were correct for that time, those decisions will not be revisited.

The criteria established in NSR for determining which emissions are non-fugitive are also applicable for two of the major source definitions under Title V, i.e., the section 302 and part D of Title I major source definitions. As a result, any Title V major source determinations made under these two definitions on or after October 21, 1994 must consider any reasonably collectable emissions as non-fugitive emissions and must, as a result, count these emissions toward determining a landfill's major source status. As of October 21, 1994, there were no permitting authorities which had received final approval of their Title V programs. As a result, unless permitting authorities were requesting Title V applications from sources prior to October 21, 1994, all MSW landfill owners or operators must count their reasonably collectable emissions toward determining major source status under these two Title V major source definitions.

It is important to clarify that under the section 112 major source definition in Title V, all hazardous air pollutants, whether the emissions are considered fugitive or non-fugitive, must be counted toward determining whether a source is a major source. Please see the enclosed MARMA letter for more discussion on the major source definitions under Title V.

Statement # 6. Without a gas collection system, it is not possible, from a technical standpoint, to determine whether or not a landfill is major for HAP or VOC emissions.

EPA Comment: This statement is **not** correct. It is technically possible to estimate the emissions from a landfill source where a gas collection system is not in place, just as emissions can be estimated for other sources which do not have systems to collect emissions. For determining whether a landfill is a major source, EPA encourages site-specific source testing of landfill gas to determine its constituent pollutants and their concentrations. Use of actual emissions data reduces the uncertainties associated with using the emission factor concentrations provided in EPA's AP-42, Compilation of Air Pollutant Emission Factors.

In the absence of actual emissions data, however, the preferred method for estimating MSW landfill emissions for major source determinations is use of EPA's AP-42. Table 2.4-1 in AP-42 contains a list of numerous HAP and VOC emissions concentrations for uncontrolled landfills. However, it is important to note that sources need to consider all pollutants for which they could be considered a major source, some of which may not be included in Table 2.4-1. (See EPA's comment on Statement #4.) Emission estimating procedures, other than AP-42, may be acceptable, as determined by the permitting authority.

¹ The currently-permitted capacity of a landfill is in reference to whatever permit the landfill owner or operator holds at the time that the landfill begins to expand, e.g., air permit or solid waste permit.

An updated version of AP-42 landfill emission factors was placed on the EPA website on September 30, 1997 and will be published by the Government Printing Office in paper in Supplement D to the 5th Edition on or about January 1999. The updated emission factors can now be accessed at the following website address: <http://www.epa.gov/ttn/chief/ap42etc.html>. Emission factors relative to landfills are located in chapter 2, section 4. A copy of these revised AP-42 emission factors is enclosed. It is important to emphasize that in order to appropriately apply various emission factors to landfills, a permitting authority should thoroughly review the background document for landfills. This document can be accessed at the following website address: <http://www.epa.gov/ttn/chief/ap42back.html>.

Finally, it is important to emphasize that major source status under the CAA is based on what a source emits or **has the potential to emit**.

DEQ Question #1

When does an NSPS subpart WWW landfill become a major source?

EPA Response: A landfill becomes a major source when it emits or has the potential to emit major amounts of any 112(b) pollutant or any pollutant of concern under section 302 or part D of Title I. (See EPA's comment on Statement #4.) NMOC became pollutants to consider in major source determinations as a result of the promulgation of the NSPS for landfills on March 12, 1996. This question is also addressed on pages one and two of the enclosed MARMA letter.

Question # 2

Given DEQ Statements/EPA Comment:

Statement # 1. A landfill which is subject to NSPS subpart WWW is preparing to install a gas collection and control system.

Statement # 2. The gas collection system and the emissions control system (landfill gas energy recovery) will be owned and operated by separate third parties under contract with the landfill owner.

Statement # 3. The gas collection and the control system will be located on the landfill property and will be used exclusively to collect emissions from the landfill and to control those emissions through energy recovery.

EPA Comment: We have no comment on any of the above three given statements.

DEQ Question #2 and Conclusion

How many sources are there and who are they?

Your conclusion was as follows: "Based on these activities being co-located, and mutually dependent, I concluded that the gas collection and the energy recovery-gas control system would be under the control of the landfill operator and, as such, should be considered as one source for NSR and for Title V applicability. For permitting purposes, the landfill, the gas collection operator, and the energy recovery operator would be registered and permitted separately, with the landfill owner's permit containing conditions that apply in the event of a noncompliance by either the gas collection operator or the energy recovery operator."

EPA Response: We agree with your conclusion that there is one source at the landfill. Under all three major source definitions under Title V (section 112, section 302, or part D of Title I), a stationary source is determined by aggregating sources which are (1) located on one or more contiguous or adjacent properties and are (2) under common control. Regardless of which major source definition is being considered, we conclude that the landfill and gas collection and control systems are one source.

One aspect of the above that may warrant further discussion is in regard to how we determined the landfill and the gas collection and control systems to be under "common control," given that the gas collection and control system will be owned and operated by separate third parties. All three statements that you provided support the conclusion that the landfill and the gas collection and control system must be considered under "common control" for Title I and Title V purposes.

Although the gas collection and control system is owned and operated by separate third parties, the owners of the gas collection and control system are under contract with the owner of the landfill. In a November 16, 1994 letter to Lisa Thorvig, Division Manager, Air Quality Division, Minnesota Pollution Control Agency from John Seitz, Director, OAQPS, the following is stated: "It is important to note that there are no provisions in Title I or Title V of the Act, or in regulations developed pursuant to them, for excluding contracted or temporary operations in defining major sources. Accordingly, it is the EPA's policy that temporary and contractor-operated units are included as part of the source with which they operate or support." (Please see the enclosed letter.)

The gas collection and control system will be used exclusively to collect emissions from the landfill and to control those emissions through energy recovery. As you have noted, this interdependence between the landfill and the gas collection and control system further indicates that both installations are under common control. For more background on common control issues, please see the enclosed letter to Peter Hamlin, Chief, Air Quality Bureau, Iowa Dept. of Natural Resources from William Spratlin, Director, Air, RCRA, and Toxics Division, Region VII, U.S. EPA, dated September 18, 1995.

Lastly, on a separate but related issue, we would like to emphasize that if permitting authorities allow separate permits to be issued to landfills and gas collection and control systems which are considered one source, those permits cannot be issued in a way that changes how the landfills or the gas collection and control systems would be subject to and comply with any applicable requirements, compared to what would otherwise occur if the source was issued a single Title V permit. A particular challenge with issuing multiple landfill permits is the difficulty of splitting the

NSPS or EG requirements among two or more permits. As a result, EPA suggests that one permit be issued to the source described above, with the permit clearly identifying the owner/operator of the landfill, the owner/operator of the gas collection system, and the owner/operator of the energy recovery-gas control system. Additionally, it is important to note that the number of permits issued to a source does not limit the liability of any of the owners/operators or contractors at the source, e.g., the owner/operator of the landfill.

We hope the enclosures combined with the above comments and responses to your questions meet your informational needs. However, if you have additional questions or concerns, please feel free to contact James B. Topsale of my staff at (215) 566-2190.

Sincerely,

/s/

Makeba A. Morris, Chief
Technical Assessment Section

Enclosures(4):

1. Compilation of Air Pollutant Emission Factors, chapter 2, section 4, Municipal Solid Waste Landfills (Supplement D), September 1997.
2. June 9, 1997 letter from Makeba A. Morris, EPA Region III, to Carl R. York, Chief, Regulation Development Division, Maryland Air and Radiation Management Administration, w/ enclosures (5).
3. November 16, 1994 letter from John S. Seitz, Director, Office of Air Quality Planning and Standards, to Lisa J. Thorvig, Division Manager, Air Quality Division, Minnesota Pollution Control Agency.
4. September 18, 1995 letter from William A. Spratlin, Director, Air, RCRA, and Toxics Division, to Peter R. Hamlin, Chief, Air Quality Bureau, Iowa Department of Natural Resources, w/ enclosure.

J



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

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Commissioner Erin M. Crotty
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-1011

Re: EPA's Review of Proposed Permit for Al Turi Landfill
Permit ID : 3-3330-00002/00039, Mod 1

Dear Commissioner Crotty:

The purpose of this letter is to notify the New York State Department of Environmental Conservation (DEC) that the United States Environmental Protection Agency (EPA) formally objects to the issuance of the above referenced proposed title V operating permit for Al Turi Landfill, located in Goshen, New York, operated by Al Turi Landfill, Inc.

Section 505(b)(1) of the Clean Air Act (the Act) and 40 C.F.R. § 70.8(c) require EPA to object to the issuance of a proposed permit in writing within 45 days of receipt of the proposed permit (and all necessary supporting information) if EPA determines that it is not in compliance with applicable requirements under the Act or 40 C.F.R. Part 70. Pursuant to 70.8(c), a detailed explanation of the objection issues and the changes necessary to make the permit consistent with the requirements of 40 C.F.R. Part 70 is provided in the attachment to this letter. In summary, the basis of EPA's objection is that the proposed permit (1) incorrectly treats Al Turi Landfill as a source separate from the landfill gas control facility; (2) misrepresents the landfill gas control devices in use; (3) does not reflect the responsibility of Al Turi Landfill for compliance with all requirements for control of the landfill gas; (4) does not satisfy the annual certification requirements of § 114(a)(3) of the Act and 40 C.F.R. § 70.6(c)(5); and (5) does not include all of the requirements of the National Emission Standard for Hazardous Air Pollutants: Municipal Solid Waste Landfills.

In addition, on January 30, 2004, the Administrator signed an Order granting the Petition filed by the New York State Public Interest Research Group in part and denying the Petition in part. See *In the Matter of Al Turi Landfill, Inc.*, Petition No. II - 2002-13-A (January 30, 2004). The Administrator's Order required DEC to make changes to or explain certain specific conditions in Al Turi's proposed permit, which this permit modification (Mod 1) fails to include. The outstanding issues granted in the Order are that the proposed permit: (1) does not explain in its Permit Review Report the options available in the regulation for nitrogen and oxygen concentrations and monitoring at the gas collection system wellheads; (2) does not explain the applicability of Condition 3 (Condition C in the Mod 1) and Condition 7 (Condition G in Mod 1).

Internet Address (URL) • <http://www.epa.gov>

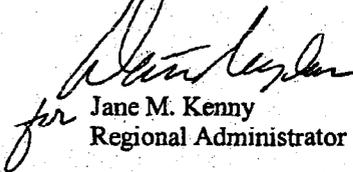
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to the Al Turi Landfill; and (3) does not include the "excuse" provision that is in New York's SIP approved by EPA at 6 N.Y.C.R.R. § 201.5. DEC is on notice that these issues were not corrected in Mod 1 and are currently outstanding. If DEC fails to implement these requirements, EPA will act to issue a part 71 permit as explained below. Enclosed is an attachment that details all the issues referenced in this letter.

The DEC is expected to submit a second permit modification (Mod 2) to EPA by July 19, 2004. The DEC is encouraged to correct both the outstanding issues from the Administrator's January 30, 2004 Order, as well as the issues addressed in this objection letter within this second permit modification. Should the DEC fail to make the necessary corrections to the Al Turi permit by Mod 2, EPA will use its authority under Section 505(c) of the Act to issue or deny the permit under 40 C.F.R. Part 71.

We are committed to working with you to resolve these issues. Please let us know if we may provide assistance to you and your staff. If you have questions or wish to discuss this further, please contact Mr. Steven C. Riva, Chief, Air Permitting Section at (212) 637-4074.

Sincerely,


for Jane M. Kenny
Regional Administrator

Attachment

cc: David Shaw, Director, Division of Air Resources, NYSDEC, Albany
Margaret Duke, Regional Permit Administrator, NYSDEC, Region 3
Robert Stanton, Regional Air Pollution Control Engineer, NYSDEC, Region 3
Tracy Peel, New York Public Interest Research Group
Gary Abraham, Esq.

Joseph Gambino
Al Turi Landfill, Inc.
73 Hartley Road
Goshen, NY 10924

Attachment

to 7/8/04 EPA Region 2
Letter to
NYSDEC

**Objection Issues and Outstanding Issues
Proposed Part 70 Permit
Al Turi Landfill, Inc.
Al Turi Landfill
Permit ID: 3-3330-00002/00039, Mod 1**

(1) The proposed permit does not treat Al Turi Landfill and Al Turi LFGTE-1 (also referred to as "Ameresco LFG-1") as a single source with the result that all applicable Federal requirements have not been addressed.

The Description section of the proposed Mod 1 permit states that DEC has determined that Al Turi Landfill and Al Turi LFGTE-1 are not under common control, and, ostensibly, therefore not a single source. The Permit Review Report states that Al Turi LFGTE-1 is a separately owned/operated and permitted gas-to-energy facility that is owned/operated by Ameresco, Inc.

Based on information provided in the proposed Mod 1 permit and in a letter from the attorneys for Al Turi Landfill, Beveridge & Diamond, P.C., the determination and statement by DEC that Al Turi Landfill and Al Turi LFGTE-1 are not under common control is incorrect. That these two facilities are a single source for Clean Air Act Title V and New Source Review (NSR) purposes is delineated below. Consequently, the permit must be modified to reflect this single-source status. The Al Turi Landfill permit must be revised to include the emission units, processes, and emissions for the landfill gas controls, and all Federal applicable requirements for those units, processes, and emissions. With this redefinition of the permitted facility, DEC must recalculate the potential to emit for Al Turi Landfill.

The formal single source determination prepared by EPA follows.

On January 21, 2004 the EPA reopened the Al Turi permit for cause pursuant to 40 C.F.R. § 70.7(g). In the Response to Comments within permit Mod 1, the DEC relied upon a letter submitted to it on April 22, 2004 by Mr. Christopher J. McKenzie of Beveridge & Diamond, P.C., the attorney for Al Turi landfill, to hold that Al Turi Landfill, Inc. ("Al Turi") and Al Turi LFGTE ("Ameresco") were not a single source for both Title V and NSR applicability purposes. A single source determination consists of a three factor test set out under the definition of "major source" in 40 C.F.R. § 70.2, as well as under the definition of "building, structure or facility" in 40 C.F.R. § 51.166. Under the definition of "major source" in 40 C.F.R. § 70.2 two facilities are considered a single source if they are (1) under common control, (2) contiguous or adjacently located and (3) have the same two-digit SIC code. The DEC did not present its own analysis of the factors of the test, nor did it determine whether or not each of the factors was present when making its single source determination within permit Mod 1. Rather, the DEC

attached excerpts of the letter submitted by Al Turi's attorney, Mr. McKenzie, and concurred with his determination, that Al Turi and Ameresco were separate sources for Title V and NSR applicability purposes.

On March 11, 2004 the DEC requested a ninety day extension from Jane M. Kenny, Regional Administrator, EPA, Region 2, in order to respond to the January 21, 2004 reopening for cause. The request was made, in order to obtain more information from Al Turi for the single source determination. This determination was to be made by DEC within the permit Mod 2. However, the DEC stated that Al Turi and Ameresco were not a single source within its response to comments within permit Mod 1, including excerpts of the analysis submitted by Mr. McKenzie within its Permit Review Report. In addition, a draft of the Permit Review Report of permit Mod 2, submitted by DEC, includes excerpts of Mr. McKenzie's letter. Again, the DEC relies upon the information provided in Mr. McKenzie's April 22nd letter to find that Al Turi and Ameresco are two separate sources for Title V and NSR applicability purposes.

Although Mr. McKenzie's letter to the DEC asserts that Al Turi and Ameresco should not be treated as a single source, an analysis of the information provided within the letter leads to the conclusion that the three factors required to treat Al Turi and Ameresco as a single source are present in this case. In the April 22nd letter, Mr McKenzie states that Al Turi and Ameresco are located on adjacent property and share the same two-digit SIC code (Major Group 49: Electric, Gas, and Sanitary Services - 4953: Refuse Systems, 4911: Electric power generation, transmission or distribution). As a result, the adjacency and SIC code factors of the test have been met.

The only remaining factor is common control. Mr. McKenzie's letter focuses primarily on this factor. A letter, written by William Spratlin, then Division Director of the Air, RCRA, and Toxics Division, EPA, Region 7, and dated September 18, 1995, outlined seven factors that can be examined when making a common control determination. Mr. McKenzie provided the DEC with answers to the seven factors. As stated in Director Spratlin's letter, a positive answer to only one or more of the seven factors is enough to establish common control between two facilities. Thus, even though two facilities may not have common officers, plant managers or workforces, they may still be under common control.

The major factor to examine in Director Spratlin's letter regarding Al Turi and Ameresco is whether or not the two facilities are inter-dependent. Ameresco purchases all of Al Turi's landfill gas and all of its energy needs from Al Turi. Based upon its proposed permit and permit Mod 1 Al Turi sells its landfill gas to Ameresco, which converts the landfill gas to electricity. This is the means by which Al Turi has chosen to meet the requirements of the New York State Landfill Plan, 6 N.Y.C.R.R. Part 208, rather than install a collection and control system. Thus, Ameresco controls the landfill gas emitted from Al Turi. In the April 22nd letter, Mr. McKenzie states that the control equipment is

owned and operated by Ameresco (the engines and back-up flares), and therefore is not owned or operated by Al Turi. Rather, Mr. McKenzie states that, within its purchase agreement Al Turi has a first option to buy back the flares should Ameresco no longer wish to purchase its landfill gas from Al Turi. A first option to buy does not constitute physical possession of the flares, and therefore an independent relationship from Ameresco. Without independent ownership of the flares Al Turi is fully dependent upon Ameresco for the treatment and control of its landfill gas.

Ameresco is equally dependent upon Al Turi as its main fuel supplier. Mr McKenzie's letter further states that Ameresco is not contractually obligated to purchase 100% of its gas supply from Al Turi, since it is allegedly allowed to supplement and/or blend the landfill gas with alternative fuel at Ameresco's discretion. However, the letter provides that the purchase agreement contractually obligates Ameresco to purchase whatever landfill gas Al Turi sends to Ameresco. Presently, it is receiving 100% of its gas supply from Al Turi and is not supplementing through other sources. Although it may supplement its gas supply through another fuel, Ameresco's main source of fuel is Al Turi's landfill gas, which it is contractually obligated to purchase. As a result, Ameresco is dependent upon Al Turi, since Ameresco can not operate without Al Turi's landfill gas, its main, and, in fact, only gas supplier. In turn, as previously established, Al Turi is dependent upon Ameresco, since Ameresco houses the control equipment for the landfill. All the control equipment, including the back-up flares are owned and operated by Ameresco. Should Ameresco choose to not treat and control its landfill gas, Al Turi will be in violation of the New York State Landfill Plan until it exercises its option to buy back the flares from Ameresco within its purchase agreement. Since Al Turi and Ameresco are inter-dependent upon one another common control is established under the criteria within Director Spratlin's letter. Again, only one factor need be present, in order to establish common control between two facilities. The inter-dependent relationship between Al Turi and Ameresco through the facts presented is enough to establish common control in and of itself and is the main focus of this determination. However, common control can be established through two of the other seven factors within the Spratlin letter as well.

ND -
WRONG

A second factor within Director Spratlin's letter that may be used to establish common control is the support factor. Mr McKenzie's letter, dated April 22, 2004, references a support relationship between Al Turi and Ameresco. The April 22nd letter does not state that the purchase agreement between Al Turi and Ameresco provides for a set price to be paid by Ameresco to Al Turi for its landfill gas. Rather, Al Turi receives a percentage of Ameresco's revenues realized by the sale of electricity or other products of the landfill gas generated at Ameresco. Thus, Al Turi's revenues are directly connected to Ameresco's revenues. An increase in Ameresco's revenues means an increase in Al Turi's revenues. Alternatively, a decrease in Ameresco's revenues means a decrease in Al Turi's revenues. Although all of Al Turi's revenues may not be connected to Ameresco, some support relationship has been demonstrated by the facts presented.

A third factor is whether or not the two facilities share control equipment and whether or not the management decisions of one facility can affect pollution control at the other facility. Al Turi's landfill gas is sent to Ameresco where it is treated and controlled at Ameresco. Ameresco converts the Al Turi landfill gas that it has treated and controlled to electricity. The control equipment although located at Ameresco meets the needs of both facilities. Without the control equipment at Ameresco, Al Turi could not meet the requirements of the New York State Landfill Plan without putting in its own collection and control system. Thus, these two facilities also share control equipment. In addition, any decisions made at Ameresco regarding the control equipment affect Al Turi. Should Ameresco shutdown the control equipment, Al Turi will not be able to comply with the New York Landfill Plan. Thus, the management decisions at Ameresco affect pollution control at Al Turi, since Al Turi's pollution equipment is owned and operated by Ameresco.

Lastly, Mr. McKenzie compares the Al Turi matter to a single source determination in a letter dated May 1, 2002 by EPA, Region III, regarding Maplewood Landfill (hereafter referred to as "Maplewood"). The distinguishing factor between the Al Turi situation and Maplewood is that the back-up flares were located at Maplewood. As stated above, an option to buy does not constitute physical possession of the flares. Unlike Al Turi, the landfill in Maplewood owned and operated the back-up flares. Thus, should INGENCO choose to suddenly stop treating and controlling Maplewood's landfill gas, INGENCO had a backup system in place. Unlike Maplewood, Al Turi does not have physical possession of the back-up flares. Al Turi must purchase the flares from Ameresco should Ameresco decide to stop purchasing its landfill gas. Should anything go wrong at Ameresco, Al Turi does not have a back-up system in place at its own facility to make it truly independent of Ameresco.

A second factor that differs between Maplewood and Al Turi was Maplewood's use of other fuel sources. In Maplewood 70% of INGENCO's fuel supply came from Maplewood. Mr. McKenzie's letter states that it is not contractually obligated to obtain its gas supply solely from Al Turi. Although Ameresco can supplement its fuel supply from other fuel sources, it is contractually obligated to purchase all the landfill gas Al Turi provides, whatever that may be. At present it purchases 100% of its gas supply from Al Turi. Ameresco's fuel supply appears to be dependent upon what Al Turi sends it. Thus, at present Ameresco purchases all of its fuel from Al Turi and is contractually obligated to do so. This demonstrates a dependent relationship between Ameresco and Al Turi that did not exist between Maplewood and INGENCO. The differences in these two factors distinguish the Maplewood determination from the Al Turi determination.

As discussed previously, a single source determination for Title V and NSR applicability purposes consists of a three factor test. Two sources must be under common control, contiguous or adjacent and have the same two-digit SIC code, in order to be deemed a single source. Based upon this determination Al Turi and Ameresco are under common

control, are adjacent and have the same two-digit SIC Code. As a result, Al Turi and Ameresco are a single source for Title V and NSR applicability purposes.

(2) The landfill gas control scenario presented in the proposed permit does not reflect the existing controls with the result that the proposed permit does not include all applicable Federal requirements.

Based on information provided by Al Turi Landfill in its May 2004 Application for a Title V Permit Modification and by DEC in its draft Mod 2 permit, the public comment period for which began June 7, 2004, the control scenario used in the original and the proposed Mod 1 permits for Al Turi Landfill is believed to be inaccurate. The most recent information reflects the following: (1) a treatment system receiving untreated gas; (2) 2 back-up flares using untreated gas; and (3) 8 or 9 engines that use treated gas--2 of the engines serve as compressors in the treatment system and 6 or 7 of the engines generate electricity. The proposed Mod 1 permit does not mention the treatment system or the use of treated gas in the engines. Since, according to the Application, the system is in use already, it is appropriate to object at this time to this feature of the proposed permit. Consequently, in addition to all requirements for enclosed flares, the permit must include all requirements for a treatment system, which may comply with the NMOC emissions standard by use of open flares, enclosed combustors, and/or other control systems designed to reduce NMOC by 98%. While this may appear to be a reversal relative to the instructions of the Order and the Notice to Reopen, it is, rather, a response to the information now gleaned from the May 2004 Application and the draft Mod 2 permit.

Among the conditions affected by this altered scenario are Conditions 1-3, 1-5, and 52.

- a. Condition 1-3, which replaces original permit Condition 50, cites 208.8(f)--the reporting requirements for an active collection system--but omits language of 208.8(f) that is relevant to open flares and to enclosed combustors that are not enclosed flares, and it omits the requirement to submit an initial performance test report within 180 days of start-up of the collection and control system. The following language must be returned to the permit: "The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 C.F.R. Part 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 6 N.Y.C.R.R. Part 208.9(c)." The controls for a treatment system may be open flares, enclosed combustors, or another type of control system designed to reduce NMOC by 98 weight percent. The Landfill must submit information to DEC per 208.7(d) for monitoring operation of the treatment system, including performance testing protocol, parameters to be monitored, and the ranges of those parameters that will reflect operation in compliance with the requirements. This addition is equivalent to returning the original permit Condition 49, "Monitoring of Operations- Other Control Devices," to the permit.

A condition to address the 208.9(c) recordkeeping requirement should be added, as well.

- b. Condition 1-5, which replaces original permit Condition 48, cites 208.7(b)--the monitoring of operations requirement for control using an enclosed combustor--and states the following: (i) there are 8 internal combustion engines and 2 enclosed flares owned and operated by Ameresco; (ii) the parameters to be monitored are temperature using a continuous-recording device and flow to or by-pass of the control device; and (iii) Ameresco LFG-1 Inc. will calibrate, maintain, and operate the monitoring devices while Al Turi Landfill is responsible for maintaining and submitting records of all data pertinent to these devices. Our objection to this condition is as follows:

- (I) Al Turi Landfill is responsible for all aspects of compliance with the Part 208 regulation. This includes calibrating, maintaining, and operating the monitoring equipment, not only maintaining and submitting records of all pertinent data.
- (ii) The parameters to be monitored in this condition are suitable for monitoring of the enclosed flares, but not for the other control devices that are or may be used for NMOC control. The Al Turi Landfill permit must address emissions from atmospheric vents in the landfill gas treatment system and restrict the treated gas to subsequent sale or use, disallowing release to the environment. The options for controlling treatment system emissions are provided at 208.3(b)(2)(iii)(C)--use of open flares or a control system designed to reduce NMOC by 98 weight percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen.
- (iii) Condition 52 was not revised as directed in the Notice to Reopen. It omits the part of the 208.9(b) recordkeeping requirement that applies to enclosed combustors such as the enclosed flares used for control by Al Turi Landfill. This condition no longer needs to accommodate modified requirements for the engines since they have been reclassified as using treated landfill gas and thus are not subject to the NMOC control requirements for landfill gas control devices.

(3) The proposed permit does not reflect the responsibility of Al Turi Landfill for compliance with all requirements for control of the landfill gas with the result that all applicable Federal requirements have not been addressed.

The proposed Mod 1 permit either has not addressed issues raised in Issue I of the Notice to Reopen, or has done so incompletely. The Issue I instruction was to add language to existing permit conditions or create new conditions to address requirements from all of the (1) standards for air emissions from MSW landfills, (2) operational standards, (3) test methods and procedures, (4) compliance provisions, (5) monitoring requirements, (6) reporting requirements, and (7) recordkeeping requirements that apply to landfill gas controls; and to supplement the changes listed as necessary to address all requirements implied by the changes. Specifically, the conditions listed in Issue I that have not been corrected are Conditions 30, 31, 32, 39, 40, 43, 44, 48 (replaced by Condition 1-5), and 52; and the requirements that were to be added per Issue I that have not been added are 6 N.Y.C.R.R. 208.8(d), 208.8(e), 208.8(g), and 208.9(c). Correct these for a single source and the existing control system per the single source determination made by EPA and the control scenario revision delineated in Issues 1 and 2 above.

(4) The proposed permit does not include all MACT requirements.

According to the Description section at the front of the permit, Condition 1-6 was added to address requirements in 40 C.F.R. 63 Subpart AAAA, the National Emission Standard for Hazardous Air Pollutants: Municipal Solid Waste Landfills (the NESHAP for MSW Landfills, also known as the Maximum Achievable Control Technology standard, or MACT standard). Condition 1-6 cites 40 C.F.R. 63.1955(b) and incorporates some, but not all of the requirements of the MACT standard. The other Federal Applicable requirement that must be included for the MACT standard is found at 40 C.F.R. 63.1980(a). In Condition 1-3, the permit incorrectly mixes the requirements of 6 N.Y.C.R.R. 208.8(f) and 40 C.F.R. 63.1980(a), and cites 208.8(f) as the Federal Applicable requirement. The two requirements are the same but for the 6-month reporting interval in 63.1980(a) versus the 1-year reporting interval in 208.8(f). Since title V permits must include all applicable Federal requirements, both requirements must be included in the permit. The Applicable Federal Requirement for Condition 1-3 as written is to 40 C.F.R. 63.1980(a) and the requirement for 208.8(f) must be added.

(5) The Permit Review Report does not include sufficient information about options regarding oxygen concentrations and monitoring at the collection system wellheads.

References to an option to operate a gas collection system well at a higher oxygen concentration (original permit Condition 36 replaced by Condition 1-4) and to monitoring for nitrogen at the wellheads (original permit Condition 35 expired) were removed from the permit, but not explained to the extent delineated in the composite list of Order and Reopening Notice issues

sent to David Shaw, DEC, on February 25, 2004. The following are the outstanding elements of that instruction to be included in the Permit Review Report:

- a. Explain the option and process for approval and use of an owner's or operator's "higher operating value demonstration" for a particular well instead of the current "Upper Permit Limit" for compliance purposes.
- b. Explain the process for revising the permit to reflect the change in the "Upper Permit Limit."
- c. Furthermore, add to the Permit Review Report the following language that was present in original permit Condition 36, but absent from the proposed Mod 1 permit and Permit Review Report: "A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens." Remove from the Permit Review Report the following statement, found in the Applicability Discussion, Facility Specific Requirements section under 6 N.Y.C.R.R. § 208.4(c), but not a part of that requirement: "By measuring oxygen content, an operator can ascertain the effectiveness of collecting gas from the landfill mass."

(6) The proposed permit does not fully meet the annual certification requirements of § 114(a)(3) of the Act and 40 C.F.R. § 70.6(c)(5) as items in the "Notification of General Permittee Obligations" section which appear under the heading "Federally Enforceable Conditions" are not subject to annual certification.

In a letter from Carl Johnson, Deputy Commissioner, DEC to George Pavlou, Director, EPA, Region 2, dated November 16, 2001, DEC writes:

The Department understands that with respect to the requirement that all terms and conditions have to be certified annually, such a requirement does not mandate that a permittee certify to terms and conditions that do not create an obligation on the permittee (e.g., terms providing for the duration of a permit). On a case-by-case basis the Department may exclude from the certification terms that do not create an obligation on the permittee. . . . The Department can deal with these general permit provisions differently from provisions that relate to emissions and monitoring, but will still obtain certification of compliance with these general provisions. (emphasis added)

Conditions A through CC of the Al Turi Landfill permit contain items which are not subject to annual certification. While EPA does not object to a permitting authority's inclusion of a list of general advisory items that do not require certification, DEC was required to work with EPA to identify which items in Conditions A through CC are purely advisory in nature and are not obligations of the permittee.

EPA has engaged DEC in communications regarding this issue without resolution. It is EPA's belief that the following six conditions listed under the heading "Notification of General Permittee Obligations" either require annual certification or can be removed from the permit on a case-by-case basis if they are not applicable to the subject facility. EPA does not believe that certification of these terms would create an excessive burden on facilities.

- Condition C. Maintenance of Equipment
- Condition F. Recycling and Salvage
- Condition G. Prohibition of Reintroduction of Collected Contaminants to the Air
- Condition I. Proof of Eligibility for Sources Defined as Exempt Activities
- Condition Z. Visible Emissions Limited
- Condition AA. Open Fires

EPA does, however, agree that the following ten conditions are not obligations of the permittee and do not require certification:

- Condition E. Emergency Defense
- Condition H. Public Access to Recordkeeping for Title V Facilities
- Condition N. Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements
- Condition P. Cessation or Reduction of Permitted Activity Not a Defense
- Condition Q. Property Rights
- Condition T. Severability
- Condition W. Permit Shield
- Condition X. Reopening for Cause
- Condition BB. Permit Exclusion
- Condition CC. Federally Enforceable Requirements

The remaining items included under the "Notification of General Permittee Obligations" require additional discussions between EPA and DEC to determine whether these items (a) are purely advisory in nature and do not need to be certified, (b) require annual certification, or (c) can be certified based upon readily available information (e.g., no evidence indicating non-compliance).

In the Order responding to *In the Matter of Al Turi Landfill, Inc.*, Petition No. II -2002-13-A (January 30, 2004), the Administrator granted the petition filed by the New York Public Interest Research Group as to Conditions C and G. The following two items further address Conditions C and G, Conditions 3 and 7, respectively, in the original permit.

a. Condition C- Maintenance of Equipment

Condition C states that the facility must maintain its control equipment. The Order stated that Al Turi must explain how Condition C applies to Al Turi Landfill, since the control

equipment is located at Ameresco. Although required to do so, Mod 1 did not explain applicability. This will no longer be an issue when the permit is modified so that the collection and control system is in one permit.

b. Condition G - Prohibition of Reintroduction of Collected Contaminants to the Outside Air:

Condition G states that air contaminants should not be allowed to be released to the outside air. The Order stated that DEC needed to clarify in the Al Turi Landfill permit or the Permit Review Report how this requirement applied to Al Turi Landfill. Although required to do so, Mod 1 did not explain applicability. This will no longer be an issue when the permit is modified so that the collection and control system is in one permit.

(7) The proposed permit does not include the "excuse" provision that is in New York's SIP approved by EPA at 6 N.Y.C.R.R. § 201.5(e).

An excuse provision (somewhat different from that which the DEC has included in the State side of the permit) is applicable to approved SIP requirements, 40 C.F.R. § 52.1679. This SIP-approved excuse provision differs from the provision in the current New York regulations because it does not cover violations due to shutdowns or during upsets. DEC should add the SIP version of the excuse provision to the Federal/State side of the permit and either (a) footnote the condition or (b) provide an explanation in the Permit Review Report that this requirement has been replaced by 6 N.Y.C.R.R. § 201-1.4 and is no longer State-enforceable. The explanation can refer the reader to the final permit condition which is located on the State-only side of the permit and contains the State-adopted version of the excuse provision.

(8) In conjunction with the permit revisions indicated by the Issues above, the permit and Permit Review Report are to be revised as follows:

- a. Add Items A through CC, Notification of General Permittee Obligations, to the "Page Location of Conditions, Federally Enforceable Conditions" at the front of the permit.
- b. Provide consistent descriptions throughout the permit and the Permit Review Report of the number of engines associated with the facility. The proposed Mod 1 permit Condition 30 indicates 9 engines; Condition 1-5, 8 engines; the Permit Review Report, 8 engines. The May 2004 Application for a permit modification indicates 9 engines.
- c. As directed in the Notice to Reopen, explain the emissions listed for Condition 59. The condition has been modified but not renumbered. It now includes a Process End Date: 3/24/2004. The emissions were "fugitive landfill gas emissions beyond the collection efficiency of the gas collection system" in the amounts of 1235 and 1903 million cubic feet per year. Explain this change in the Permit Review Report.

- d. Clarify and reconcile statements in the Permit Review Report and in proposed Mod 1 permit Condition 55 regarding landfill capacity, cover, waste acceptance, and collection and control system completion status. This information was requested in the Notice to Reopen with the footnote that gas must be collected and controlled from waste in place 2 years or more in an inactive landfill and 5 years or more in an active landfill. The Permit Review Report states that the landfill is at capacity with an expired solid waste permit, a Part 360 or equivalent cap installed over the entire "landfill proper," and a Landfill Gas Recovery System design and layout approved September 23, 1997, with updates approved annually by DEC. Condition 55 refers to "progression of final waste deposition," 10% of the landfill as "remaining operational," approximately 90% of the "operational landfill" as having a Part 360 final cover system in place, and 90% of the "landfill area" as being equipped with a collection and control system based on a November 1991 Master Plan.

In conjunction with addressing these Issues, DEC is herein directed to request the startup, shutdown, and malfunction plan (SSM plan) from Al Turi Landfill per 40 C.F.R. 63.6(e)(3); assure that the plan is revised, if necessary, to fulfill the requirements for Al Turi Landfill operating as a source that includes the landfill gas controls required by Part 208; and provide a copy of the plan to EPA.

K



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

APR 27 2009

Peter H. Zeliff
Innovative Energy Systems Inc.
2999 Judge Road
Oakfield, NY 14125-9771

Re: Prevention of Significant Deterioration (PSD) - New Major Stationary Source Air Permit Application for the Innovative/DANC, LLC Landfill gas electricity generation facility at the DANC Solid Waste Management Facility, Rodman, Jefferson County, New York; DEC ID: 6225200018

Dear Mr. Zeliff:

The Region 2 Office of the U.S. Environmental Protection Agency (EPA) has reviewed the March 18, 2009 Prevention of Significant Deterioration (PSD) air permit application for a proposed major stationary source. The proposed project consists of an electricity generation capacity expansion project from 4.8 MW to 8 MW that will include the addition of two (2) identical internal combustion (IC) landfill gas engines. Also, the applicant proposes to increase the allowable carbon monoxide (CO) hourly emissions limits for their three (3) permitted internal combustion landfill gas engines. Additional equipment included in the air permit application is an open flare for landfill gas combustion. After review, it has been determined that the application is incomplete. In order to continue processing your application, EPA will need the additional information requested below.

Single "Stationary Source" under Prevention of Significant Deterioration (PSD) regulations

The PSD regulations at 40 CFR 52.21 (b) (5) and (6) define a stationary source as "... all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)...Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same 'Major Group' (i.e., which have the same first two digit code) as described in the Standard Industrial Classification Manual, 1972 , as amended by the 1977 supplement..."

As Innovative/DANC, LLC, is located on DANC Solid Waste Management Facility (DANC SWMF) property (leased land), the two facilities are located on "adjacent or contiguous properties." Also, based on the information supplied with your application and the information contained in the DANC SWMF title V Permit (Permit ID 6-2252-00007/00015, Renewal

Number 1), the two facilities belong to the same "Major Group." Consequently, if Innovative/DANC and DANC SWMF are under common control, they would constitute a single source for the purposes of PSD.

The fact that Innovative/DANC is located on property owned by DANC SWMF creates a presumption of common control.¹ Your application states, "The engines are fueled exclusively with landfill gas generated by and received from DANC Solid Waste Management Facility (natural gas is not, and will not be, used to fuel the internal combustion engines operations)." This dependency supports the presumption of common control. We have not seen any information in your application that overcomes the presumption that the gas-to-energy operation and the landfill are under common control.

The information before us leads to the belief that the facilities permitted as Innovative DANC (Permittee: Innovative/DANC LLC) and DANC Solid Waste Management Facility (Permittee: Development Authority of the North Country) are to be treated as a single source for the purposes of permitting under the PSD, non-attainment New Source Review (NSR), and title V programs of the Clean Air Act. Therefore, please revise your PSD Air Permit Application to include all pollutant-emitting activities of the landfill and the gas-to-energy operations currently permitted as separate sources. Please be sure to include the air contaminant emissions associated with the uncollected landfill gas, and all air contaminants emitted by any sources existing at these facilities that currently are considered "exempt" or "trivial sources." In order to facilitate the inclusion of all the information needed concerning the landfill gas generation rate, emissions from uncollected gas, and landfill gas combustion at the landfill, we encourage you to contact us as you prepare additional materials for your revised application. For example, if you plan to subtract any portion of the placed waste as non-biodegradable, sufficient documentation must be provided. If the landfill is operated with leachate recirculation or another method for promoting faster degradation of the landfilled waste, then that information should be included for consideration when estimating the landfill gas generation rate. We will use the information to arrive at a facilitywide potential-to-emit for the source before and after the modification.

Best Available Control Technology (BACT)

Since the carbon monoxide (CO) potential emissions from the Innovative project constitute a major source by itself, this project triggers a major PSD review. For this project a BACT determination is required for nitrogen oxides (NOx), carbon monoxides(CO), sulfur dioxide (SO2) and particulates (PM 10 and PM 2.5) as they are the only pollutants with emissions above the significant thresholds. However, Innovative's BACT analysis does not address SO2 emissions even though the SO2 potential to emit from the proposed project (five internal combustion engines and one landfill gas open flare) of 45.2 tons per year exceed the significant PSD threshold of 40 tons per year.

It is EPA's position that the applicant has not performed an appropriate Best Available Control Technology (BACT) analysis for this proposed project. Specifically, Innovative/DANC neither

¹ Note that, while common ownership constitutes common control, a common control relationship may be established in the absence of common ownership.

selected the most effective available means for minimizing their air pollutant emissions of NOx, CO, PM 10 and PM 2.5 nor sufficiently demonstrated why the most stringent technology should not be adopted. Furthermore, the applicant has failed to conduct a BACT analysis for SO2 even though the project causes significant SO2 emission increases.

Discussion on BACT for IC landfill gas engines

The NOx, CO, PM10 and PM 2.5 emission limits proposed by Innovative as Best Available Control Technology (BACT) for their five IC landfill gas engines are based solely on the emission limits of air contaminants that have been established for Caterpillar G3520C IC landfill gas engines. These are the same engines as those proposed for operation at the facility, and that are currently in operation at similar landfill gas to energy facilities. Lower emission limits, and the use of add-on controls such as selective catalytic reduction (SCR) and oxidation catalyst, were deemed infeasible by Innovative simply because of the presence of siloxanes in the landfill gas. As stated in the application, the siloxanes can damage the engine and may cause increases in emissions, especially carbon monoxide emissions. As well, the siloxanes foul the surface of the catalyst causing failure of the add-on controls. Additionally, Innovative's determination for not proposing add-on controls for their landfill gas engines was justified on the fact that none of the similar projects posted on US EPA BACT/LAER Clearinghouse have add-on controls.

Discussion on BACT for the landfill gas open flare

The NOx, CO, PM 10 and PM 2.5 emission limits proposed by Innovative as Best Available Control Technology (BACT) for their open flare are based exclusively on the information found on the US EPA BACT/LAER Clearinghouse for open and enclosed flares. However, Innovative has neither selected the most stringent emissions limitations contained in the US EPA database for their flare, nor provided an adequate justification why the most stringent limits have not been proposed.

EPA's Conclusions regarding BACT

EPA does not agree that Innovative's NOx, CO, PM10 and PM2.5 emission limits represent BACT for their landfill gas engines and landfill gas flare. Moreover, EPA does not agree that the BACT analysis should only consider the emissions from engine's manufacturer, type, and model, which are identical with those proposed in the project (e.g., IC Engine CAT 3520 C). Based on EPA's Draft New Source Review Workshop Manual (October, 1990), the BACT analysis should be based on "source category" rather than on certain equipment's manufacturer, make & model number. In addition, EPA believes that since siloxane removal technologies are commercially available, and have been employed in removing siloxanes from landfill gas, lower NOx, CO, PM 10 and PM 2.5 emission and the use of add on controls are feasible.

In further support of our opinion we attach examples with air permits and stack data issued for similar source categories (landfill gas engines and flares) that contain lower emission limits than those proposed by Innovative (Enclosure 1). In addition, we attach examples of landfill gas to energy projects employing the siloxanes removal technologies (Enclosure 2).

In conclusion, please provide a more thorough BACT analysis following the "top-down approach" as it is described in EPA's Draft New Source Review Workshop Manual (October 1990). The BACT analysis should include, but not be limited to, the following:

1. BACT analysis for SO₂ emissions from both landfill gas engines and flare.
2. Siloxanes content of the raw landfill gas (based on actual sampling).
3. Efficiency and cost of different siloxanes removal technologies.
4. The engine and add-on control (SCR and oxidation catalyst) manufacturer-specified siloxanes level requirement in the landfill gas prior to the engine and add-on control.
5. Cost of add-on controls (SCR and oxidation catalyst).
6. Please justify why an enclosed flare is not being proposed by Innovative for this project.
7. NO_x, CO, PM₁₀, and PM 2.5 emission limits for the IC landfill gas fired engines at the levels comparable with the best emission limits in the "source category" or provide further justification for not proposing the most stringent limit.
8. NO_x, CO, PM 10 and PM 2.5 emission limits for the flare at the levels comparable with the best emission limits in the "source category" or provide further justification for not proposing the most stringent limit.

Other Issues

Landfill Gas Heating Value.

- Please explain why Innovative did not use the actual (measured) landfill gas heating value of 491 BTU/SCF for the engines and flare emission calculations, but a lower heating value of 350 BTU/SCF was used instead.
- Is there a difference between the heating values of the landfill gas used for engines than for the landfill gas combusted by the flare? If not, please use the same landfill gas heating value and methane content for both engines and flare emission calculations.

Characterization of DANC's landfill gas

- Please clarify what "methane rich gas" means. What is the methane content that makes DANC's landfill gas "methane-rich gas".

Fuel usage, heating value and air contaminants emission calculations

- The air contaminant emission rates calculations were based exclusively on a maximum landfill gas consumption rate of 719 SCFM/engine and a minimum landfill gas lower heating value of 350 BTU/SCF. However, for the same landfill gas usage rate (SCFM/engine) and higher landfill gas heating values, the engine's brake horse power hour (BHP), the emission factors (g/BHP-hr) of air pollutants, and respectively the emission rates may increase significantly. Please explain how you propose to ensure that the heating value of the landfill gas used for the engines will not exceed 350 BTU/SCF. Please be as specific as possible.

NMOC and VOC

- Are the NMOC and VOC (ppm) concentrations in the landfill gas sent to the engines different from the concentrations in the gas sent to the flare? If not, please use the same NMOC and VOC (ppm) concentrations for both engines and flare emission calculations.

Maximum Landfill Gas Usage Rate (SCFM/each engine)

- The maximum landfill gas fuel usage rate of 719 SCFM/engine at 350 BTU/SCF heating value of landfill gas exceeds the Engine's Manufacturer maximum fuel rate for the same fuel heating value. Please provide the engine's manufacturer guarantee that the emission factors will remain the same for a higher fuel consumption rate.

Start up and Shut down periods

- Please provide the duration (minutes) of each start up and shut down event. Also please specify the number of start up and shut down events /year /engine.
- Please provide the engine manufacturer's emission factors for the start up and shut down periods.

Condensable Particulate matter (CPM)

- EPA recognizes that pursuant to 40 CFR 52.21 (b) (50) (vi) condensable particulate matter need not be accounted for in the applicability determinations until "On or after January 1, 2011 (or any earlier date established in the upcoming rulemaking codifying test methods)...". However, on March 25, 2009, US EPA published a proposed rule to revise two test methods for measuring particulate matter (PM) including condensable (CPM) from stationary source. The rule is currently under public comment until May 26, 2009. If the rule is adopted as proposed, the transition period for condensable particulate matter could end within 60 to 90 days after the promulgation of the test methods. Accordingly, if the CPM rule is adopted before a permit decision is reached, there may be potential delays in issuing the permit as the new CPM rule's provisions would have to be incorporated into your PSD permit. For that reason, EPA believes that it would be in your best interest if the condensable particulate matter would be addressed at this time in the PSD Applicability Determination for the proposed project.

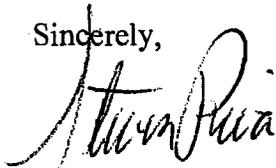
Air Quality Analysis

- In response to your request to be waived from the preconstruction ambient air monitoring requirements, we agree that you may be waived from these requirements for CO, NO₂ and SO₂ since the modeled impacts provided thus far are less than the monitoring de minimis levels as specified in 40 CFR 52.21. Regarding, PM₁₀ the impacts are greater than the monitoring de minimis levels. EPA does not currently have final monitoring de minimis levels for PM_{2.5}. Therefore, you may not be waived from these requirements for PM₁₀ and PM_{2.5}. To address this, you propose to obtain data from two existing sites in St. Lawrence County. We understand this data is being collected on tribal lands and uploaded to the AQS (formerly AIRS) data base. In order for us to accept this data, we would need the following information:

1. EPA guidance recommends that 3 years of current of data is necessary. The data proposed is current. But, for the annual averages you provided data only for 2007. If there is more data at these locations it should be supplemented. We understand that the 2008 data may just have been added. If 3 years of data is not available, it may be necessary to supplement the data with data collected at other representative locations.
 2. Information regarding data capture and data quality should be included with the request to use these sites.
- Under a U.S. and Canada agreement, we must notify Canada of any air permit applications for sources located within 100 km of the border. Please find the enclosed form (Enclosure 3), which should be filled out and sent back to EPA Region 2 so that we may notify the proper officials.
 - It is not sufficient to claim that the existing enclosed landfill flare will not operate frequently. Impacts from the enclosed flare must be assessed unless the flare will be decommissioned.
 - The size of the SIA needs to be corrected from 1.0 km to 2.7 km on page 2 of the modeling section.
 - The XL files contained on the CD with the modeling analysis should be labeled and include a readme file that describes the contents.

If you have any questions related to our comments on the air quality analysis, please contact Ms. Annamaria Coulter at (212) 637-4016. For questions concerning all other comments in this letter, please contact Ms. Viorica Petriman at (212) 637-4021.

Sincerely,



Steven C. Riva, Chief
Permitting Section
Air Programs Branch

Enclosure(s):

1. Landfill gas IC engines and flares— NOx, CO, PM10 and PM 2.5 emission limits and stack test results.
2. Landfill gas to energy projects and siloxanes removal technologies.
3. U.S./Canada Agreement Notification form

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ENCLOSURE 1

Table 1. Landfill gas IC engines – NOx, CO, PM 10 emission limits and stack test results

Facility	Number & Type of Engines	NOx		CO		PM10		Siloxane Removal System Yes/No
		Allowable	Stack test	Allowable	Stack test	Allowable	Stack test	
Ameresco Half Moon Bay, LLC, CA	Six(6)GE Jenbacher , 2677 BHP/each	0.15 g/BHP-hr (SCR) BACT	-	0.52 g/BHP-hr (Oxidation Catalyst) BACT	-	0.1 g/BHP-hr	-	Yes
Warren County Landfill, NJ	Two(2) GE Jenbacher, 2677 BHP/each	0.53 g/BHP-hr Mfg Guarantee SOTA	0.42 g/BHP-hr	2.1 g/BHP-hr Mfg Guarantee SOTA	1.4 g/BHP-hr 1.9 g/BHP-hr	0.2 g/BHP-hr (TSP/PM10)	0.08 g/BHP-hr 0.06 g/BHP-hr (TSP)	No
Atlantic County Landfill Energy, NJ	Two (2) GE Jenbacher 2677 BHP/each	0.53 g/BHP-hr Mfg Guarantee SOTA ¹	0.48 g/BHP-hr	2.1 g/BHP-hr Mfg Guarantee NJDEP-SOTA ¹	1.96 g/BHP-hr	0.17 g/BHP-hr (TSP/ PM-10)	0.06 g/BHP-hr (TSP)	No
Ameresco-Keller Canyon, CA	Two(2) GE Jenbacher, 2677 BHP/each	0.6 g/BHP-hr Mfg Guarantee	-	2.1 g/BHP-hr Mfg Guarantee	-	0.1g/BHP-hr Mfg guarantee	-	Yes
PPL Renewable Energy, VT	Two(2) Caterpillar G3520C LE, 2233 BHP/each (3)	0.5 g/BHP-hr	-	2.75 g/BHP-hr	-	0.2 g/BHP-hr	-	No
Sonoma County , CA	Two(2) Caterpillar 3516 SITA, 1138 BHP/each	0.8 g/BHP-hr Mfg Guarantee LAER	-	2.1 g/BHP-hr	-	0.1 g/BHP-hr	-	No

Innovative/DANC, LLC Landfill Gas Engines – NOX, CO, PM 10 Existing and Proposed Emission Limits

Innovative/DANC (Mod 1)	Three(3) Caterpillar G3520C, 2233 BHP/each	0.60 g/BHP-hr	0.35 g/BHP-hr	3 g/BHP-hr	2.4 g/BHP-hr			No
Innovative/DANC PENDING	Five(3) Caterpillar G3250C, 2233 BHP/each	0.60 g/BHP-hr BACT	-	3.3 g/BHP-hr BACT	-	0.24 g/BHP-hr (PM-10) -BACT 0.14 g/BHP-hr (PM2.5)-BACT		No

¹SOTA – New Jersey Department of Environmental Protection, State of the Art Manual for Engines

ENCLOSURE 1 (continued)

Table 2. Landfill Gas Flares: NOx, CO and Particulate emissions limits and stack test results

Facility	Number & Type of Flares	NOx		CO		PM10	
		Allowable	Stack test	Allowable	Stack test	Allowable	Stack test
Bureau of Sanitation City of Los Angeles, CA	Seven(7)Enclosed Flares 35 MMBTU/hr /each	0.06 lb/MMBTU BACT	0.045 lb/MMBTU	0.01 lb/MMBTU BACT	0.008 lb/MMBTU	6.1 lb/ MMSCF (PM) BACT	4.79 lb/MMSCF (PM)
Waste Management New Hampshire, NH	One(1) Enclosed Flare John Zinc, 115.5 MMBTU/hr	0.025 lb/MMBTU BACT	0.014 lb/MMBTU	0.06 lb/MMBTU BACT	0.013 lb/MMBTU	-	-
Rhode Island Resource Recovery ,LLC RI	One(1) Enclosed Flare John Zinc 201 MMBTU/hr	0.025 lb/MMBTU BACT	0.01 lb/MMBTU	0.06 lb/MMBTU BACT	0.00017 lb/MMBTU	-	-
Innovative/DANC, LLC Landfill Gas Flare – NOX, CO, PM 10 Proposed Emission Limits							
Innovative/ Danc	One(1) Open Flare John Zinc 38.9 MMBTU/hr	0.068 lb/MMBTU BACT	-	0.37 lb/MMBTU BACT	-	10 lb.MMSCF PM10/PM2.5 BACT	-

ENCLOSURE 2

Landfill gas to energy projects & siloxanes removal technologies

1. Ameresco Keller Canyon, LLC, CA
 - Two(2) GE Jenbacher landfill gas fired engines, 2677 BHP/each (operational 2008)
 - Siloxanes removal system: Temperature swing absorption gas cleaning system(TSA)
2. Ameresco Half Moon Bay, LLC, CA(experimental)
 - Six(6) GE Jenbacher landfill gas fired engines, 2677 BHP/each
 - Siloxanes removal system: Temperature swing absorption gas cleaning system(TSA)
 - Add on controls after the engines: Selective Catalytic Reduction and Oxidation Catalyst
3. Ameresco Jefferson City, LLC, Missouri
 - Three (3) Jenbacher landfill gas engines, 1470 BHP/each(operational)
 - Siloxanes removal system: activated carbon
4. Greenville Gas Producers, LLC – South Carolina
 - Two (2) Caterpillar G3520 landfill gas fired engines; 1600 kW/each(operational 2008)
 - Siloxanes removal technology is a GC GC Environmental, Inc
5. Belgium, Europe
 - Two(2) Deutz landfill Gas fired engines: 1200 kW and 3200 kW (operational 2003)
 - Siloxanes removal system consists of :AFT- Activated Graphite SAG TM
6. Calabasas Landfill –Sanitation Districts of Los Angeles County – South Coast Air Quality Management CA
 - Ten (10) 30 kW Capstone C30 landfill gas fire microturbines(operational 2002)
 - Siloxanes removal system: two stainless steel vessels containing activated carbon in series
7. Rhode Island Central Genco, RI (pending permit)
 - Five(5) Solar Taurus 60 landfill –gas fired combustion turbines, 6 MW/each
 - Siloxane removal system: activated carbon
 - Add on controls: Selective Catalytic Reduction(SCR)

Enclosure 3

Notification Information per the 1995 US-Canada Air Quality Agreement

Requested Information

1. Name of facility
2. Location (city, county, state, zip code, etc.)
3. Distance from the US/Canada border (km/miles)
4. Type and size of facility (e.g., 400 MW utility)
5. Source of emissions (e.g., boiler, turbine, municipal waste combustor)
6. Type of fuel (e.g., coal, natural gas, fuel oil, wood)
7. Type and quantity of emissions (e.g., NOx - 800 tpy, 182.7 lbs/hr)
8. Emission control technology
9. Date permit application received
10. Stack height and diameter
11. Permit agency's contact name, address and telephone number (and email, if available)

For more details on the US-Canada Air Quality Agreement, including the Articles relating to the notification see

<http://www.epa.gov/airmarkets/usca/>