NOV 16 2011

David Demler
Demler Enterprises
PO Box 207
Wasco, CA 93280

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1104423

Dear Mr. Demler:

Enclosed for your review and comment is the District's analysis of Demler Enterprises's application for an Authority to Construct for the installation of a chicken manure composting operation, at 28720 Garces Highway in Delano.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. John Yoshimura of Permit Services at (559) 230-5887.

Sincerely,

David Warner
Director of Permit Services

DW: jy

Enclosures
NOV 16 2011

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1104423

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Demler Enterprises's application for an Authority to Construct for the installation of a chicken manure composting operation, at 28720 Garces Highway in Delano.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. John Yoshimura of Permit Services at (559) 230-5887.

Sincerely,

David Warner
Director of Permit Services

Enclosure
NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Demler Enterprises for the installation of a chicken manure composting operation, at 28720 Garces Highway in Delano.

The analysis of the regulatory basis for this proposed action, Project #S-1104423, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, REGION'S ADDRESS.
San Joaquin Valley Air Pollution Control District  
Authority to Construct Application Review  
Chicken Manure Composting  

Facility Name: Demler Enterprises  
Mailing Address: PO Box 207 Wasco, CA 93280  
Contact Person: David Demler  
Telephone: (661) 758-5896  
Fax: (661) 758-1579  
E-Mail: sharmanflash@aol.com  
Application #(s): S-4908-2-2  
Project #: S-1104423  
Deemed Complete: December 2, 2010  

Date: November 14, 2011  
Engineer: John Yoshimura  
Lead Engineer: Sheraz Gill  

I. Proposal  
Demler Enterprises has applied for an Authority to Construct to modify their existing solid manure handling permit S-4908-2-1 to allow composting of 711 tons per week (37,000 tons per year) of chicken manure generated onsite by their hen egg laying operation.  

At present, the manure is hauled offsite by Grimmway Farms after it is removed from the hen houses. Grimmway Farms pays for the transportation costs and in return gets raw material for its composting operation located outside the District. Recently, Grimmway has found that it is no longer cost effective to haul the manure out of San Joaquin Valley, compost it, then truck it back into the San Joaquin Valley to apply to their farmland. Therefore, Demler Enterprises has proposed to compost the chicken manure at their facility; after the chicken manure has been turned into compost, Grimmway Farms will remove the material for use at their farmland.  

Demler Enterprises has proposed to implement mitigation measures from Rule 4565 for compliance with Best Available Control Technology (BACT) requirements.  

II. Applicable Rules  
Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)  
Rule 2520 Federally Mandated Operating Permits (6/21/01)  
Rule 4001 New Source Performance Standards (4/14/99)  
Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)  
Rule 4101 Visible Emissions (2/17/05)  
Rule 4102 Nuisance (12/17/92)  
Rule 4565 Biosolids, Animal Manure, and Poultry Litter Operations (3/15/07)  
Rule 4570 Confined Animal Facilities (10/21/10)
III. Project Location

This facility is located at 28720 Garces Highway in Delano. The District has verified that there are no K-12 schools within 1,000 feet of this facility. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Demler Enterprises provided the following description of the solid waste handling/composting process:

1. Manure will be removed from the hen housing and transported to an on-site drying area.
2. The manure will be spread into a 3" – 6" thick layer by a tractor and dried to a moisture content of 10-20%. The approximate drying times are 3 – 4 days in the summer and 10 days in the winter. The dried manure may be composted or removed from the site (by Grimmway Farms) and used as an agricultural soil amendment or dried poultry litter (animal feed amendment).
3. If the dried manure is composted onsite, it will first be piled into a windrow approximately 10’ wide by 4.5’ high by 1000’ long.
4. In the windrow, dry manure is mixed with wet manure in order to reach the desired moisture levels needed for controlling the temperature, which will be maintained between 131 – 146 degrees Fahrenheit. No additional water will be added. The manure will be turned a minimum of 5 times over 15 days using a compost turner power by a diesel tractor with a power take-off.
5. At the end of 15 days, samples of the finished product will be taken and sent to a lab for testing. After the tests have been conducted and reviewed for approval by Kern County Environmental health officials, the product can be shipped for land application within 3 – 4 days of approval.
6. The estimated time from the beginning of the drying process until shipping of finished compost is approximately 4 – 5 weeks. The ultimate user of all the compost is Grimmway Farms. According to Grimmway and Demler, Grimmway is “given” the chicken manure and will be given the compost in exchange for hauling it offsite.

V. Equipment Listing

Pre-Project Equipment Description:

S-4908-2-1: SOLID MANURE HANDLING SYSTEM CONSISTING OF MANURE STACK BELTS WITH SOLID MANURE HAULED OFFSITE
ATC Equipment Description:

S-4908-2-2: SOLID MANURE HANDLING SYSTEM CONSISTING OF MANURE STACK BELTS WITH SOLID MANURE HAULED OFFSITE: ALLOW DRYING AND COMPOSTING OF CHICKEN MANURE

Post Project Equipment Description:

S-4908-2-2: SOLID MANURE HANDLING SYSTEM CONSISTING OF MANURE STACK BELTS WITH SOLID MANURE BEING DRIED, COMPOSTED, AND HAULED OFFSITE

VI. Emission Control Technology Evaluation

Although the use of a tractor engine to turn the compost piles is a source of NOx, CO, VOC, PM10, and SOx emissions, the tractor is a motor vehicle and therefore not subject to regulation as a stationary source.

The handling, drying, and composting of chicken manure produces VOC emissions. The facility will minimize VOC emissions to the extent feasible by adopting the mitigation measures from Rule 4565, Biosolids, Animal Manure, and Poultry Litter Operations.

VII. General Calculations

A. Assumptions

- The composting operation will generate VOC and ammonia (NH3) emissions.
- Because of the high moisture content of the chicken manure (>10%), PM10 emissions are expected to be negligible from material handling.
- Production rates: 711 tons/week and 37,000 tons/year (per applicant)
- Each compost cycle lasts 15 days, and the emissions from the cycle are evenly spread over the 15 days.
- For daily VOC and ammonia emissions, there are potentially three 711 ton batches of compost emitting at the same time.
- From the dimensions of the compost windrow (1000’ x 10’ x 4.5”) and the density of chicken manure 26 lb/ft3 with a 20% moisture content (see Appendix C), the mass of manure in the windrow is equal to 585 tons of chicken manure that could be in the windrow on any one day.
- The daily and annual pre-project potential to emit for solid manure handling outside the hen houses is 0 lb-VOC and 0 lb-NH3. At present, the facility is required to remove all solid manure within 72 hours of removing it from the housing. Emissions from the storage and handling of solid manure outside of the hen housing have not been measured. Emissions from poultry litter have been accounted for in the hen
housing permit S-4908-1; the VOC emission factor used for hen housing is on a per bird basis.

B. Emission Factors

The District has published a technical review of emission factors for composting under the title "Compost VOC Emission Factors" (September 15, 2010).

"Biosolids and animal manure composting emission factors were taken from source tests conducted by the South Coast Air Quality Management District (SCAQMD) in support of their Rule 1133 (Emission Reductions from Composting and Related Operations). These emission factors were calculated as an average of emissions from three co-composting facilities (SCAQMD, 2002).

The District has not been able to identify an emission factor for poultry litter composting. The District will use the biosolids composting emission factor to represent this feed stock until a more representative emission factor can be identified."

For poultry litter composting in windrows, the emission factors are:
- 1.78 lb-VOC/wet ton per cycle
- 2.93 lb-ammonia/wet ton per cycle.

The control efficiencies for using finished compost on the windrow piles are:
- VOC: Cover Active/Curing Piles ≥ 6" – 56% (per Rule 4566 source testing)
- NH3: Cover Active/Curing Piles ≥ 6" – 28% (assumption based on Rule 4566)

C. Calculations

1. Pre-Project Potential to Emit (PE1)

As noted in the assumptions Section VII.A above, the PE1 for all pollutants will be 0 lb/day and 0 lb/year.

<table>
<thead>
<tr>
<th>PE1</th>
<th>Daily Emissions (lb/day)</th>
<th>Annual Emissions (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>SOx</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>PM10</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>CO</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>NH3</td>
<td>0.0</td>
<td>0</td>
</tr>
</tbody>
</table>
2. Post Project Potential to Emit (PE2)

During the 15 day cycle, there are potentially three 711 ton batches of compost emitting during this time.

\[
\text{PE2}_{\text{VOC}} = (1.78 \text{ lb-VOC/wet-ton/cycle}) \times (1 \text{ cycle/15 days}) \times (711 \text{ tons/batch}) \\
\times 3 \text{ batches x (1 – 0.56)} \\
= 111.4 \text{ lb VOC/day} \\
= (1.78 \text{ lb-VOC/wet-ton/cycle}) \times (37,000 \text{ tons/year}) \times (1 – 0.56) \\
= 28,978 \text{ lb-VOC/year}
\]

\[
\text{PE2}_{\text{NH3}} = (2.93 \text{ lb-NH3/wet ton/cycle}) \times (1 \text{ cycle/15 days}) \times (711 \text{ tons/batch}) \\
\times 3 \text{ batches x (1 – 0.28)} \\
= 300.0 \text{ lb-NH3/day} \\
= (2.93 \text{ lb-NH3/wet ton/cycle}) \times (37,000 \text{ tons/year}) \times (1 – 0.28) \\
= 78,055 \text{ lb-NH3/year}
\]

<table>
<thead>
<tr>
<th>PE2</th>
<th>Daily Emissions (lb/day)</th>
<th>Annual Emissions (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>SOX</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>PM_{10}</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>CO</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>VOC</td>
<td>111.4</td>
<td>28,978</td>
</tr>
<tr>
<td>NH3</td>
<td>300.0</td>
<td>78,055</td>
</tr>
</tbody>
</table>

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

The values in the table below are taken from the SSPE table and PE2 calculations performed in project S-1072672.

S-4908 is an agricultural operation and does not have any ERCs from AERs occurring at the facility.
### SSPE1 (lb/year)

<table>
<thead>
<tr>
<th>Permit Unit</th>
<th>NO\textsubscript{x}</th>
<th>SO\textsubscript{x}</th>
<th>PM\textsubscript{10}</th>
<th>CO</th>
<th>VOC</th>
<th>NH\textsubscript{3}</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-4908-1-3 Housing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>17,760</td>
<td>23,643</td>
</tr>
<tr>
<td>S-4908-2-1 Manure Handling</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>S-4908-3-0 ICE</td>
<td>739</td>
<td>70</td>
<td>37</td>
<td>225</td>
<td>84</td>
<td>739</td>
</tr>
<tr>
<td>S-4908-4-0 ICE</td>
<td>1,182</td>
<td>112</td>
<td>59</td>
<td>359</td>
<td>135</td>
<td>1,182</td>
</tr>
<tr>
<td><strong>SSPE1</strong></td>
<td><strong>1,921</strong></td>
<td><strong>182</strong></td>
<td><strong>96</strong></td>
<td><strong>584</strong></td>
<td><strong>17,979</strong></td>
<td><strong>25,564</strong></td>
</tr>
</tbody>
</table>

### 4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

S-4908 is an agricultural operation and does not have any ERCs from AERs occurring at the facility.

### SSPE2 (lb/year)

<table>
<thead>
<tr>
<th>Permit Unit</th>
<th>NO\textsubscript{x}</th>
<th>SO\textsubscript{x}</th>
<th>PM\textsubscript{10}</th>
<th>CO</th>
<th>VOC</th>
<th>NH\textsubscript{3}</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-4908-1-3 Housing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>17,760</td>
<td>23,643</td>
</tr>
<tr>
<td>S-4908-2-2 Manure Handling</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>28,978</td>
<td>78,055</td>
</tr>
<tr>
<td>S-4908-3-0 ICE</td>
<td>739</td>
<td>70</td>
<td>37</td>
<td>225</td>
<td>84</td>
<td>739</td>
</tr>
<tr>
<td>S-4908-4-0 ICE</td>
<td>1,182</td>
<td>112</td>
<td>59</td>
<td>359</td>
<td>135</td>
<td>1,182</td>
</tr>
<tr>
<td><strong>SSPE2</strong></td>
<td><strong>1,921</strong></td>
<td><strong>182</strong></td>
<td><strong>96</strong></td>
<td><strong>584</strong></td>
<td><strong>46,957</strong></td>
<td><strong>103,619</strong></td>
</tr>
</tbody>
</table>

### 5. Major Source Determination

Pursuant to Section 3.25 of District Rule 2201, a major source is a stationary source with post-project emissions or a Stationary Source Potential to Emit (SSPE), equal to or exceeding one or more of the following threshold values.

Pursuant to Section 3.24.1 of District Rule 2201, fugitive emissions do not add to the SSPE2 for Major Source determination purposes, unless the source is included in the list of source categories identified in the major source definition in 40 CFR Part 70.2.

The EPA defines fugitive emissions as "...those emissions that could not reasonably pass through a stack, chimney, vent or other functionally-equivalent opening."

Emissions from composting operations can be collected and vented through the use of an in-vessel or impermeable cover system. However, these control technologies are not cost-effective and are unreasonable for this facility; therefore, the District has determined that the emissions associated with the composting operation are fugitive.
<table>
<thead>
<tr>
<th>Major Source Determination (lb/year)</th>
<th>NO\textsubscript{X}</th>
<th>SO\textsubscript{X}</th>
<th>PM\textsubscript{10}</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-4908-1-1 Broiler Housing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>17,760</td>
</tr>
<tr>
<td>S-4908-2-2 Manure Handling</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>S-4908-3-0 ICE</td>
<td>739</td>
<td>70</td>
<td>37</td>
<td>225</td>
<td>84</td>
</tr>
<tr>
<td>S-4908-4-0 GDO</td>
<td>1,182</td>
<td>112</td>
<td>59</td>
<td>359</td>
<td>135</td>
</tr>
<tr>
<td>Stationary Source Potential to Emit</td>
<td>1,921</td>
<td>182</td>
<td>133</td>
<td>584</td>
<td>17,979</td>
</tr>
<tr>
<td>Major Source Threshold</td>
<td>50,000</td>
<td>140,000</td>
<td>140,000</td>
<td>200,000</td>
<td>50,000</td>
</tr>
</tbody>
</table>

As seen in the table above, the facility is not a Major Source.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. This project is exempt from offsets pursuant to Rule 2201, Section 4.6.9. Therefore, BE calculations are not required.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

As discussed in Section VII.C.5 above, the facility is not a Major Source for NO\textsubscript{X}, SO\textsubscript{X}, PM10 and VOC emissions; therefore, the project does not constitute a SB 288 Major Modification for NO\textsubscript{X}, SO\textsubscript{X}, PM10 and VOC emissions.

8. Federal Major Modification

As discussed in Section VII.C.5 above, the facility is not a Major Source for NO\textsubscript{X}, SO\textsubscript{X}, PM10 and VOC emissions; therefore, the project does not constitute a Federal Major Modification for NO\textsubscript{X}, SO\textsubscript{X}, PM10 and VOC emissions.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day.

c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or

d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As discussed in Section I above, there are no new emissions units associated with this project; therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

\[
AIPE = PE2 - HAPE
\]

Where,

\[
AIPE \quad = \quad \text{Adjusted Increase in Permitted Emissions, (lb/day)}
\]

\[
PE2 \quad = \quad \text{Post-Project Potential to Emit, (lb/day)}
\]

\[
HAPE \quad = \quad \text{Historically Adjusted Potential to Emit, (lb/day)}
\]

\[
HAPE = PE1 \times (EF2/EF1)
\]

Where,

\[
PE1 \quad = \quad \text{The emissions unit's Potential to Emit prior to modification or relocation, (lb/day)}
\]

\[
EF2 \quad = \quad \text{The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1}
\]

\[
EF1 \quad = \quad \text{The emissions unit's permitted emission factor for the pollutant before the modification or relocation}
\]

\[
AIPE = PE2 - (PE1 \times (EF2 / EF1))
\]

S-4908-2.2:

VOC

\[
AIPE = 111.4 - (0 \times (1.78/0.0))
\]

\[
= 111.4 - 0
\]

\[
= 111.4 \text{ lb-VOC/day}
\]
\[ \text{NH}_3 \]
\[ \text{AIPE} = 300.0 - (0 \times (2.93/0.0)) \]
\[ = 300.0 - 0 \]
\[ = 300.0 \text{ lb-NH}_3/\text{day} \]

As demonstrated above, the AIPE is greater than 2.0 lb/day for VOC and \text{NH}_3 emissions; therefore BACT is triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does not constitute a SB 288 and/or Federal Major Modification for NO\textsubscript{x} emissions; therefore BACT is not triggered for any pollutant.

2. BACT Guideline

As shown above, BACT is triggered for VOC and \text{NH}_3 emissions. The District BACT Guideline x.x.x (\textit{Chicken Manure composting}) is applicable (see Appendix C).

3. Top-Down BACT Analysis

Pursuant to the attached Top-Down BACT Analysis (see Appendix D), BACT has been satisfied with the following:

**VOC**
- Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.
- Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.
- Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.
- Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.

**NH3**
- Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.
- Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.
• Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.
• Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.

B. Offsets

Pursuant to Section 4.6.9 of District Rule 2201, agricultural sources, to the extent provided by California Health and Safety Code, section 42301.18(c) are exempt from offsets as long as nothing in this Health and Safety Code section circumvents the requirements of section 42301.16(a). Therefore, offsets are not required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIEP of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE2 (lb/day)</th>
<th>Public Notice Threshold</th>
<th>Public Notice Triggered?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{X}</td>
<td>0</td>
<td>100 lb/day</td>
<td>No</td>
</tr>
<tr>
<td>SO\textsubscript{X}</td>
<td>0</td>
<td>100 lb/day</td>
<td>No</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>0</td>
<td>100 lb/day</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>0</td>
<td>100 lb/day</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>111.4</td>
<td>100 lb/day</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Therefore, public noticing for PE > 100 lb/day purposes is required.
c. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SSPE1 (lb/year)</th>
<th>SSPE2 (lb/year)</th>
<th>Offset Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>1,921</td>
<td>1,921</td>
<td>20,000 lb/year</td>
<td>Yes</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>182</td>
<td>182</td>
<td>54,750 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>96</td>
<td>92</td>
<td>29,200 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>584</td>
<td>584</td>
<td>200,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>17,979</td>
<td>46,957</td>
<td>20,000 lb/year</td>
<td>Yes</td>
</tr>
</tbody>
</table>

As detailed above, offset thresholds were surpassed for NO\textsubscript{x} with this project; therefore public noticing is required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SSPE2 (lb/year)</th>
<th>SSPE1 (lb/year)</th>
<th>SSIPE (lb/year)</th>
<th>SSIPE Public Notice Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>1,921</td>
<td>1,921</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>182</td>
<td>182</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>92</td>
<td>96</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>584</td>
<td>584</td>
<td>0</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>46,957</td>
<td>17,979</td>
<td>28,978</td>
<td>20,000 lb/year</td>
<td>Yes</td>
</tr>
</tbody>
</table>

As demonstrated above, the SSIPEs for NO\textsubscript{x} and CO were greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.
2. Public Notice Action

As discussed above, public noticing is required for this project for VOC emissions in excess of 100 lb/day, VOC emissions exceeding the offset threshold and for SSIPE emissions exceeding 20,000 lb/year for VOC emissions. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit’s maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

**Proposed Rule 2201 (DEL) Conditions:**

- The permittee shall scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles. [District Rule 2201]

- Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile. [District Rule 2201]

- Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished composting; or at least six (6) inches of soil. [District Rule 2201]

- Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished composting; or at least six (6) inches of soil. [District Rule 2201]

- Weekly production rate of compost shall not exceed 700 ton/week. [District Rule 2201]

- Annual production rate of compost shall not exceed 37,000 ton/year. [District Rule 2201]

- All compost shall meet at least one of the following stability criteria prior to leaving the cure-phase piles: 1) The compost emits no more than four (4) mg CO2-C per gram of organic material per day (per TMECC Method 05-08-B), 2) The compost has a Solvita Maturity Index of 7 or greater (per TMECC Method 05-08-E), or 3) The material has been composted at least 40 consecutive calendar days after the active-phase composting period. [District Rule 2201]
E. Compliance Assurance

1. Source Testing

No source testing is required for District Rule 2201.

2. Monitoring

No monitoring is required for District Rule 2201.

3. Recordkeeping

• The permittee shall keep records to verify all finished compost meets the required stability criteria. [District Rule 2201]

• Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rules 1070 and 4570] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis; refer to Appendix E – HRA Summary.

Because of the high moisture content of the chicken manure (>10%), PM10 emissions are expected to be negligible from material handling. At this time, there are no AAQA standards for VOC emissions, therefore an AAQA is not necessary for this project.

Rule 2520 Federally Mandated Operating Permits

Since this facility's potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to poultry litter composting operations.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of
hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to poultry litter composting operations.

**Rule 4101 Visible Emissions**

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

The following conditions will be added to the permit:

- Visible emissions shall not exceed 5% opacity. [District Rules 2201 and 4101]
- Water sprays shall be used, as needed, to ensure visible emissions do not exceed 5% opacity. [District Rules 2201 and 4101]

Therefore, compliance with District Rule 4101 requirements is expected.

**Rule 4102 Nuisance**

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

- No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

Due to the rural location of the facility and use of control equipment satisfying District BACT requirements, public nuisance conditions are not expected as a result of these operations, provided the control equipment is well maintained. Therefore, compliance with this rule is expected.

**California Health & Safety Code 41700 (Health Risk Assessment)**

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (*Appendix E*), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.
Rule 4201 Particulate Matter Concentration

This rule applies only to sources with stacks. Therefore, this rule does not apply to these emission sources.

Rule 4565 Biosolids, Animal Manure, and Poultry Litter

This rule applies to all facilities whose throughput consists entirely or in part of biosolids, animal manure, or poultry litter and the operator who landfills, land applies, composites, or co-composts these materials.

Facilities subject to Rule 4570 (Confined Animal Facilities) or facilities that are specifically exempt under Section 4.0 of Rule 4570 are exempt from this rule.

Rule 4570 Confined Animal Facilities (CAF)

This rule applies to Confined Animal Facilities (CAF) located within the San Joaquin Valley Air Basin. The purpose of this rule is to limit emissions of Volatile Organic Compounds (VOC) from Confined Animal Facilities (CAF).

Demler Enterprises is subject to Rule 4570 and the following conditions ensure compliance with the requirements of this rule:

- {3215} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 1070]
- {3216} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 1070]
- {4528} If weatherproof covering is used, permittee shall maintain records, such as manufacturer warranties or other documentation, demonstrating that the weatherproof covering over litter/manure are installed, used, and maintained in accordance with manufacturer recommendations and applicable standards listed in NRCS Field Office Technical Guide Code 313 or 367, or any other applicable standard approved by the APCO, ARB, and EPA. [District Rule 4570]
- {3658} This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080, and Public Resources Code 21000-21177: California Environmental Quality Act].
- {4573} Within seventy two (72) hours of removal of solid manure from housing, permittee shall either 1) remove all litter/manure from the facility, or 2) cover litter/manure outside the housing with a weatherproof covering from October through May, except for times when wind events remove the covering, not to exceed twenty-four (24) hours per event. [District Rule 4570]
• (4574) Permittee shall keep records of dates when litter/manure is removed from the facility; manure hauling invoices may be used to meet this requirement, or permittee shall maintain records to demonstrate that litter/manure piles outside the pens are covered with a weatherproof covering from October through May. [District Rule 4570]

• (4452) If a licensed veterinarian or a certified nutritionist determines that any VOC mitigation measure will be required to be suspended as a detriment to animal health or necessary for the animal to molt, the owners/operators must notify the District in writing within forty-eight (48) hours of the determination including the duration and the specific health condition requiring the mitigation measure to be suspended. If the situation is expected to exist longer than a thirty-day (30) period, the permittee shall submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the suspended mitigation measure. [District Rule 4570]

• (4453) Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rule 4570]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality ACT (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its Environmental Review Guidelines (ERG) in 2001. The basic purposes of CEQA are to:

• Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.

• Identify the ways that environmental damage can be avoided or significantly reduced.

• Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.

• Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project will not have a significant effect on the environment. The County of Kern has determined that the proposed project is an allowed use. The District finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).
IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authority to Construct S-4908-2-2 subject to the permit conditions on the attached draft Authority to Construct in Appendix A.

X. Billing Information

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Fee Schedule</th>
<th>Fee Description</th>
<th>Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-4908-2-2</td>
<td>3020-06</td>
<td>Solid Manure Handling System</td>
<td>$105.00</td>
</tr>
</tbody>
</table>

Appendices

A: Draft ATC
B: Current PTO
C: BACT Guideline
D: BACT Analysis
E: HRA Summary
APPENDIX A
Draft ATC
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-4908-2-2
LEGAL OWNER OR OPERATOR: DEMLER ENTERPRISES
MAILING ADDRESS: PO BOX 207
WASCO, CA 93280
LOCATION: 28720 GARCES HIGHWAY
DELANO, CA 93215

EQUIPMENT DESCRIPTION:
MODIFICATION OF SOLID MANURE HANDLING SYSTEM CONSISTING OF MANURE STACK BELTS WITH SOLID MANURE HAULED OFFSITE: COMPOST

CONDITIONS

1. (3216) Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 1070]

2. (3215) Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 1070]

3. (4452) If a licensed veterinarian or a certified nutritionist determines that any VOC mitigation measure will be required to be suspended as a detriment to animal health or necessary for the animal to molt, the owners/operators must notify the District in writing within forty-eight (48) hours of the determination including the duration and the specific health condition requiring the mitigation measure to be suspended. If the situation is expected to exist longer than a thirty-day (30) period, the owner/operator shall submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the suspended mitigation measure. [District Rule 4570]

4. (3658) This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080, and Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. (4573) Within seventy two (72) hours of removal of solid manure from housing, permittee shall either 1) remove all litter/manure from the facility, or 2) cover litter/manure outside the housing with a weatherproof covering from October through May, except for times when wind events remove the covering, not to exceed twenty-four (24) hours per event. [District Rule 4570]

6. (4574) Permittee shall keep records of dates when litter/manure is removed from the facility; manure hauling invoices may be used to meet this requirement, or permittee shall maintain records to demonstrate that litter/manure piles outside the pens are covered with a weatherproof covering from October through May. [District Rule 4570]

7. (4528) If weatherproof coverings are used, permittee shall maintain records, such as manufacturer warranties or other documentation, demonstrating that the weatherproof covering over dry manure are installed, used, and maintained in accordance with manufacturer recommendations and applicable standards listed in NRCS Field Office Technical Guide Code 313 or 367, or any other applicable standard approved by the APCO, ARB, and EPA. [District Rule 4570]

8. (4453) Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rule 4570]

9. (98) No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

10. Visible emissions shall not exceed 5% opacity. [District Rules 2201 and 4101]

11. Water sprays shall be used, as needed, to ensure visible emissions do not exceed 5% opacity. [District Rules 2201 and 4101]

12. When composting, the permittee shall scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles. [District Rule 2201]

13. When composting, the permittee shall maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile. [District Rule 2201]

14. When composting, the permittee shall cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished composting; or at least six (6) inches of soil. [District Rule 2201]

15. When composting, the permittee shall cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished composting; or at least six (6) inches of soil. [District Rule 2201]

16. Weekly production rate of compost shall not exceed 711 ton/week. [District Rule 2201]

17. Annual production rate of compost shall not exceed 37,000 ton/year. [District Rule 2201]

18. All compost shall meet at least one of the following stability criteria prior to leaving the cure-phase piles: 1) The compost emits no more than four (4) mg CO2-C per gram of organic material per day (per TMECC Method 05-08-B), 2) The compost has a Solvita Maturity Index of 7 or greater (per TMECC Method 05-08-E), or 3) The material has been composted at least 40 consecutive calendar days after the active-phase composting period. [District Rule 2201]

19. The permittee shall keep records to verify all finished compost meets the required stability criteria. [District Rule]

20. (3246) All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
APPENDIX B
Current PTO
PERMIT UNIT: S-4908-2-1
EXPIRATION DATE: 07/31/2011

EQUIPMENT DESCRIPTION:
SOLID MANURE HANDLING SYSTEM CONSISTING OF MANURE STACK BELTS WITH SOLID MANURE HAULED OFFSITE

PERMIT UNIT REQUIREMENTS

1. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 1070]

2. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 1070]

3. If a licensed veterinarian or a certified nutritionist determines that any VOC mitigation measure will be required to be suspended as a detriment to animal health or necessary for the animal to molt, the owners/operators must notify the District in writing within forty-eight (48) hours of the determination including the duration and the specific health condition requiring the mitigation measure to be suspended. If the situation is expected to exist longer than a thirty-day (30) period, the owner/operator shall submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the suspended mitigation measure. [District Rule 4570]

4. This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [District Rules 2070 and 2080, and Public Resources Code 21000-21177: California Environmental Quality Act]

5. Within seventy two (72) hours of removal of solid manure from housing, permittee shall either 1) remove all litter/manure from the facility, or 2) cover litter/manure outside the housing with a weatherproof covering from October through May, except for times when wind events remove the covering, not to exceed twenty-four (24) hours per event. [District Rule 4570]

6. Permittee shall keep records of dates when litter/manure is removed from the facility; manure hauling invoices may be used to meet this requirement, or permittee shall maintain records to demonstrate that litter/manure piles outside the pens are covered with a weatherproof covering from October through May. [District Rule 4570]

7. If weatherproof coverings are used, permittee shall maintain records, such as manufacturer warranties or other documentation, demonstrating that the weatherproof covering over dry manure are installed, used, and maintained in accordance with manufacturer recommendations and applicable standards listed in NRCS Field Office Technical Guide Code 313 or 367, or any other applicable standard approved by the APCO, ARB, and EPA. [District Rule 4570]

8. Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rule 4570]

These terms and conditions are part of the Facility-wide Permit to Operate.
APPENDIX C
BACT Guideline
San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline

**Emission Unit:** Chicken manure composting

**Equipment Rating:**
- > 20,000 wet ton-Compost/year
- and < 185,000 wet ton-Compost/year

**Industry Type:** Chicken manure composting

**Last Update:**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Achieved in Practice or contained in SIP</th>
<th>Technologically Feasible</th>
<th>Alternate Basic Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>1. Mitigation Measures - 56% control efficiency for VOC emissions&lt;br&gt;- Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1&quot;) in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.&lt;br&gt;- Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.&lt;br&gt;- Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.&lt;br&gt;- Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.</td>
<td>1. 98% overall control (enclosed vented to thermal/catalytic oxidizer)&lt;br&gt;2. 95% overall control (enclosed vented to carbon adsorption unit)&lt;br&gt;3. 91% overall control (in-vessel enclosure)&lt;br&gt;4. ≥ 80% overall control (enclosed vented to biofilter with ≥ 80% control)</td>
<td></td>
</tr>
</tbody>
</table>
1. Mitigation Measures - 28% control efficiency for NH₃ emissions
   • Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.
   • Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.
   • Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.
   • Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.

1. 99% overall control (enclosed vented to wet scrubber)
2. ≥ 90% overall control (enclosed vented to biofilter with ≥ 90% control)
3. 56% overall control (in-vessel enclosure)

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

*This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)
APPENDIX D
BACT Analysis
BACT ANALYSIS
Chicken Manure Composting

Facility Name: Demler Enterprises
Applicant/Operator: David Demler
Mailing Address: PO Box 207
                        Wasco, CA 93280

Submitting Official: David Demler, Partner
Phone: (661) 758-5896
Fax: (661) 758-1579

SJVAPCD Project #: S-1104423
Application #'s: S-4908-2-2
Project Complete Date: December 14, 2007
Preliminary Notice Date: TBD
Processing Engineer: John Yoshimura, Permit Services Department - SJVAPCD
Lead Engineers: Jim Swaney, P.E., Permit Services Department - SJVAPCD
                 Sheraz Gill, Permit Services Department - SJVAPCD
I. Proposal

Demler Enterprises has applied for an Authority to Construct to modify their existing solid manure handling permit S-4908-2-1 to allow composting of 700 tons per week (37,000 tons per year) of chicken manure generated onsite by their hen egg laying operation. After the chicken manure has been turned into compost, Grimmway Farms will remove the material for their composting operation.

Although District Rule 4565 is not applicable, Demler Enterprises has proposed to implement the following four mitigation measures from Rule 4565 as BACT Achieved-In-Practice (AIP) for VOC and NH₃ emissions. These mitigation measures apply to operators of composting/co-composting facilities with throughputs of at least 20,000 wet tons per year but less than 100,000 wet tons per year:

- Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.
- Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.
- Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.
- Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.

Currently, there are no chicken manure composting operations with an annual throughput between 20,000-100,000 wet tons per year that use an in-vessel impermeable cover to enclose the windrows as part their VOC and NH₃ emissions control equipment.

In a phone conversation with John Yoshimura, AQE, on October 24, 2011, Brian Fuchs, Gore, stated there are no chicken manure composting operations in the United States that use a Gore cover as a control technology for windrows.

II. Project Location:

This facility is located at 28720 Garces Highway in Delano.

III. Process Description

See Section IV of the Application Review for this ATC project.
IV. Equipment Description

S-4908-2-2: SOLID MANURE HANDLING SYSTEM CONSISTING OF MANURE STACK BELTS WITH SOLID MANURE BEING DRIED, COMPOSTED, AND HAULED OFFSITE

V. EMISSION CONTROL TECHNOLOGY EVALUATION:

A. BACT Applicability

BACT requirements are triggered for affected pollutants on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. BACT is required for the following actions: (1) Any new emissions unit with a potential to emit exceeding two pounds in any one day, (2) The relocation of an existing emissions unit from one stationary source to another with a potential to emit exceeding two pounds in any one day, (3) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds in any one day, and (4) Major Modifications. Also, if the SSPE2 for CO is less than 200,000 pounds per year, BACT is not required for CO.

This BACT determination applies to both VOC and NH₃ emissions from chicken manure composting. The uncontrolled PE was calculated in Section VII.C of the application review, and is summarized in the table below:

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>PM₁₀</th>
<th>SOₓ</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>NH₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken Manure Composting</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>249.2</td>
<td>0</td>
<td>410.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>PM₁₀</th>
<th>SOₓ</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>NH₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken Manure Composting</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>32.9</td>
<td>0</td>
<td>54.2</td>
</tr>
</tbody>
</table>

B. BACT Policy

Since there is no BACT Guideline in the most recent SJVAPCD BACT Clearinghouse, which governs this class and category of emissions unit, a new BACT Analysis is being performed.

The U.S. Environmental Protection Agency (USEPA) RACT/BACT/LAER Clearinghouse, the California Air Pollution Control Officers Association (CAPCOA) BACT Clearinghouse, the South Coast Air Quality...
Management District (SCAQMD) BACT Clearinghouse, and the Bay Area Air Quality Management District (BAAQMD) BACT Guidelines were reviewed to determine potential control technologies for this class and category of operation but no applicable guidelines were found for co-composting mixing operations.

Also, the SJVAPCD permit database was searched for operating chicken manure composting facilities in order to determine Achieved in Practice (AIP) controls. Currently, there are no other chicken manure composting operations with an annual throughput between 20,000-100,000 wet tons per year.

Furthermore, in a phone conversation with John Yoshimura, AQE, on October 24, 2011, Brian Fuchs, Gore, stated there are no chicken manure composting operations in the United States that use a Gore cover as a control technology for windrows.

Demler Enterprises has proposed a 56% and 28% overall control for VOC and NH₃ respectively by covering all active and curing compost windrow piles with finished compost.

The scope of this guideline applies to facilities that process more than 20,000 wet tons of chicken manure per year, but less than 100,000 wet tons of chicken manure per year.

C. BACT Analysis for VOC Emissions

Step 1 - Identify All Possible Control Technology Options

Option 1 – Enclosure (100% capture) vented to carbon adsorption unit (generally accepted VOC control technique)

Option 2 - Enclosure (100% capture) vented to a thermal or catalytic reduction unit (generally accepted VOC control technique)

Option 3 - Enclosure (100% capture) vented to a biofilter with 80% and 90% control for VOC and NH₃ respectively

Biofilter uses microbiological organisms (microbes) or “bugs” to decompose or breakdown a VOC into less reactive compounds such as CO₂ and water. This decomposition typically takes place aerobically (in the presence of O₂). An established type of biofilter involves a porous medium (typically soil, compost or wood chips - Green Waste), that contain large populations of microbes. This type of system can be used as an after control. Other types of after control biofilters may be referred to as biotrickling or bioscrubbers. These types of filters and bioscrubber types function with the microbes suspended or mobilized in liquid phase.
Per the Final Staff Report for SCAQMD Rule 1133.2, biofilters can achieve 80% and 90% control for VOC and NH₃ respectively for well-designed, well-operated, and well-maintained biofilters.

**Option 4 - Enclosure (100% capture) vented to a biofilter with 90% and 90% control for VOC and NH₃ respectively**

Per the Final Staff Report for SCAQMD Rule 1133.2, two facilities (Griffith Park and Philadelphia Biosolids Recycling Center) have achieved a biofilter control efficiency of 90% for both VOC and NH₃.

**Option 5 – In-vessel enclosure (100% capture) with 91% and 56% control for VOC and NH₃ emissions, respectively**

Per the source test report submitted to the SJVAPCD (Appendix A), the overall VOC and NH₃ control levels for a proposed Gore System are approximately 91% and 56%, respectively.

**Option 6 – Mitigation measures with 56% and 28% control for VOC and NH₃ respectively**

Data from the San Joaquin Valley Air Pollution Study Agency's (Study Agency) field study showed that application of finished compost as a cover (acting as a passive biofilter) during the active phase can achieve a 56% reduction in VOC. The compost cover is also attributed 56% for the curing-phase since the control method and nature of the emissions should be similar to the active-phase.

**Alternate Basic Equipment: None**

**Step 2 - Eliminate Technologically Infeasible Options**

All options from above are technologically feasible except Option 4. Per the Final Staff Report for SCAQMD Rule 1133.2, concerns over the continuous effectiveness beyond 80% and 90% control for VOC and NH₃ respectively, this option is eliminated. Biological controls such as biofilters have a varied control efficiency range due to the natural of the living organisms. Requiring a limit at the upper end of the range is not practical in this case.
Step 3 - Rank Remaining Control Technologies by Control Effectiveness

<table>
<thead>
<tr>
<th>Rank</th>
<th>Option</th>
<th>Overall Control</th>
<th>Achieved in Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100% Capture and Thermal or Catalytic Reduction</td>
<td>98% (1)</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>100% Capture and Carbon Adsorption</td>
<td>95% (2)</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>100% Capture Enclosure</td>
<td>91% (3)</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>100% Capture and Biofilter</td>
<td>80% (4)</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>Mitigation Measures</td>
<td>56% (5)</td>
<td>Yes - applicant proposed</td>
</tr>
</tbody>
</table>

(1) Thermal or catalytic reduction for VOC control is a common control technique. It is District practice to assume that a VOC control efficiency of 98% is readily achievable.
(2) Carbon adsorption for VOC control is a common control technique. It is District practice to assume that a VOC control efficiency of 95% readily achievable.
(3) Covering the open windrow with an impermeable cover, such as GORE, has a control efficiency of 91% for VOC emissions.
(4) Venting the biosolids receiving and mixing emissions to a biofilter with a minimum 80% VOC control.
(5) The applicant has proposed to implement the District Rule 4565 mitigation measures which include scraping or sweeping at least once a day, maintaining a minimum oxygen concentration of at least 5% by volume, covering all active and curing compost piles within 3 hours of each turning with at least 6 inches of finished compost. It is District practice to assume that a VOC control efficiency of 56% is readily achievable.

Step 4 - Cost Effectiveness Analysis

A cost-effective analysis will now be performed for each control technology, which has not been proposed.

I. Cost Effectiveness Analysis: Thermal/Catalytic Reduction

A partial cost analysis will be performed to determine if the annual natural gas cost will be adequate to cause VOC capture and control with thermal or catalytic incineration to be not cost effective per District BACT policy. The increase in temperature of the contaminated air stream required by a catalytic incineration system is less than for thermal incineration, so less fuel gas is needed to heat the exhaust stream. Therefore, by demonstrating that a catalytic incinerator would cause such a system to not be cost effective, will also be sufficient to show that a thermal oxidation system would not be cost effective either.
Annual Natural Gas Requirement:

Natural Gas Requirement = (flow)(Cp_Air)(ΔT) ÷ (HEF)

Where:

Flow (Q) = exhaust flow rate of VOC contaminated air stream: 100,000 acfm\(^{(1)}\)

Cp_Air = specific heat of air: 0.0194 Btu/scf - °F

ΔT = increase in the temperature of the contaminated air stream required for catalytic oxidation to occur (It will be conservatively assumed that the air stream would increase in temperature from 100 °F to 600 °F.)

HEF = heat exchanger factor: 0.7 \(^{(2)}\)

Gas Requirement = \[
\frac{[100,000 \text{ scf/min} \times 0.0194 \text{ Btu/scf - °F}}{	imes (600 \text{ °F} - 100 \text{ °F})] \div 0.7 = 1,385,714 \text{ Btu/min}
\]

Uncontrolled VOC emissions:

<table>
<thead>
<tr>
<th>Uncontrolled VOC Emissions (lb/year)</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Source</td>
<td></td>
</tr>
<tr>
<td>Chicken Manure Composting</td>
<td>65,860</td>
</tr>
<tr>
<td>Total</td>
<td>65,860</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VOC Reductions 98% control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>64,543 lb/yr ⇒ 32.3 ton/year</td>
</tr>
</tbody>
</table>

Annual Natural Gas Cost:

The fuel usage will be reduced by the heating value of the influent VOC stream. The heating value of the VOC’s being controlled is not known so the heating value of MEK (13,729 Btu/lb) will be utilized in the calculation:

Btu content = 65,860 lb-VOC/year × 13,729 Btu/lb = 904,191,940 Btu/yr

Gas Cost: $11.06/MMBtu \(^{(3)}\)

Oxidizer Operating hours = (24 hr/day)(365 day/yr) = 8,760 hr/year

---

\(^{(1)}\) Although the applicant has identified a total exhaust flow rate of 300,000 acfm, a flow rate of 100,000 acfm will be used as a conservative estimate for this cost analysis.


\(^{(3)}\) Natural gas price $11.06/1,000 scf updated 3/27/08 at [http://tonto.eia.doe.gov/dnav/ng/ng_pri_sum_dcu_nus_m.htm](http://tonto.eia.doe.gov/dnav/ng/ng_pri_sum_dcu_nus_m.htm)
Gas Cost = [(1,385,714 Btu/min × 60 min/hr × 8,760 hr/year) - 904,191,940 Btu/yr] × ($11.06/MMBtu × MMBtu/10^6 Btu)

Gas Cost = $8,049,960/yr

**Cost of Reductions:**

Cost of Reductions = $8,049,960/yr ÷ 32.3 tons/year = $249,225/ton

The cost of VOC reduction utilizing either a thermal or catalytic oxidizer is greater than the $17,500/ton cost effectiveness threshold of the District BACT policy. The above cost number does not include any purchase, installation, or maintenance costs. Inclusion of these additional costs would raise the cost per ton number even higher. The equipment is therefore not cost effective.

**II. Cost Effectiveness Analysis: Carbon Adsorption**

Carbon Adsorption occurs when air containing VOC's is blown through a carbon unit.

Two main areas of cost are the cost of the device, and the replacement carbon. The following is the cost analysis to install the device, an in-floor aeration negative ASP.

<table>
<thead>
<tr>
<th>Uncontrolled VOC Emissions (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VOC Reductions 95% control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Annual Operating Cost:**

See Appendix B: Compost Control Costs – Carbon Adsorption.

Capital recovery factor (10%, 10 yrs): 0.163
Contingency Cost Factor: 20%
<table>
<thead>
<tr>
<th>Additional Equipment to Purchase</th>
<th>Capital Cost ($)</th>
<th>Annualized Capital Cost ($/yr)</th>
<th>O&amp;M ($/yr)</th>
<th>Fuel/Energy ($/yr)</th>
<th>Personnel ($/yr)</th>
<th>Total Cost ($/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>1,234,800</td>
<td>201,272</td>
<td>86,528</td>
<td>37,440</td>
<td>124,124</td>
<td>539,237</td>
</tr>
<tr>
<td>Construction</td>
<td>929,645</td>
<td>151,532</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>181,839</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>2,164,445</strong></td>
<td><strong>352,805</strong></td>
<td><strong>86,528</strong></td>
<td><strong>37,440</strong></td>
<td><strong>124,124</strong></td>
<td><strong>721,076</strong></td>
</tr>
</tbody>
</table>

**VOC Reductions:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>32.93</td>
<td>95%</td>
<td>31.2</td>
<td>23,111</td>
</tr>
</tbody>
</table>

Since the cost-effectiveness threshold is $23,111/ton-VOC reduced, this option is not cost effective. The equipment is therefore not cost effective.

**III. Cost Effectiveness Analysis: Mobile Enclosure**

Enclose windrow with mobile impermeable cover with 91% and 56% control efficiency for VOC and NH₃ respectively.

A cost analysis will be performed to determine if the annualized cost of enclosing the windrow (to capture 100% of the emissions) will prove to be not cost effective per District BACT policy.

<table>
<thead>
<tr>
<th>Uncontrolled VOC Emissions (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VOC Reductions 91% control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Annual Operating Cost:**

See Appendix C: Compost Control Costs – Mobile In-Vessel Cover.

Capital recovery factor (10%, 10 yrs): 0.163
Contingency Cost Factor: 20%
O&M: 5 $/wet ton (Fuchs)
<table>
<thead>
<tr>
<th>Additional Equipment to Purchase</th>
<th>Capital Cost ($)</th>
<th>Annualized Capital Cost ($/yr)</th>
<th>O&amp;M Cost ($/yr)</th>
<th>Fuel/Energy Cost ($/yr)</th>
<th>Personnel Cost ($/yr)</th>
<th>Total Cost ($/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>500,000</td>
<td>81,500</td>
<td>185,000</td>
<td>100,000</td>
<td>185,000</td>
<td>661,800</td>
</tr>
<tr>
<td>Construction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>500,000</strong></td>
<td><strong>81,500</strong></td>
<td><strong>185,000</strong></td>
<td><strong>100,000</strong></td>
<td><strong>100,000</strong></td>
<td><strong>661,800</strong></td>
</tr>
</tbody>
</table>

**VOC Reductions:**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>32.93</td>
<td>91%</td>
<td>29.9</td>
<td>22,134</td>
</tr>
</tbody>
</table>

Since the cost-effectiveness threshold is $22,134/ton-VOC reduced, this option is not cost effective. The equipment is therefore not cost effective.

**III. Cost Effectiveness Analysis: Biofilter**

Enclose aerated static piles (ASP) and vent to control device with ≥ 80% and 90% control efficiency for VOC and NH₃ respectively.

As shown above, the cost of enclosing the ASPs to capture the VOC emissions from the windrow is greater than the $17,500/ton cost-effectiveness threshold of the District BACT policy. Therefore, capture and control with a biofilter is not cost effective. The equipment is therefore not cost effective and is being removed from consideration at this time.

**Step 5: Select BACT:**

The applicant has proposed to use the only control technology not eliminated in Step 4 above, the following mitigation measures:

- Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.
- Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.
- Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.
• Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.

Therefore, the applicant’s proposal meets the BACT requirements for VOC emissions from this class and category of source.

A cost effectiveness analysis is not required for proposed controls. The applicant has proposed an overall VOC control efficiency of 56%; therefore, a cost analysis will not be performed. Implementing the mitigation measures will be listed as Achieved in Practice (AIP).

D. BACT Analysis for NH₃ Emissions

According to the source test data for biofilters conducted for the Project S-1032219, VOC and NH₃ control efficiencies were the same (≥ 80%). Since the data collected for Project S-1032219 show that VOC and NH₃ control efficiencies for biofilters are the same, the District will therefore assume the control efficiencies for VOC and NH₃ are the same for compost covers. Data from the San Joaquin Valley Air Pollution Study Agency’s (Study Agency) field study showed that application of finished compost as a cover (acting as a passive biofilter) during the active phase can achieve a 56% reduction in VOC. The compost cover is also attributed 56% for the curing-phase since the control method and nature of the emissions should be similar to the active-phase. However, to be conservative, the District will assume the NH₃ control efficiency for active and curing-phase will be half (28%) as efficient as the VOC CE.

However, the District does not have a cost effective threshold for ammonia emissions; therefore, no cost analysis will be performed. The applicant has proposed to implement the following mitigation measures to satisfy BACT requirements for this class and category of source and will be considered Achieved in Practice (AIP):

• Scrape or sweep, at least once a day, all areas where compostable material is mixed, screened, or stored such that no compostable material greater than one inch (1") in height is visible in the areas scraped or swept immediately after scraping or sweeping, except for compostable material in process piles or storage piles.
• Maintain a minimum oxygen concentration of at least five percent (5%), by volume, in the free air space of every active and curing compost pile.
• Cover all active compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.
• Cover all curing compost piles within 3 hours of each turning with one of the following: a waterproof covering; at least six (6) inches of finished compost; or at least six (6) inches of soil.
APPENDIX E
HRA Summary
A. RMR SUMMARY

<table>
<thead>
<tr>
<th>Categories</th>
<th>Solid Manure Handling System (Unit 2-2)</th>
<th>Project Totals</th>
<th>Facility Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritization Score</td>
<td>0.37</td>
<td>0.37</td>
<td>0.37</td>
</tr>
<tr>
<td>Acute Hazard Index</td>
<td>N/A ¹</td>
<td>N/A ¹</td>
<td>N/A</td>
</tr>
<tr>
<td>Chronic Hazard Index</td>
<td>N/A ¹</td>
<td>N/A ¹</td>
<td>N/A</td>
</tr>
<tr>
<td>Maximum Individual Cancer Risk (10^-6)</td>
<td>N/A ¹</td>
<td>N/A ¹</td>
<td>N/A</td>
</tr>
<tr>
<td>T-BACT Required?</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Permit Conditions?</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹This project passes on prioritization; therefore, no further analysis is necessary.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 2-2

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on October 19, 2011, to perform a Risk Management Review and Ambient Air Quality Analysis (AAQA) for a proposed modification to a solid manure handling system. The applicant is proposing to allow the drying and composting of chicken manure. According to the engineer, there are no PM emissions associated with this project, only VOC emissions. At this time, there are no AAQA standards for VOC, therefore an AAQA was not performed for this project.
II.  Analysis

Toxic emissions for this proposed unit were calculated using the District’s “Biosolids Composting” spreadsheet. In accordance with the District’s *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit’s toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District’s HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

<table>
<thead>
<tr>
<th>Analysis Parameters</th>
<th>Unit 2-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC Emissions (lb/hr)</td>
<td>10.38</td>
</tr>
<tr>
<td>NH3 Emissions (lb/hr)</td>
<td>17.09</td>
</tr>
<tr>
<td>VOC Emissions (lb/yr)</td>
<td>65,860</td>
</tr>
<tr>
<td>NH3 Emissions (lb/yr)</td>
<td>108,410</td>
</tr>
<tr>
<td>Max Hours per Year</td>
<td>8760</td>
</tr>
<tr>
<td>Closest Receptor (m)</td>
<td>427</td>
</tr>
</tbody>
</table>

III. Conclusion

The prioritization score is less than 1.0. In accordance with the District’s Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Toxic emissions summary
D. Prioritization score
E. Facility Summary