



# INTERMEDIATE STATE PERMIT TO OPERATE

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

**Intermediate Operating Permit Number:** OP2009-034  
**Expiration Date:** NOV 29 2014  
**Installation ID:** 087-0016  
**Project Number:** 2006-06-103

**Installation Name and Address**

Golden Triangle Energy, LLC  
15053 Highway 111  
Craig, MO 64437  
Holt County

**Parent Company's Name and Address**

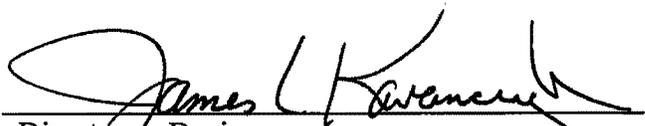
Golden Triangle Energy, LLC  
15053 Highway 111  
Craig, MO 64437  
Holt County

**Installation Description:**

Golden Triangle Energy is a 22 million gallon per year denatured ethanol, beverage and industrial alcohol production installation. Processes include alcohol storage, grain handling, fermentation, distillation and formulation.

NOV 30 2009

Effective Date

  
Director or Designee  
Department of Natural Resources

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# I. Installation Description and Equipment Listing

## INSTALLATION DESCRIPTION

Golden Triangle Energy is a 22 million gallon per year denatured ethanol, beverage and industrial alcohol production installation. Approximately eleven (11) million bushels of corn are used as raw material. Three product categories of ethanol are produced; (1) Fuel grade ethanol is manufactured from the fermentation of corn and subsequent distillation of liquid fermentation products. Gasoline is added (as denaturant) to form a 95%-5% blend of ethanol and gasoline; (2) pure beverage grade alcohol; and (3) industrial alcohol with denaturants as regulated by 27 CFR (Alcohol, Tobacco Products and Firearms). One bushel of corn (56 pounds) run through a dry mill ethanol plant will produce roughly one third (17-19 pounds) of each of the products: ethanol, carbon dioxide (CO<sub>2</sub>) and Distillers Dried Grain and Solubles (DDGS).

Corn is first ground into meal and slurried with water to form a mash. Enzymes are added to the mash to convert the starch to the simple sugar, dextrose. Ammonia is also added for pH control and as a nutrient for the yeast. The mash is processed through a high temperature cook step to reduce bacteria levels ahead of fermentation. The mash is cooled and transferred to the fermenters where yeast is added and the conversion of sugar to ethanol and CO<sub>2</sub> begins. After fermentation, the resulting "beer" is transferred to distillation columns where the ethanol is separated from the residual "stillage". The ethanol is concentrated to 190 proof using conventional distillation and then is dehydrated to approximately 200 proof using a molecular sieve system. The fuel grade product begins with anhydrous ethanol and is blended with about 5% denaturant and is then shipped to gasoline terminals or retailers.

The stillage, which exits the bottom of the stripper column, is pumped to a continuous flow centrifuge where heavy solids are separated out of the stillage in the form of a cake. The cake is called distillers wet grain (DWG) and the liquid is called thin stillage. Approximately 50% of the thin stillage is sent to the front of the plant as backset. The other half flows to the evaporator where the soluble fraction is concentrated to about 30% solids. This intermediate is called Condensed Distillers Solubles (CDS) or "syrup." The coarse grain and syrup fractions are then co-dried to produce the DDGS product.

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO <sub>x</sub> )	Nitrogen Oxides (NO <sub>x</sub> )	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
2008	45.27	0.33	9.49	50.22	4.07	--	2.42
2007	11.28	0.14	11.14	46.10	3.95	--	2.83
2006	18.97	0.14	12.98	92.39	12.99	--	5.85
2005	16.18	0.14	23.72	50.24	19.93	--	7.47
2004	15.10	0.14	23.10	48.20	19.40	--	6.35

**EMISSION UNITS WITH LIMITATIONS**

The following list provides a description of the equipment at this installation which emits air pollutants and which is identified as having unit-specific emission limitations.

<b>Emission Unit #</b>	<b>Stack #</b>	<b>Description of Emission Unit</b>
EU001	SV001	Corn dump pit/auger
EU002	SV001	Corn elevator
EU003	SV001	Scalper
EU004	SV001	Corn bin - Surge
EU005	SV001	Corn bin – 36,000 Bushels
EU006	SV001	Corn bin – 150,000 Bushels
EU007	SV001	Corn bin – 150,000 Bushels
EU008	SV001	DDGS dump pit/auger
EU009	SV001	DDGS elevator
EU010	SV001	DDGS rail load spout
EU011	SV001	DDGS screw conveyor
EU012	SV001	DDGS truck load spout
EU013	SV003	Hammermill
EU014	SV004	Fermentor #1
EU015	SV004	Fermentor #2
EU016	SV004	Fermentor #3
EU017	SV004	Beer Well
EU018	SV005	Beer Str\$ipper Distillation
EU019	SV005	Rectifier Distillation
EU020	SV005	Side Stripper Distillation
EU021	SV005	Molecular Sieve Dehydration
EU022	SV005	Evaporator
EU023	SV005	Slurry Tank
EU024	SV005	Yeast Tank
EU025	SV005	Production Rundown
EU026	SV006/SV012	DDGS Dryer Multicyclones
EU027	SV007	DDGS cooler cyclone
EU028	SV008	Boiler, 60.5 MMBtu/hr w/ Low NOx Burner
EU034	SV011	Boiler, 60.5 MMBtu/hr
EU035	SV005	Industrial Extractive Distillation Column #1
EU036	SV005	Industrial Rectifier Distillation Column #2
EU037	SV005	Industrial Demethylization Distillation Column #3
EU038	SV012	Regenerative Thermal Oxidizer
EU040	SV005	Industrial Distillation Recycle Rectifier Column #4
EU041	SV001	Corn bin distribution conveyor
EU042	SV001	Corn bin unloading conveyor
EU043	SV001	DDGS conveyor
EU044	SV001	DDGS load out conveyor
EU045	SV005	High Quality molecular sieve vacuum pump vent
EU046	SV005	High Quality ED heads condenser
FS001	NA	Denatured Ethanol Rail Loading Rack
FS002	NA	Equipment leaks

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FS004	NA	Truck Haul Road
FS005	NA	Cooling tower #1
FS006	NA	Cooling tower #2
FS007	NA	Denatured Ethanol Truck Loading Rack
T801	NA	Tank, 190 proof
T802	NA	Tank, 200 proof
T803	NA	Tank, denatured ethanol
T804	NA	Tank, denatured ethanol
T805	NA	Tank, denaturant (gasoline)
T811	NA	Tank, Industrial Alcohol

### **EMISSION UNITS WITHOUT LIMITATIONS**

The following list provides a description of the equipment which does not have unit specific limitations at the time of permit issuance.

<b><u>Emission Unit #</u></b>	<b><u>Description of Emission Source</u></b>
EU029	Grain storage building
FS003	Uncaptured grains/DDGS
FS008	Industrial Denaturant - Methanol, 5.0%
FS009	Industrial Denaturant - Ter. Butyl Alcohol, 0.13%
FS010	Industrial Denaturants - Toluene, 0.05%
FS011	Industrial Denaturants – CIPTES, 1.0%
FS012	Industrial Denaturants – Ethyl Acetate, 4.25%
T806	Tank, Industrial Alcohol
T807	Tank, Industrial Alcohol
T808	Tank, Industrial Alcohol
T809	Tank, Industrial Alcohol
T810	Tank, Corrosion Inhibitor

### **DOCUMENTS INCORPORATED BY REFERENCE**

These documents have been incorporated by reference into this permit.

1. Construction Permit Number 072008-001
2. Construction Permit Amendment 072008-001A
3. Consent Decree, Civil Action No. 05-6032-CV-SJ-SOW
4. Construction Permit Application, Received March 21, 2007

## II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

<p style="text-align: center;"><b>PERMIT CONDITION PW001</b> <b>10 CSR 10-6.060 Construction Permits Required</b> <b>Construction Permit 072008-001, Issued July 2, 2008</b></p>
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**Emission Limitations:**

- 1) Golden Triangle Energy, LLC shall limit its truck and rail grain receiving rate to 217,778 tons of grain per year. [Condition 5 A.]
- 2) Golden Triangle Energy, LLC shall limit its truck and rail DDGS shipment rate to 78,840 tons of DDGS shipped per year. [Condition 6 A.]
- 3) Golden Triangle Energy, LLC shall limit its annual denatured ethanol production rate to 22,050,000 gallons per consecutive 12-month period. The total ethanol production remains at 21,000,000 gallons per year. The maximum amount of denaturant used per year is 1,050,000 gallons per year. [Condition 7 A.]
- 4) Golden Triangle Energy, LLC shall emit less than 95 tons of particulate matter less than ten microns in diameter (PM<sub>10</sub>) into the atmosphere from this installation in any consecutive 12-month period. [Condition 8 A.1.]
- 5) Golden Triangle Energy, LLC shall emit less than 95 tons of Nitrogen Oxides (NO<sub>x</sub>) from this installation in any consecutive 12-month period. [Condition 8 B.2.]
- 6) Golden Triangle Energy, LLC shall emit less than 24 tons of combined and 9 tons of individual Hazardous Air Pollutants (HAPs) from this installation in any consecutive 12-month period. [Condition 8 C.1&2.]
- 7) Golden Triangle Energy, LLC shall emit less than 95 tons of Volatile Organic Compounds (VOCs) from this installation in any consecutive 12-month period. [Condition 8.D.1.]
- 8) Golden Triangle Energy, LLC shall emit less than 95 tons of Carbon Monoxide (CO) from this installation in any consecutive 12-month period. [Condition 8.E.1]
- 9) Golden Triangle Energy, LLC shall emit less than 95 tons of Sulfur Oxide (SO<sub>x</sub>) from this installation in any consecutive 12-month period. [Condition 8.F.1]

**Monitoring/Recordkeeping:**

- 1) Golden Triangle Energy, LLC shall keep a record of the weight in tons of grain received by rail or truck per day. Attachment A, *Daily Grain Receiving Tracking Sheet*, or equivalent form(s), shall be used for this purpose. [Condition 5.B.]
- 2) Golden Triangle Energy, LLC shall keep a record of the weight in tons of DDGS shipped by rail or truck per day. Attachment B, *Daily DDGS Processed Tracking Sheet*, or equivalent form(s), shall be used for this purpose. [Condition 6.B.]
- 3) Golden Triangle Energy, LLC shall keep a record of the amount in gallons of ethanol produced and denaturant used per consecutive 12-month period. Attachment C, *Annual Denatured Ethanol Tracking Sheet*, or equivalent form(s), shall be used for this purpose. [Condition 7.B.]
- 4) Golden Triangle Energy, LLC shall record the monthly amount and the sum of the most recent consecutive 12-months NO<sub>x</sub> emissions in tons from this installation. Attachment D, *Monthly NO<sub>x</sub> Emissions Tracking Record*, or equivalent form(s), shall be used for this purpose. [Condition 8.B.9]

- 5) Golden Triangle Energy, LLC shall record the monthly amount and the sum of the most recent consecutive 12-months HAPs emissions in tons from this installation. Attachment E and F, *Monthly Total HAPs Emissions Tracking Record* and *Monthly Individual HAPs Emissions Tracking Record*, or equivalent form(s), shall be used for this purpose. [Condition 8.C.2&4.]
- 6) Golden Triangle Energy, LLC shall record the monthly amount and the sum of the most recent consecutive 12-months VOC emissions in tons from this installation. Attachment G, *Monthly VOC Emissions Tracking Record*, or equivalent form(s), shall be used for this purpose. The emission rates used in Attachments G shall be determined by performance testing or from emission factors from AP-42 or DENCO. [Condition 8.D.2.]
- 7) Golden Triangle Energy, LLC shall record the monthly amount and the sum of the most recent consecutive 12-months CO emissions in tons from this installation. Attachment H, *Monthly CO Emissions Tracking Record*, or equivalent form(s), shall be used for this purpose. The emission rates used in Attachments H shall be determined by performance testing or from emission factors from AP-42 or DENCO. [Condition 8.E.4.]
- 8) Golden Triangle Energy, LLC shall record the monthly amount and the sum of the most recent consecutive 12-months SO<sub>x</sub> emissions in tons from this installation. Attachment I, *Monthly SO<sub>x</sub> Emissions Tracking Record*, or equivalent form(s), shall be used for this purpose. [Condition 8.F.3.]
- 9) Golden Triangle Energy, LLC shall keep all operating and maintenance logs onsite for no less than five (5) years and shall make them available to any Department of Natural Resources' personnel upon request. [Condition 19.]

**Testing:**

Golden Triangle, LLC shall conduct performance tests to verify the emission rates as follows:

- 1) The following stacks shall be tested to determine the VOC and total HAP emission rates when all equipment controlled by these devices is in operation: The wet scrubber stacks for main fermentation, and distillation (SV004 and SV005); the RTO for the DDGS dryer (SV012) and the cooling cyclone (SV007). These emission rates shall be used in Attachments E and F to demonstrate compliance with the VOC and HAPs emission limitation. [Condition 15.A.1.]
- 2) The following stacks shall be tested to determine the emission rates of acetaldehyde, acrolein, formaldehyde, and methanol when all equipment controlled by these devices is in operation: The wet scrubber stacks for fermentation, and distillation (SV004 and SV005), the RTO for the DDGS dryer SV012) and cooling cyclone (SV007). These emission rates shall be used in Attachment E and F to demonstrate compliance with the HAPs emission limitation. [Condition 15.A.2&3.]
- 3) The following stacks shall be tested to determine the emission rates of CO when all equipment controlled by these devices is in operation: The RTO for the DDGS dryer (SV012) and the boilers (SV008 and SV011). These emission rates shall be used in Attachment H to demonstrate compliance with the CO emission limitation. [Condition 15.A.4.]
- 4) The following stacks shall be tested to determine the emission rates of PM<sub>10</sub> when all equipment controlled by these devices is in operation: The grains handling baghouse (SV001), hammermill/hominy unload (SV003), cooling cyclone (SV007), the boilers (SV008 and SV011), and the RTO for the DDGS dryer (SV012). These emission rates shall not exceed the amounts listed in Special Condition 8.A. Table 2 of permit 072008-001. [Condition 15.A.5.]
- 5) The following stacks shall be tested to determine the emission rates of NO<sub>x</sub> when all equipment controlled by these devices is in operation: Boiler #1 SV008 and the RTO for the DDGS dryer (SV012). These emission rates shall not exceed the amounts listed in Special Condition 8.B. Table 3 of permit 072008-001. [Condition 15.A.6.]

- 6) The RTO for the DDGS dryer (SV012) and the wet scrubbers (SV004 and SV005) shall be tested to determine the SO<sub>2</sub> content of these streams. [Condition 15.A.7.]
- 7) Emission factors from AP42 can be used to determine VOC, HAP, PM<sub>10</sub> and SO<sub>x</sub> emissions for boilers #1 and #2 with stacks SV008 and SV011; or the site may test to determine these emission factors. [Condition 15 A.8]
- 8) The operating parameters (water flowrate, amount of additives) at which the stack tests are conducted shall be used to set the appropriate values used in actual operations of the following control devices. Inlet air temperature, pH and pressure may vary under normal operating conditions and can be operated at different values than the value used during stack testing. [Condition 15 B.]
  - a) The wet scrubbers (SV004 and SV005)
  - b) The RTO (SV012)
- 9) The performance tests for the fermentation wet scrubber (SV004) shall be conducted for one of the following time periods:
  - a) A complete cycle, defined as the time period between transferring the contents of one fermenter to the beer well and transferring the contents of the next fermenter: or [Condition 15 E.1]
  - b) During period(s) of representative emissions. Golden Triangle Energy, LLC shall submit, in the proposed test plan outlined below, sufficient data to determine the point(s) of representative emissions. The representative emissions are the average of 3 points identified as highest airflow, lowest airflow, and mid-range airflow going up or down the pressure curve. Testing will consist of three 1-hour runs at each of the 3 points. These points must be approved by the Air Pollution Control Program's Compliance/Enforcement Section prior to conducting the tests. Weighted averages can be used to determine the average emission rate. If sufficient data is not supplied supporting these representative emission point, Golden Triangle Energy, LLC must conduct testing for the time period outlined in part a) of this section. [Condition 15 E.2.]
- 10) Performance testing required may be limited to conducting tests on a representative piece(s) of each type of equipment upon approval by the Director. In addition, an alternate method(s) of quantifying the emission rates of criteria air pollutants from these sources may be used in place of the above testing requirement if requested by Gold Triangle Energy, LLC and approved by the Director. [Condition 15 F.]
- 11) Golden Triangle Energy, LLC shall conduct performance tests to verify the emission rates as indicated Special Condition 15.A. of permit 072008-001 **once every 5 years from the date of the most recent performance tests, except for baghouse stacks**. The baghouse stacks shall be tested once upon startup in accordance with Special Condition 15.G. of permit 072008-001 No further testing will be necessary unless the stack tests do not show compliance with limits in this permit or the facility modifies the equipment or the process in a manner that could cause a change in emission rates from these stacks. During the life of the Consent Decree (CD) the performance test frequency for group NO<sub>x</sub> cap and CD equipment with limits shall be per attachment 2 in the CD. [Condition 15 I.]
- 12) Proposed Test Plan - A completed Proposed Test Plan Form must be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing. [Condition 16 A.]

**Reporting:**

- 1) Golden Triangle Energy, LLC shall report to the Air Pollution Control Program's Enforcement Section (P. O. Box 176, Jefferson City, MO 65102) no later than ten (10) days after the end of any

month during which the records required by the above referenced permit show that the installation exceeded the emission limitations listed above.

- 2) Two (2) copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one (1) sample run. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations. [Condition 16 B&C.]
- 3) If the performance testing required by Special Condition 15 of permit 072008-001 indicates that any of the emission limits are being exceeded, Golden Triangle Energy, LLC must propose a remedial plan to the Air Pollution Control Program within thirty (30) days of submitting the performance test results. This plan must demonstrate how Golden Triangle Energy, LLC will reduce the emission rates below those stated in Emission Limitations. Golden Triangle Energy, LLC shall implement any such plan immediately upon its approval by the Director and stack testing. Additional controls, if necessary, must be started-up within 12 months after the stack test results report. [Condition 16 D.]

### III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

<b>EU01-EU012 &amp; EU041-EU044 – GRAIN HANDLING EQUIPMENT EU013 – HAMMERMILL</b>				
<b>Emission Unit</b>	<b>Description</b>	<b>Control Device #</b>	<b>EQ Stack #</b>	<b>2007 EQ Reference #</b>
EU001	Corn dump pit/auger	C001	SV001	EU001
EU002	Corn elevator			EU002
EU003	Scalper			EU003
EU004	Corn bin			EU004
EU005	Corn bin			EU005
EU006	Corn bin			EU006
EU007	Corn bin			EU007
EU008	DDGS dump pit/auger			EU008
EU009	DDGS elevator			EU009
EU010	Rail load spout			EU010
EU011	Screw conveyor			EU011
EU012	Truck load spout			EU012
EU041	Corn bin distribution conveyor			NA
EU042	Corn bin unloading conveyor	NA		
EU043	DDGS conveyor	NA		
EU044	DDGS load out conveyor	NA		
EU013	Hammermill	C002	SV003	EU013

**PERMIT CONDITION (EU001-EU013, and EU041-EU044) -001**  
**10 CSR 10-6.060 Construction Permits Required**  
**Construction Permit 072008-001, Issued July 2, 2008**  
**10 CSR 10-6.220**  
**Restriction of Emission of Visible Air Contaminants**

**Emission Limitation:**

- 1) Golden Triangle Energy, LLC shall not discharge PM10 into the atmosphere from stack SV001 in excess of 0.272 tons per year. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Condition 8 A.1]
- 2) Golden Triangle Energy, LLC shall not discharge PM10 into the atmosphere from stack SV003 in excess of 1.314 tons per year. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Condition 8 A.1]
- 3) No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%. [10 CSR 10-6.220]
  - a) Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

**Operational Specifications:**

- 1) The grain handling and process equipment (EU001 to EU012 and EU041 to EU044) and grain milling equipment (EU013) shall be enclosed by ductwork and shall be maintained under negative pressure and exhausted to baghouses. [Condition 9 A.]
- 2) The baghouses (C001 and C002) must be in use at all times when the associated equipment listed in condition 10 A. (Tables) of permit 072008-001 is in operation. [Condition 10 A.]
- 3) The baghouses (C001 and C002) and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications. The baghouses shall be equipped with gauges or meters that indicate the pressure drop across each baghouse. These gauges or meters shall be located in such a way that they may be easily observed by Department of Natural Resources' employees. [Condition 10 B.]
- 4) Replacement bags for all baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance). [Condition 10 C.]

**Monitoring/Recordkeeping:**

- 1) Golden Triangle Energy, LLC shall demonstrate negative pressure by using visual indicators such as streamers, talc puff test, negative pressure gauges, flags, etc. at openings that are not closed during normal operations. All openings must indicate the presence of negative pressure for compliance. [Condition 9 B.]
- 2) Golden Triangle Energy, LLC shall perform a visual emissions check for each emission point (SV001 and SV003) at least once in every 24-hour period while the grain handling, grain storage, and grain milling equipment are in operation. [Condition 9 C.]
  - a) The permittee shall conduct visual emissions checks using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission units are operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
  - b) The permittee shall maintain records of all observation results (see Attachment K and L), noting:
    - i) Whether any air emissions (except for water vapor) were visible from the emission units,
    - ii) All emission units from which visible emissions occurred, and
    - iii) Whether the visible emissions were normal for the process.
  - c) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment M)
- 3) The grain storage building is a multipurpose building. The DDGS storage pile and DDGS truck loading and corn dump pits are all located in this building. The building is divided into halves by a low concrete wall separating the DDGS storage from the DDGS loading and corn unloading area. The cooling cyclone underflow conveyor discharges into this building supplying the DDGS and creating the DDGS storage pile. [Condition 9 E.]
  - a) The DDGS floor pits which convey the DDGS to the DDGS leg for rail car or truck loadout are controlled with negative pressure to the baghouse C001. The equipment is expected to be maintained at 100 percent capture efficiency. No visible emissions are expected from the transferring equipment. [Condition 9 E.1.]

- b) The site claimed 80 percent capture on the dump pits. Visible emissions created from the corn dump pits are expected from this portion of the building. [Condition 9 E.2.]
  - c) The site claimed reduced wind flow for the storage pile of 2 mph. Visible emissions are expected from the storage pile portion of the building. [Condition 9 E.3.]
  - d) No capture efficiency is claimed for the building. All building openings are not required to indicate the presence of negative pressure for compliance. [Condition 9 E.4.]
- 4) Golden Triangle Energy, LLC shall monitor and record, in an operating and maintenance log, the operating pressure drop across the baghouses at least once every 24 hours. Either paper copy or electronic formats of the log are acceptable. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty. If the pressure drop reading fall outside of this normal operating range, then the associated equipment shall be shut down as quickly as is feasible and corrective action taken to address the cause of the pressure drop problem. The problem shall be corrected and the baghouse shall be operational before restarting the equipment. [Condition 10 D.]
- 5) Golden Triangle Energy, LLC shall maintain an operating and maintenance log for the grain and DDGS storage handling equipment, process equipment, and baghouses which shall include the following: [Condition 10 E.]
- a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions. [Condition 10 E.1.]
  - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc. [Condition 10 E.2.]
  - c) A record of regular inspection schedule, the date and results of all inspections, including any actions or maintenance activities that result from the inspections. Either paper copy or electronic formats are acceptable. [Condition 10 E.3.]
- 6) Golden Triangle Energy, LLC shall keep all operating and maintenance logs onsite for no less than five (5) years and shall make them available to any Department of Natural Resources' personnel upon request. [Condition 19.]

**Reporting:**

- 1) Golden Triangle Energy, LLC shall report to the Air Pollution Control Program's Enforcement Section (P. O. Box 176, Jefferson City, MO 65102) no later than ten (10) days after the end of any month during which the permittee determines that the installation exceeded the emission limitations listed in this permit condition.
- 2) The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

<b>EU014-EU017 – FERMENTATION SCRUBBER</b>				
<b>EU018-EU025, EU035-EU037, EU040, EU045 and EU046 – DISTILLATION SCRUBBER</b>				
Emission Unit	Description	Control Device #	EIQ Stack #	2007 EIQ Reference #
EU014	Fermentor #1	C003	SV004	EU014
EU015	Fermentor #2			EU015
EU016	Fermentor #3			EU016
EU017	Beer Well			EU017
EU018	Beer Stripper Distillation	C004	SV005	EU018
EU019	Rectifier Distillation			EU019
EU020	Side Stripper Distillation			EU020
EU021	Molecular Sieve Dehydration			EU021
EU022	Evaporator			EU022
EU023	Slurry Tank			EU023
EU024	Yeast Tank			EU024
EU025	Production Rundown			EU025
EU035	Industrial Extractive Distillation Column #1			EU035
EU036	Industrial HQ Rectifier Distillation Column #2			EU036
EU037	Industrial Demethylization Distillation Column #3			EU037
EU040	Industrial Recycle Rectifier Distillation Column #4			EU040
EU045	High Quality molecular sieve vacuum pump vent			NA
EU046	High Quality ED heads condenser			NA

**PERMIT CONDITION**  
**(EU014-EU017, EU018-EU025, EU035-EU037, EU040 & EU045-EU046) - 001**  
**10 CSR 10-6.060 Construction Permits Required**  
**Construction Permit 072008-001, Issued July 2, 2008**

**Emission Limitation:**

- 1) Golden Triangle Energy, LLC has an equipment limit of 95 percent reduction or less than 20 ppm VOC on the fermentation scrubber (C003) to conform to the Consent Decree, Civil Action No. 05-6032-CV-SJ-SOW. [Condition 8 D.1]

**Operational Specifications:**

- 1) The wet scrubbers (C003 and C004) must be in use at all times when the associated equipment is in operation. [Condition 11.A]
- 2) The scrubbers and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer’s specifications and stack test operating parameters. The scrubber shall be equipped with a gauge or meter that indicates the pressure drop across the scrubber. Each scrubber shall be equipped with a flow meter that indicates the flow through the scrubber. These gauges and meters shall be located in such a way they may be easily observed by Department of Natural Resources’ personnel. [Condition 11 B.]
- 3) The operating parameters (water flowrate, amount of additives) at which the stack tests are conducted shall be used to set the appropriate values used in actual operations of the wet scrubbers (C003 and C004). Inlet air temperature, pH and pressure may vary under normal operating conditions and can be operated at different values than the value used during stack testing. The operating parameters shall be determined and agreed upon by the Air Pollution Control Program’s Enforcement Section and Golden Triangle, LLC before the start of the performance tests. [Condition 15 B. & C.]

- a) Fermentation scrubber C003 was tested at a 28 gallons per minute (gpm) water rate and a 1 gallon/hour of 36 % sodium bisulfite addition. The calculated pressure drop based on Flexiring packing curves and variable speed fan curves ranges from 1.0 to 14 inches water column (inWC). The distillation scrubber (C004) was tested at a 4 gpm water rate and a 0 gallon/hour of 36% sodium bisulfate addition. The calculated pressure drop based on Flexiring packing curves and fan curves ranges from 0.4 to 8 inWC. The scrubbers C003 and C004 shall be operated within the parameters described. [Condition 11 C.]
- 4) Bisulfate addition is required all times C003 is in operation. To change the condition, to operate without bisulfate addition in C003, the installation must retest the fermentation scrubber as defined in Special Conditions 15 and 16 or permit 072008-001 while operating C003 without the bisulfate addition. Bisulfate addition can be discontinued only for authorized stack testing. Using the data from the test, calculate the installation wide annual PTE for acetaldehyde. If the PTE value is below the current SMAL value for acetaldehyde presently at 9 tons per year, bisulfate addition can be discontinued upon approval and concurrence of calculation method and testing procedures by the Permitting and Enforcement Section of the Air Pollution Control Program. Bisulfate addition must be maintained until approval to discontinue is obtained. [Condition 11 D.]

**Monitoring/Recordkeeping:**

- 1) Golden Triangle Energy, LLC shall monitor and record the operating pressure drop across each scrubber at least once every twenty-four (24) hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty and the condition determined from stack testing defined in Special Conditions 15 and 16 of permit 072008-001. [Condition 11 E.]
- 2) Golden Triangle Energy, LLC shall maintain an operating and maintenance log for the scrubber, which shall include the following: [Condition 11 F.]
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions. [Condition 11 F.1.]
  - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc. [Condition 11 F.2.]
  - c) A record of regular inspection schedule, the date and results of all inspections, including any actions or maintenance activities that result from the inspection. Either paper copy or electronic formats are acceptable. [Condition 11 F.3.]
- 3) The operating parameters discussed in Special Condition 15.B of permit 072008-001 shall be recorded on record keeping sheet(s) and be made available to Department of Natural Resources personnel upon request. The frequency of the record keeping is dependent upon the parameters being kept and should be determined and agreed upon by the Air Pollution Control Program's Enforcement Section and Golden Triangle, LLC before the start of the performance tests. [Condition 15 D.]
- 4) Golden Triangle Energy, LLC shall keep all operating and maintenance logs onsite for no less than five (5) years and shall make them available to any Department of Natural Resources' personnel upon request. [Condition 19]

**Reporting:**

Reports of any deviations from the normal flowrate and/or normal pressure drop ranges defined above, as well as any other deviations from the requirements of this permit condition shall be submitted in the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

EU027 – DDGS COOLING CYCLONE				
Emission Unit	Description	Control Device #	EIQ Stack #	2007 EIQ Reference #
EU027	DDGS Cooling Cyclone	NA	SV007	EU027

**PERMIT CONDITION EU027 -001**  
**10 CSR 10-6.060 Construction Permits Required**  
**Construction Permit 072008-001, Issued July 2, 2008**

**Emission Limitation:**

- 1) Golden Triangle Energy, LLC shall not discharge PM<sub>10</sub> into the atmosphere from stack SV007 in excess of 1.34 tons per year. This emission rate shall be verified through performance testing, as detailed in Permit Condition PW001. [Condition 8 A.1. & 8 A.2.]
- 2) Golden Triangle Energy, LLC shall not discharge VOCs into the atmosphere from stack SV007 in excess of 2.79 pounds per hour. This equipment specific limit is necessary to conform to the Consent Decree, Civil Action No. 05-6032-CV-SJ-SOW. [Condition 13 C.]
- 3) Golden Triangle Energy, LLC shall not discharge HAPs (speciated) into the atmosphere from stack SV007 in excess of 0.33 pounds per hour. [Condition 13 D.]

**Operational Specifications:**

- 1) The cyclone system shall be used at all times when the DDGS dryers are in operation. The cyclone system shall be operated and maintained in accordance with the manufacturer’s specifications. [Condition 13 A.]

**Monitoring/Recordkeeping:**

- 1) Pressure drop monitoring is required. [Condition 13 E.]
  - a) The observation of pressure drop deviations from this emission unit outside of the range 3 to 8 in WC will be considered an excursion and corrective actions shall be implemented within a reasonable period. [Condition 13 E.1]
  - b) An excursion does not necessarily indicate a violation of the applicable requirement. When the level of excursions exceed three percent of the total number of observations in a six month period and corrective actions fail to return the emission unit to a no visible emission condition, then the permittee shall conduct source testing within 90 days of the last excursion to demonstrate compliance with 10 CSR 10-6.400. [Condition 13 E.2.]
  - c) If the test demonstrates noncompliance with the above emission limitation, the permittee shall propose a schedule to implement further corrective actions to bring the source into compliance and demonstrate that compliance. [Condition 13 E.3.]
- 2) Golden Triangle Energy, LLC shall maintain an operating and maintenance log for the cyclone system which shall include the following; [Condition 13 F.]
  - a) Incidents of malfunction, with impact on emissions, durations of event, probable cause, and corrective actions; and [Condition 13 F.1.]
  - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc. [Condition 13 F.2.]
  - c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection. [Condition 13 F.3.]
- 3) Golden Triangle Energy, LLC shall keep all operating and maintenance logs onsite for no less than five (5) years and shall make them available to any Department of Natural Resources’ personnel upon request. [Condition 19.]

**Testing:**

- 1) Golden Triangle, LLC shall conduct performance tests to verify the emission rates as follows:
  - a) The cooling cyclone (EU027) shall be tested to determine the VOC and total HAP emission rates when all equipment controlled by these devices is in operation. [Condition 15 A.1.]
  - b) The cooling cyclone (EU027) shall be tested to determine the emission factors of acetaldehyde, acrolein, formaldehyde, and methanol when all equipment controlled by these devices is in operation. [Condition 13 B.]

**Reporting:**

- 1) Golden Triangle Energy, LLC shall report to the Air Pollution Control Program's Enforcement Section (P. O. Box 176, Jefferson City, MO 65102) no later than ten (10) days after the end of any month during which the records required by the above referenced permit show that the installation exceeded the emission limitations listed above.
- 2) The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

<p><b>PERMIT CONDITION EU027-002</b> <b>10 CSR 10-6.220</b> <b>Restriction of Emission of Visible Air Contaminants</b></p>
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**Emission Limitation:**

- 1) No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%.
- 2) Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

**Monitoring:**

- 1) The permittee shall conduct opacity readings on this emission unit using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) The following monitoring schedule must be maintained:
  - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then-
  - b) Observations must be made once every two (2) weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then-
  - c) Observations must be made once per month. If a violation is noted, monitoring reverts to weekly.
- 3) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

**Record Keeping:**

- 1) The permittee shall maintain records of all observation results (see Attachment K and L), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions. (see Attachment N)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment M)
- 4) Attachments K, L, M, and N contain logs including these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) These records shall be made available immediately for inspection to Department of Natural Resources personnel upon request.
- 6) All records shall be maintained for five years.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.
- 2) The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

**PERMIT CONDITION EU027-003  
10 CSR 10-6.400**

**Restriction of Emission of Particulate Matter From Industrial Processes**

**Emission Limitation:**

- 1) Particulate matter shall not be emitted from EU027 in excess of 17.87 lb/hr.  
This emission rate is calculated using the following equation:
  - a) For process weight rates of 60,000 lb/hr or less:  
$$E = 4.10(P)^{0.67}$$
  
Where:  
E = rate of emission in lb/hr  
P = process weight rate in tons/hr
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

**Monitoring/Record Keeping:**

- 1) The permittee shall retain the potential to emit calculations in Attachment O which demonstrate that the above emission limitations will not be exceeded.
- 2) The calculation shall be made available immediately for inspection Pollution Control Division or Department of Natural Resources' personnel upon request.
- 3) All records shall be kept for a period of five years.

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

<b>EU026 – DDGS Dryer</b> <b>EU028 – BOILER #1</b> <b>EU034 – BOILER #2</b> <b>EU038 – RTO THERMAL OXIDIZER</b>				
Emission Unit	Description	Control Device #	EIQ Stack #	2007 EIQ Reference #
EU026	DDGS Dryer, 36 MMBtu/hr, construction date 2000	C005/ C008	SV006/ SV012	EU026
EU028	Boiler 1, 60.5 MMBtu/hr w/ Low NOx Burner, construction date 2000	NA	SV008	EU028
EU034	Boiler 2, 60.5 MMBtu/hr	NA	SV011	EU034
EU038	Regenerative Thermal Oxidizer (RTO) Burner, Eisenmann, construction date 2005	C008	SV012	EU038

<b>PERMIT CONDITION (EU026, EU028 &amp; EU038)-001</b> <b>10 CSR 10-6.060 Construction Permits Required</b> <b>Construction Permit #072008-001, Issued July 2, 2008</b>
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**Emission Limitations:**

- 1) Golden Triangle Energy, LLC shall not discharge nitrogen oxides (NOx) into the atmosphere from the stacks associated with the Boiler #1 or DDGS dryer (SV008 and SV012) in excess of 20.24 tons per year. [Condition 8.B.1. and 8.B.5.]
- 2) Golden Triangle Energy, LLC shall not discharge PM<sub>10</sub> into the atmosphere from Boilers #1 or #2 (SV008 and SV011) in excess of 2.01 tons per year each. Stacks SV008 and SV011 can use AP42 SCC emission factors to show compliance or be tested. [Condition 8.A.1. and 8.A.2.]
- 3) Golden Triangle Energy, LLC shall not discharge PM<sub>10</sub> into the atmosphere from the DDGS dryer (SV012) in excess of 8.67 tons per year. An equipment specific limit of 3.4 pounds of PM<sub>10</sub> per hour exists for the RTO (SV012). This equipment limit is necessary to conform to the Consent Decree, Civil Action No. 05-6032-CV-SJ-SOW. [Condition 8.A.1. and 8.A.3.]
- 4) Golden Triangle Energy, LLC has specific equipment limits of 95 percent reduction or less than 10 ppm of VOC on the RTO and process emissions from the DDGS dryer (SV012). [Condition 8.D.1.]
- 5) Golden Triangle Energy, LLC has specific equipment limits of 90 percent reduction or less than 100 ppm of CO on the RTO and process emissions from the DDGS dryer (SV012). [Condition 8.E.2.]

**Operational Specifications:**

- 1) The regenerative thermal oxidizer (RTO) must be in use at all times when the dryer is in operation or any time that regulated PM<sub>10</sub>, volatile organic compounds (VOC) or hazardous air pollutant (HAP) emissions are possible. Time during the 50 hr/yr alternative operating scenario (A.O.S.), per the consent decree, is exempted. The thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications. Emission rates of PM<sub>10</sub>, VOC, HAPs, CO and NOX will be tested to verify the thermal oxidizer is operating as assumed. [Condition 14.A.]
- 2) Thermal oxidizer (TO) alternative operating scenarios (A.O.S.) regeneration shall not exceed fifty (50) dryer operating hours per year. [Condition 8.B.6.]
- 3) Individual TO A.O.S. regeneration events shall be limited to no longer than twelve (12) hours for each event. [Condition 8.B.7.]

**Monitoring/Recordkeeping:**

- 1) The operating temperature of the thermal oxidizer shall be continuously monitored and recorded during operation. The operating temperature of the thermal oxidizer shall be maintained at 1614 degrees Fahrenheit or greater based on a 1 hour averaging time. The acceptable temperature range may be reestablished by performing a new set of emission tests. [Condition 14.B.]
- 2) Golden Triangle, LLC shall maintain an operating and maintenance log for the thermal oxidizer which shall include the following: [Condition 14.C.]
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and [Condition 14.C.1.]
  - b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc. [Condition 14.C.2.]
  - c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection. [Condition 14.C.3.]
- 3) Each regeneration event is to be recorded and NO<sub>x</sub> emissions calculated, accounted for and reported in the installation wide record keeping for the NO<sub>x</sub> limit of < 95 tons per year. [Condition 8.B.8.]

**Reporting:**

- 1) Golden Triangle Energy, LLC shall report to the Air Pollution Control Program's Enforcement Section (P. O. Box 176, Jefferson City, MO 65102) no later than ten (10) days after the end of any month during which the records required by the above referenced permit show that the installation exceeded the emission limitations listed above.
- 2) The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

**PERMIT CONDITION (EU028 & EU034)-002**

**10 CSR 10-6.070 New Source Performance Regulations**

**40 CFR Part 60 Subpart A General Provisions and Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

**Monitoring/Recordkeeping:**

- 1) The permittee shall record and maintain records of the amount of each fuel combusted during each operating day.
  - a) Exception, as an owner or operator of an affected facility that combusts only natural gas, the permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

**Reporting:**

- 1) The permittee shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of Part 60. This notification shall include:
  - a) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.
  - b) The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

**PERMIT CONDITION (EU026 & EU038)-003**  
**10 CSR 10-6.220**  
**Restriction of Emission of Visible Air Contaminants**

**Emission Limitation:**

- 1) No owner or other person shall cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%.
- 2) Exception: A person may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

**Monitoring:**

- 1) The permittee shall conduct opacity readings on SV006 and SV012 using the procedures contained in U.S. EPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) The following monitoring schedule must be maintained:
  - a) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then-
  - b) Observations must be made once every two (2) weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then-
  - c) Observations must be made once per month. If a violation is noted, monitoring reverts to weekly.
- 3) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

**Record Keeping:**

- 1) The permittee shall maintain records of all observation results (see Attachment K and L), noting:
  - a) Whether any air emissions (except for water vapor) were visible from the emission units,
  - b) All emission units from which visible emissions occurred, and
  - c) Whether the visible emissions were normal for the process.
- 2) The permittee shall maintain records of any equipment malfunctions. (see Attachment N)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment M)
- 4) Attachments K, L, M, and N contain logs including these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) These records shall be made available immediately for inspection to Department of Natural Resources personnel upon request.
- 6) All records shall be maintained for five years.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.
- 2) The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(5)(A).

**PERMIT CONDITION EU026-004  
10 CSR 10-6.400**

**Restriction of Emission of Particulate Matter From Industrial Processes**

**Emission Limitation:**

- 1) Particulate matter shall not be emitted from EU0026 in excess of 17.9 lb/hr. These emission rates were calculated using one of the following equations:
  - a) For process weight rates of 60,000 lb/hr or less:  
$$E = 4.10(P)^{0.67}$$
Where:  
E = rate of emission in lb/hr  
P = process weight rate in tons/hr
- 2) The concentration of particulate matter in the exhaust gases shall not exceed 0.30 gr/scf.

**Operational Limitation/Equipment Specifications:**

- 1) The cyclone(s) controlling emissions from EU026 shall be maintained such that the pressure drop remains in the normal operating range specified by the manufacturer.
- 2) The permittee shall calibrate, maintain and operate the instrumentation and cyclone(s) according to the manufacturer's specifications and recommendations.

**Monitoring:**

- 1) Check the air flow rate and the total static pressure drop across the cyclone(s) once per working day when EU026 is in operation. If the pressure drop is outside the normal operating range, corrective action shall be taken as soon as practicable but within eight hours to return the pressure drop to normal.
- 2) Inspect the solids discharge valve(s) for proper operation weekly.
- 3) Inspect the structural components, including the cyclone(s) ductwork and hoods for leaks and component failures quarterly.
- 4) Check for leaks in the system to ensure airflow from the dirty side does not infiltrate the clean side annually.
- 5) Verify that the inlet and outlet ductwork is in proper operating condition annually.
- 6) Check the barrel and collecting tube(s) for deposits and/or excess wear annually. Clean and repair as needed.
- 7) Maintain a written record of all observations, deficiencies and any action resulting from inspections.
- 8) All instruments and control equipment shall be calibrated, maintained and operated according to the manufacturer's instructions.

**Recordkeeping:**

- 1) The permittee shall document all operational readings on Attachment P, or its equivalent.
- 2) All inspections, corrective actions, and instrument calibration shall be recorded (see Attachment N).

- 3) Attachments P and Q contain logs including these record keeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement
- 4) All records shall be maintained for five years.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined that the emission unit(s) exceeded the emission limitation(s) listed above.
- 2) The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

<b>FS007 – ETHANOL TRUCK LOADING RACK</b>				
Emission Unit	Description	Control Device #	EIQ Stack #	2007 EIQ Reference #
FS007	Ethanol Truck Loading Rack, construction date 2000		NA	FS007

<p><b>PERMIT CONDITION FS007-001</b>  <b>10 CSR 10-6.060 Construction Permits Required</b>  <b>Construction Permit #072008-001, Issued July 2, 2008</b></p>
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**Operational Specifications:**

- 1) The flare must be in use at all times during denatured ethanol truck load out (FS007). [Condition 12.A.]
- 2) The flare shall be operated and maintained in accordance with the manufacturer’s specifications. The flare must be operated in accordance with 40 CFR Part 60.18, *General Control Device & Work Practice Requirements*. Golden Triangle, LLC shall maintain records that sufficiently indicate compliance with 40 CFR Part 60.18. [Condition 12.B.]

**Monitoring/Recordkeeping:**

- 1) Golden Triangle, LLC shall maintain an operating and maintenance log for the flare, which shall include the following. [Condition 12.C.]
  - a) Incidents of malfunction, with impact on emissions, duration of events, probable cause, and corrective actions taken. [Condition 12.C.1.]
  - b) Maintenance activities, with inspection schedules, repair actions, and replacements. [Condition 12.C.2.]
  - c) A record of regular inspection schedule, the date and results of all inspections, including any actions or maintenance activities that result from the inspections. Either paper copy or electronic formats are acceptable. [Condition 12.C.3.]

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

**PERMIT CONDITION FS007-002**  
**10 CSR 10-6.070 New Source Performance Regulations**  
**40 CFR Part 60 Subpart A General Provisions**

**Operational Specifications:**

- 1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in §60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
- 2) Flares shall be operated with a flame present at all times, as determined by the methods specified in §60.18(f).
- 3) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

**Monitoring/Recordkeeping:**

- 1) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.
- 2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
- 3) Golden Triangle Energy, LLC shall maintain records that sufficiently indicate compliance with §60.18.

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(5)(A).

<b>FS002– EQUIPMENT LEAKS</b>				
Emission Unit	Description	Control Device #	EIQ Stack #	2007 EIQ Reference #
FS002	Equipment Leaks	NA	NA	FS002

**PERMIT CONDITION FS002-001**  
**10 CSR 10-6.070 New Source Performance Regulations**  
**40 CFR Part 60 Subpart A General Provisions and Subpart VV Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry**

**Operational Limit/Equipment Specifications:**

The owner or operator of Synthetic Organic Chemical Manufacturing facilities with the design capacity for producing a chemical affected by 40 CFR Part 60, Subpart VV [§60.489] in amounts equal to or greater than 1000 Mg per year, affecting processes installed after January 5, 1981 and on or before November 7, 2006 are subject to the provisions of 40 CFR Part 60, Subpart VV and include the following operational limits and/or equipment specifications:

- 1) Pumps in Light Liquid Service
  - a) A leak is detected when visual indications of liquids dripping from the pump seal are present or an instrument reading of 10,000 ppm or greater is measured according to the methods described in §60.485.
  - b) Repair of any and all leaks shall be performed as soon as practical, but no later than 15 calendar days after it is detected, except as provided in §60.482-9.

- c) A first attempt at repair shall be performed no later than 5 calendar days after the leak is detected.

2) Compressors

- a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1(c) and paragraphs (h) and (i) of §60.482-3 and the aforementioned seal system shall be:
  - i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
  - ii) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10; or
  - iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
- b) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. The criteria for failure of the seal system, barrier fluid system, or both shall be determined by the owner or operator based upon design considerations and operating experience.
- c) Repair of any and all leaks shall be performed as soon as practical, but no later than 15 calendar days after it is detected, except as provided in §60.482-9.
- d) A first attempt at repair shall be performed no later than 5 calendar days after the leak is detected.

3) Pressure Relief Devices in Gas/Vapor Service

- a) Each pressure relief device, except during pressure releases, shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, according to the methods specified by §60.485 (c).
- b) Each pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm, as soon as possible and no later than five calendar days after the pressure release, except as specified in §60.482-9.
- c) Any pressure relief device that is routed to a process or fuel gas system, equipped with a closed vent system capable of capturing and transporting leakage to a control device as described in §60.482-10, or equipped with a rupture disk that is replaced as soon as possible, but no later than five calendar days after each pressure release, except as provided in §60.482-9, is exempt from paragraphs of a) and b) of this section.

4) Valves in Gas/Vapor Service and in Light Liquid Service

- a) A leak is detected when an instrument reading of 10,000 ppm or greater is measured according to the methods described in §60.485.
- b) Repairs to the leak shall be performed as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9.
- c) A first attempt at repair shall be made no later than 5 calendar days after a leak is first detected and includes, but is not limited to the following procedures:
  - i) Tightening of bonnet bolts;
  - ii) Replacement of bonnet bolts;
  - iii) Tightening of packing gland nuts;
  - iv) Injection of lubricant into lubricated packing;

5) Closed Vent Systems and Control Devices

- a) Vapor recovery systems (e.g. condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppm by volume, whichever is less stringent.
- b) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppm by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.
- c) A leak is positively detected by when an instrument reading of 500 ppm by volume above background or by visual inspections.
- d) Repair shall be made as soon as practicable, but no later than 15 calendar days after the leak is first detected.
- e) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

6) Delay of Repair

- a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
- b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.
- c) Delay of repair for pumps will be allowed if:
  - i) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
  - ii) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
- d) Delay of repair for valves will be allowed if:
  - i) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and
  - ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with § 60.482-10.
- e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
- f) Delay of repair for a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

**Monitoring:**

1) Pumps in Light Liquid Service

- a) Each pump in light liquid service shall be monitored monthly to detect leaks by the instrument methods specified in §60.485(b), except as provided in §60.482-1(c) and §60.482-2 (d), (e).
- b) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

- c) Any pump that is designated as unsafe-to-monitor, according to §60.486(f)(1), is exempt from the monitoring and inspection requirements of this section if they comply with the requirements described in §60.482-2(g)(1) and (2).
- 2) Compressors
  - a) Each sensor required by §60.482-3(d) shall be checked daily or equipped with an audible alarm.
- 3) Pressure Relief Devices in Gas/Vapor Service
  - a) Each pressure relief device in gas/vapor service shall be monitored after each pressure release to ensure a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided by delay of repair requirements [§60.482-9].
- 4) Valves in Gas/Vapor Service
  - a) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b), except valves that are designated for no detectable emissions, as described in §60.486(e)(2), and are in conformance with the requirements of §60.482-7(f).
  - b) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.
  - c) Any valve designated as unsafe-to-monitor, as described in §60.486(f)(1), is exempt from the monitoring requirements described in this section if they comply with the requirements described in §60.482-7(h)(1),(2), and (3).
  - d) An owner or operator may elect to comply with alternative work practices specified in §60.483-b(2) and (3) if they notify the Administrator before implementing one of the alternative work practices, as specified in §60.487(d). (b)(1) and comply with the initial requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482-7.
- 5) Closed Vent Systems and Control Devices
  - a) Each vapor collection system or closed vent system constructed of hard-piping is subject to the following monitoring requirements:
    - i) An initial inspection shall be conducted according to the procedures described in §60.485(b); and
    - ii) Annual inspection shall be conducted for visible, audible, or olfactory indications of leaks
  - b) Each vapor collection system or closed vent system constructed of ductwork is subject to the following monitoring requirements:
    - i) An initial inspection and annual inspections shall be conducted according to the procedures described in §60.485(b).
  - c) Any vapor collection system or closed vent system operated under a vacuum is exempt from the initial and annual inspection and monitoring requirements described in §60.485(b) (instrument readings), but are still subject to annual inspections for visible, audible, or olfactory indications of leaks.
  - d) Any parts of the closed vent system that are designated as unsafe to inspect, as described in §60.482-10(l)(1), are exempt from the monitoring and inspection requirements listed above if they comply with the requirements described in §60.482-10(j)(1) and (2).
  - e) Any parts of the closed vent system that are designated as difficult to inspect, as described in §60.482-10(l)(2), are exempt from the monitoring and inspection requirements listed above if they comply with the requirements described in §60.482-10(k)(1), (2), and (3).

**Recordkeeping:**

Each owner or operator subject to the provisions of this subpart shall comply with the following recordkeeping requirements of this section.

- 1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to leaking equipment when a leak is detected.
- 2) The identification on equipment, except on a valve, may be removed after it has been repaired. The identification on a valve may be removed after it has been monitored for 2 successive months, as specified in §60.482-7(c), and no leak has been detected during those 2 months.
- 3) The following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location when each leak is detected:
  - a) The instrument and operator identification numbers and the equipment identification number.
  - b) The date the leak was detected and the dates of each attempt to repair the leak.
  - c) Repair methods applied in each attempt to repair the leak.
  - d) “Above 10,000” if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.
  - e) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
  - f) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
  - g) Dates of process unit shutdowns that occur while the equipment is repaired.
  - h) The date of successful repair of the leak.
- 4) The following information pertaining to the design requirements for closed vent systems and control devices shall be recorded and kept in a readily accessible location:
  - a) Detailed schematics, design specifications, and piping and instrumentation diagrams.
  - b) The dates and descriptions of any changes in the design specifications.
  - c) A description of the parameter or parameters monitored to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
  - d) Periods when the closed vent systems and control devices are not operated as designed.
  - e) Dates of startups and shutdowns of the closed vent systems and control devices.
- 5) The following information pertaining to all equipment subject to the requirements of this subpart shall be recorded in a log that is kept in a readily accessible location:
  - a) A list of identification numbers for equipment subject to the requirements of this subpart.
  - b) The dates, background level, and maximum instrument reading measured during each compliance test.
  - c) A list of identification numbers for equipment in vacuum service.

**Reporting:**

- 1) The permittee shall submit semiannual reports to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 beginning six months after the issuance of this permit.
- 2) The initial semiannual report shall include the following information:
  - a) Process unit identification.
  - b) Number of valves, pumps, and compressors subject to this subpart.
- 3) All semiannual reports shall include the following information:
  - a) Process unit identification.
  - b) For each month during the semiannual reporting period,

- i) Number of valves, pumps, and compressors for which leaks were detected.
- ii) Number of valves, pumps, and compressors for which leaks were not repaired.
- iii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
- iv) Dates of process unit shutdown which occurred within the semiannual reporting period.
- v) Revisions to items reported in the initial semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report.
- vi) The results of all performance tests and notification to the Air Pollution Control Program of the schedule for the initial performance tests at least 30 days before the initial performance tests.

### **PERMIT CONDITION FS002-002**

#### **10 CSR 10-6.070 New Source Performance Regulations**

#### **40 CFR Part 60 Subpart A General Provisions and Subpart VVa Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry**

##### **Operational Limit/Equipment Specifications:**

The owner or operator of Synthetic Organic Chemical Manufacturing facilities with the design capacity for producing a chemical affected by 40 CFR Part 60, Subpart VVa [§60.480a] in amounts equal to or greater than 1000 Mg per year that commenced construction, reconstruction, or modification after November 7, 2006 are subject to the provisions of 40 CFR Part 60, Subpart VVa and include the following operational limits and/or equipment specifications:

##### **1) Pumps in Light Liquid Service**

- a) A leak is detected when visual indications of liquids dripping from the pump seal are present or an instrument reading of 5,000 ppm or greater is measured for pumps handling polymerizing monomers or 2,000 ppm or greater for all other pumps according to the methods described in § 60.485a.
- b) Repair of any and all leaks shall be performed as soon as practical, but no later than 15 calendar days after it is detected, except as provided in § 60.482-9a.
- c) A first attempt at repair shall be performed no later than 5 calendar days after the leak is detected.

##### **2) Compressors**

- a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in § 60.482-1a(c) and paragraphs (h), (i), and (j) of §60.482-3a and the aforementioned seal system shall be:
  - i) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
  - ii) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of § 60.482-10a; or
  - iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
- b) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. The criteria for failure of the seal system, barrier fluid system, or both shall be determined by the owner or operator based upon design considerations and operating experience.
- c) Repair of any and all leaks shall be performed as soon as practical, but no later than 15 calendar days after it is detected, except as provided in § 60.482-9a.

- d) A first attempt at repair shall be performed no later than 5 calendar days after the leak is detected.
- 3) Pressure Relief Devices in Gas/Vapor Service
- a) Each pressure relief device, except during pressure releases, shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, according to the methods specified by §60.485a(c).
  - b) Each pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm, as soon as possible and no later than five calendar days after the pressure release, except as specified in §60.482-9a.
  - c) Any pressure relief device that is routed to a process or fuel gas system, equipped with a closed vent system capable of capturing and transporting leakage to a control device as described in §60.482-10a, or equipped with a rupture disk that is replaced as soon as possible, but no later than five calendar days after each pressure release, except as provided in §60.482-9a, is exempt from paragraphs of a) and b) of this section.
- 4) Valves in Gas/Vapor Service and in Light Liquid Service
- a) A leak is detected when an instrument reading of 500 ppm or greater is measured according to the methods described in §60.485a.
  - b) Repairs to the leak shall be performed as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9a.
  - c) A first attempt at repair shall be made no later than 5 calendar days after a leak is first detected and includes, but is not limited to the following procedures:
    - i) Tightening of bonnet bolts;
    - ii) Replacement of bonnet bolts;
    - iii) Tightening of packing gland nuts;
    - iv) Injection of lubricant into lubricated packing;
- 5) Closed Vent Systems and Control Devices
- a) Vapor recovery systems (e.g. condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppm by volume, whichever is less stringent.
  - b) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppm by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.
  - c) A leak is positively detected by when an instrument reading of 500 ppm by volume above background or by visual inspections.
  - d) Repair shall be made as soon as practicable, but no later than 15 calendar days after the leak is first detected.
  - e) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
- 6) Connectors in Gas/Vapor Service and in Light Liquid Service
- a) A leak is detected when an instrument reading of 500 ppm or greater is measured according to the methods described in §60.485a.
  - b) Repairs to the leak shall be performed as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9a.
  - c) A first attempt at repair shall be made no later than 5 calendar days after a leak is first detected.
  - d) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

7) Delay of Repair

- a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
- b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.
- c) Delay of repair for pumps will be allowed if:
  - i) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
  - ii) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
- d) Delay of repair for valves will be allowed if:
  - i) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and
  - ii) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482-10a.
- e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
- f) Delay of repair for a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

**Monitoring:**

1) Pumps in Light Liquid Service

- a) Each pump in light liquid service shall be monitored monthly to detect leaks by the instrument methods specified in §60.485a(b), except as provided in §60.482-1a(c) and (f) and §60.482-2a(d), (e), and (f).
- b) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal except as provided in §60.482-1a(f).
- c) Any pump that is designated as unsafe-to-monitor, according to §60.486a(f)(1), is exempt from the monitoring and inspection requirements of this section if they comply with the requirements described in §60.482-2a(g)(1) and (2).

2) Compressors

- a) Each sensor required by §60.482-3a(d) shall be checked daily or equipped with an audible alarm.

3) Pressure Relief Devices in Gas/Vapor Service

- a) Each pressure relief device in gas/vapor service shall be monitored after each pressure release to ensure a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided by delay of repair requirements [§60.482-9a].

4) Valves in Gas/Vapor Service and in Light Liquid Service

- a) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485a(b), except valves that are designated for no detectable emissions, as described in §60.486a(e)(2), and are in conformance with the requirements of §60.482-7a(f).
  - b) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.
  - c) Any valve designated as unsafe-to-monitor, as described in §60.486(f)(1), is exempt from the monitoring requirements described in this section if they comply with the requirements described in §60.482-7a(g)(1) and (2).
  - d) An owner or operator may elect to comply with alternative work practices specified in §60.483-1a or §60.483-2a if they notify the Administrator before implementing one of the alternative work practices, as specified in §60.487a(d) and comply with the initial requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482-7a.
- 5) Closed Vent Systems and Control Devices
- a) Each vapor collection system or closed vent system constructed of hard-piping is subject to the following monitoring requirements:
    - i) An initial inspection shall be conducted according to the procedures described in §60.485a(b); and
    - ii) Annual inspection shall be conducted for visible, audible, or olfactory indications of leaks.
  - b) Each vapor collection system or closed vent system constructed of ductwork is subject to the following monitoring requirements:
    - i) An initial inspection and annual inspections shall be conducted according to the procedures described in §60.485a(b).
    - ii) Conduct annual inspections according to the procedures in §60.485a(b).
  - c) Any vapor collection system or closed vent system operated under a vacuum is exempt from the initial and annual inspection and monitoring requirements described in §60.485a(b) (instrument readings), but are still subject to annual inspections for visible, audible, or olfactory indications of leaks.
  - d) Any parts of the closed vent system that are designated as unsafe to inspect, as described in §60.482-10a(l)(1), are exempt from the monitoring and inspection requirements listed above if they comply with the requirements described in §60.482-10a(j)(1) and (2).
  - e) Any parts of the closed vent system that are designated as difficult to inspect, as described in §60.482-10a(l)(2), are exempt from the monitoring and inspection requirements listed above if they comply with the requirements described in §60.482-10a(k)(1), (2), and (3).
- 6) Connectors in Gas/Vapor Service and in Light Liquid Service
- a) The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup.
  - b) The owner or operator shall perform monitoring, subsequent to the initial monitoring required above, as specified in §60.482-11a(b)(3)(i) through (iii), and shall comply with the requirements of §60.482-11a(b)(3)(iv) and (v).
  - c) Any connector that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of listed above if they comply with the requirements described in §60.482-11a(e)(1) and (2).

- d) Any connector that is inaccessible or that is ceramic or ceramic-lined, is exempt from the monitoring requirements listed above, from leak repair requirements listed above and recordkeeping requirements of §§63.1038 and 63.1039 if the connector meets the provisions of §60.482-11a(f)(1)(i) through (vi).

**Recordkeeping:**

Each owner or operator subject to the provisions of this subpart shall comply with the following recordkeeping requirements of this section.

- 1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to leaking equipment when a leak is detected.
- 2) The identification on equipment, except on a valve, may be removed after it has been repaired. The identification on a valve may be removed after it has been monitored for 2 successive months, as specified in §60.482-7a(c), and no leak has been detected during those 2 months.
- 3) The following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location when each leak is detected:
  - a) The instrument and operator identification numbers and the equipment identification number.
  - b) The date the leak was detected and the dates of each attempt to repair the leak.
  - c) Repair methods applied in each attempt to repair the leak.
  - d) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be Nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.
  - e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
  - f) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
  - g) Dates of process unit shutdowns that occur while the equipment is repaired.
  - h) The date of successful repair of the leak.
- 4) The following information pertaining to the design requirements for closed vent systems and control devices shall be recorded and kept in a readily accessible location:
  - a) Detailed schematics, design specifications, and piping and instrumentation diagrams.
  - b) The dates and descriptions of any changes in the design specifications.
  - c) A description of the parameter or parameters monitored to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
  - d) Periods when the closed vent systems and control devices are not operated as designed.
  - e) Dates of startups and shutdowns of the closed vent systems and control devices.
- 5) The following information pertaining to all equipment subject to the requirements of this subpart shall be recorded in a log that is kept in a readily accessible location:
  - a) A list of identification numbers for equipment subject to the requirements of this subpart.
  - b) The dates, background level, and maximum instrument reading measured during each compliance test.
  - c) A list of identification numbers for equipment in vacuum service.

**Reporting:**

- 1) The permittee shall submit semiannual reports to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 beginning six months after the issuance of this permit.

- 2) The initial semiannual report shall include the following information:
  - a) Process unit identification.
  - b) Number of valves, pumps, and compressors subject to this subpart.
- 3) All semiannual reports shall include the following information:
  - a) Process unit identification.
  - b) For each month during the semiannual reporting period,
    - i) Number of valves, pumps, and compressors for which leaks were detected.
    - ii) Number of valves, pumps, and compressors for which leaks were not repaired.
    - iii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
    - iv) Dates of process unit shutdown which occurred within the semiannual reporting period.
    - v) Revisions to items reported in the initial semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report.
    - vi) The results of all performance tests and notification to the Air Pollution Control Program of the schedule for the initial performance tests at least 30 days before the initial performance tests.

<b>FS004– HAUL ROADS</b>			
Emission Unit	Description	Manufacturer/Model #	2006 EIQ Reference #
FS004	Haul Roads: truck traffic fugitives	NA	FS004

**PERMIT CONDITION FS004-001**  
**10 CSR 10-6.060 Construction Permits Required**  
**Construction Permit 072008-001, Issued July 2, 2008**

**Operational Specifications:**

**Paved Haul Road Control** - Golden Triangle Energy LLC’s haul road is 0.6 miles long and 0.24 miles are paved.

- 1) Golden Triangle Energy, LLC shall control fugitive emissions from 0.24 miles of haul road at this site by paving and washing/cleaning. [Condition 3.]
- 2) Golden Triangle Energy, LLC shall pave with materials such as asphalt, concrete, and/or other material(s). If materials other than asphalt or concrete are used, Golden Triangle Energy, LLC must receive approval from the Air Pollution Control Program. The pavement shall be applied in accordance with industry standards for such pavement so as to achieve control of fugitive emissions while the plant is operating. [Condition 3.A.]
- 3) Maintenance and/or repair of the road surface shall be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas. [Condition 3.B.]

**Non-Paved Haul Road Control** - Golden Triangle Energy LLC’s haul road is 0.6 miles long and 0.36 miles are not paved.

- 1) Golden Triangle Energy, LLC will apply dust suppressant or water within forty-eight (48) hours of observation of fugitive dust emissions caused by car/truck traffic on the road. [Condition 4.B.]

**Monitoring/Recordkeeping:**

- 1) Golden Triangle Energy, LLC personnel will inspect the non-paved roadway on a weekly basis for wear, frost boils, etc. and will observe truck traffic for signs of visible emissions. [Condition 4.A.]

- 2) Golden Triangle personnel will record roadway inspection observation data including but not limited to: [Condition 4.C.]
  - a) Date and time of inspection, name of inspector, map or site plan showing locations, and site line of visible emission observations and location of road surface problem areas, corrective actions taken to eliminate visible emissions or problem surface conditions. [Condition 4.C.1.]

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

<b>FS005 – COOLING TOWER #1 FS006 – COOLING TOWER #2</b>			
Emission Unit	Description	Manufacturer/Model #	2006 EIQ Reference #
FS005	Cooling Tower #1, construction date 2000	Midwest Towers/ RS2424	FS005
FS006	Cooling Tower #2, construction date 2007	EvapTech/ EC224-424K	FS006

**PERMIT CONDITION (FS005 & FS006)-001  
 10 CSR 10-6.060 Construction Permits Required  
 Construction Permit #072008-001, Issued July 2, 2008**

**Operational Specifications:**

- 1) The cooling tower(s) (CT) shall be operated and maintained in accordance with the manufacturer’s specifications. [Condition 17.A.]
- 2) The cooling water design circulation rate is 7,700 gpm for CT #1 (FS005) and 9,600 gpm for CT #2 (FS006). [Condition 17.B.]
- 3) The drift loss from the towers shall not exceed 548 gallons per minute or 1.4% percent of the water circulation rate. [Condition 17.D.]
- 4) The total dissolved solids (TDS) concentration in the circulated cooling water shall not exceed a TDS concentration of 3,500 [PTE calculations used 3,500] parts per million (ppm). [Condition 17.E.]

**Monitoring/Recordkeeping:**

- 1) Golden Triangle, LLC shall keep records of the monthly and 12-month rolling averages of the hours of cooling tower operation (this is already being logged and reported to EPA). [Condition 17.C.]
- 2) Manufacturer’s specifications shall be kept onsite and made readily available to Department of Natural Resources’ Employees. [Condition 17.A.]
- 3) Verification of evaporative loss shall be by manufacturer’s guaranteed evaporative loss and shall be kept onsite and be made readily available to Department of Natural Resources’ employees upon request. [Condition 17.D.]
- 4) A TDS sample shall be collected monthly and the results recorded monthly to verify the TDS concentration. [Condition 17.E.]
- 5) The requirements for TDS Sample collection may be eliminated or the frequency reduced upon written approval by the Air Pollution Control Program if TDS sampling results demonstrate compliance for twenty-four (24) consecutive months. [Condition 17.F.]

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition using the annual compliance certification to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10 CSR 10-6.065(5)(A).

<b>T801-T805, T811 - STORAGE TANKS</b>			
Emission Unit	Description	Manufacturer/Model #	2006 EIQ Reference #
T801	Tank, 190 proof		T801
T802	Tank, 200 proof		T802
T803	Tank, Denatured Ethanol		T803
T804	Tank, Denatured Ethanol		T804
T805	Tank, Denaturant		T805
T811	Tank, Industrial Alcohol: capacity 180,000 gallons, construction date 2007	Strobel/ 32x32	T811

**PERMIT CONDITION (T801-T805, T811)-001**  
**10 CSR 10-6.070 New Source Performance Regulations**  
**40 CFR Part 60 Subpart A General Provisions and Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23,1984**

**Note:**

Each of these storage tanks (T801 through T804) have a design capacity greater than or equal to 151 m<sup>3</sup> and contain a volatile organic liquid (VOL) that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa. According to §60.112b(a), the permittee shall equip each of these storage vessel with either (1) a fixed roof in combination with an internal floating roof, (2) an external floating roof, (3) a closed vent system and control device or (4) an alternative means of emission limitation. The permittee has chosen to equip each storage vessel with a fixed roof in combination with an internal floating roof. Therefore §60.112b(a)(1) of this regulation applies.

**Operational Specifications:**

- 1) The permittee shall equip the storage vessel with a fixed roof in combination with an internal floating roof meeting the following specifications:
  - a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
  - b) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
    - i) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

- ii) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
- iii) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
- c) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
- d) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
- e) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
- f) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
- g) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
- h) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
- i) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

**Monitoring:**

- 1) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), the permittee shall:
  - a) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
  - b) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
  - c) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):
    - i) Visually inspect the vessel as specified in §60.113b(a)(4) at least every 5 years; or

- ii) Visually inspect the vessel as specified in §60.113b(a)(2).
- d) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with Subpart Kb occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in §60.113b(a)(2) and (a)(3)(ii) and at intervals no greater than 5 years in the case of vessels specified in §60.113b(a)(3)(i).

**Recordkeeping:**

- 1) The permittee shall keep records and furnish reports as required by §60.115b and §60.116b. The permittee shall keep copies of all reports and records required for at least 5 years with the following exception:
  - a) The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the source.
- 2) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following recordkeeping requirements.
  - a) Keep a record of each inspection performed as required by §60.113b(a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
- 3) The permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
- 4) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.
  - a) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
  - b) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
    - i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference - see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).
    - ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.
  - c) For other liquids, the vapor pressure:

- i) May be obtained from standard reference texts, or
  - ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or
  - iii) Measured by an appropriate method approved by the Administrator; or
  - iv) Calculated by an appropriate method approved by the Administrator.
- 5) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.
- a) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in §60.116b(e).
  - b) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
    - i) ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or
    - ii) ASTM D323–82 or 94 (incorporated by reference—see §60.17); or
    - iii) As measured by an appropriate method as approved by the Administrator.

**Reporting:**

- 1) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following reporting requirements.
  - a) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).
  - b) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
  - c) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §60.112b(a)(1) or §60.113b(a)(3) and list each repair made.
- 2) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by §60.113b(a)(1) and (a)(4) to afford the Administrator the opportunity to have an observer present. If the inspection required by §60.113b(a)(4) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

## IV. Core Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR), Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### **10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions**

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the Director within two business days, in writing, the following information:
  - a) Name and location of installation;
  - b) Name and telephone number of person responsible for the installation;
  - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
  - d) Identity of the equipment causing the excess emissions;
  - e) Time and duration of the period of excess emissions;
  - f) Cause of the excess emissions;
  - g) Air pollutants involved;
  - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
  - i) Measures taken to mitigate the extent and duration of the excess emissions; and
  - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the Director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the Director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the Director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.
- 4) Nothing in this rule shall be construed to limit the authority of the Director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

### **10 CSR 10-6.060 Construction Permits Required**

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

### **10 CSR 10-6.065 Operating Permits**

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(5)(B)1.A(III)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065, §(5)(C)(1) and §(6)(C)3.B]

### **10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information**

- 1) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- 2) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
- 3) The fees shall be due April 1 each year for emissions produced during the previous calendar year. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the Director.

### **10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential**

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

### **10 CSR 10-6.150 Circumvention**

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

### **10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin**

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the Director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.

- 3) Should it be determined that noncompliance has occurred, the Director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
  - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
  - b) Paving or frequent cleaning of roads, driveways and parking lots;
  - c) Application of dust-free surfaces;
  - d) Application of water; and
  - e) Planting and maintenance of vegetative ground cover.

#### **10 CSR 10-6.180 Measurement of Emissions of Air Contaminants**

- 1) The Director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The Director may specify testing methods to be used in accordance with good professional practice. The Director may observe the testing. All tests shall be performed by qualified personnel.
- 2) The Director may conduct tests of emissions of air contaminants from any source. Upon request of the Director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The Director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

#### **10 CSR 10-3.030 Open Burning Restrictions**

- 1) The permittee shall not conduct, cause, permit or allow a salvage operation, the disposal of trade wastes or burning of refuse by open burning.
- 2) Exception - Open burning of trade waste or vegetation may be permitted only when it can be shown that open burning is the only feasible method of disposal or an emergency exists which requires open burning.
- 3) Any person intending to engage in open burning shall file a request to do so with the Director. The request shall include the following:
  - a) The name, address and telephone number of the person submitting the application; The type of business or activity involved; A description of the proposed equipment and operating practices, the type, quantity and composition of trade wastes and expected composition and amount of air contaminants to be released to the atmosphere where known;
  - b) The schedule of burning operations;
  - c) The exact location where open burning will be used to dispose of the trade wastes;
  - d) Reasons why no method other than open burning is feasible; and
  - e) Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.
- 4) Upon approval of the open burning permit application by the Director, the person may proceed with the operation under the terms of the open burning permit. Be aware that such approval shall not exempt Sullivan/Huggins Precision Metal Finishing from the provisions of any other law, ordinance or regulation.
- 5) The permittee shall maintain files with letters from the Director approving the open burning operation and previous Department of Natural Resources inspection reports.

**10 CSR 10-3.090 Restriction of Emission of Odors**

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour.

**This requirement is not federally enforceable.**

**10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61  
Subpart M National Emission Standard for Asbestos**

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

**10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements**

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the Department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the Department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the Department. Certain business entities that meet the requirements for state-approved exemption status must allow the Department to monitor training classes provided to employees who perform asbestos abatement.

**Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone**

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
  - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
  - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

- a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
  - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
  - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
  - 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82*

#### **10 CSR 10-6.280 Compliance Monitoring Usage**

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Any other monitoring methods approved by the Director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
  - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
  - a) Applicable monitoring or testing methods, cited in:
    - i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";

- ii) 10 CSR 10-6.040, "Reference Methods";
- iii) 10 CSR 10-6.070, "New Source Performance Standards";
- iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or
- b) Other testing, monitoring, or information gathering methods, if approved by the Director, that produce information comparable to that produced by any method listed above.

## V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

### **10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.B Permit Duration**

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

### **10 CSR 10-6.065, §(5)(C)1 and §(6)(C)1.C General Record Keeping and Reporting Requirements**

- 1) Record Keeping
  - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
  - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- 2) Reporting
  - a) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
  - b) The permittee shall submit a report of all required monitoring by:
    - i) April 1st for monitoring which covers the January through December time period.
    - ii) Exception. Monitoring requirements which require reporting more frequently than annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
  - c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit.
  - d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
    - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7 of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.

- ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's annual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

#### **10 CSR 10-6.065 §(5)(C)1 and §(6)(C)1.D Risk Management Plan Under Section 112(r)**

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

#### **10 CSR 10-6.065(5)(C)1.A General Requirements**

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted under this rule.
- 6) Failure to comply with the limitations and conditions that qualify the installation for an Intermediate permit make the installation subject to the provisions of 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit.

**10 CSR 10-6.065(5)(C)1.C Reasonably Anticipated Operating Scenarios**

The permittee is authorized to bypass the Regenerative Thermal Oxidizer (RTO) (C008) for a maximum of 50 DDGS dryer operating hours per year to allow for regeneration without ceasing dryer operations. Individual regeneration events shall not exceed 12 hours per event. These requirements are detailed in construction permit 072008-001 and Permit Condition (EU028 & EU038)-001.

**10 CSR 10-6.065, §(5)(B)4; §(5)(C)1, §(6)(C)3.B; and §(6)(C)3.D; and §(5)(C)3 and §(6)(C)3.E.(I) – (III) and (V) – (VI) Compliance Requirements**

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
  - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
  - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
  - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and exceedances must be included in the compliance certifications. The compliance certification shall include the following:
  - a) The identification of each term or condition of the permit that is the basis of the certification;
  - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
  - c) Whether compliance was continuous or intermittent;
  - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
  - e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

**10 CSR 10-6.065, §(5)(C)1 and §(6)(C)7 Emergency Provisions**

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
  - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
  - b) That the installation was being operated properly,
  - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
  - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

**10 CSR 10-6.065(5)(C)5 Off-Permit Changes**

- 1) Except as noted below, the permittee may make any change in its permitted installation's operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Off-permit changes shall be subject to the following requirements and restrictions:
  - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is a Title I modification; Please Note: Changes at the installation which affect the emission limitation(s) classifying the installation as an intermediate source (add additional equipment to the record keeping requirements, increase the emissions above major source level) do not qualify for off-permit changes.
  - b) The permittee must provide written notice of the change to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, KS 66101, no later than the next annual emissions report. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change; and
  - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes.

**10 CSR 10-6.020(2)(R)12 Responsible Official**

The application utilized in the preparation of this permit was signed by Mr. Roger Hill. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used

in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

**10 CSR 10-6.065 §(5)(E)4 and §(6)(E)6.A(III)(a)-(c) Reopening-Permit for Cause**

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 2) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
  - a) The permit has a remaining term of less than three years;
  - b) The effective date of the requirement is later than the date on which the permit is due to expire;  
or
  - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 3) The Missouri Department of Natural Resources or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

**10 CSR 10-6.065 §(5)(E)1.A and §(6)(E)1.C Statement of Basis**

This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

## **VI. Attachments**

Attachments follow.



























**ATTACHMENT O**

This attachment may be used to demonstrate compliance with the limitations of 10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes* for the equipment listed.

**PM Emission limit:**

$$E = 4.1(P)^{0.67} \quad (P \leq 30)$$

$$E = 55(P)^{0.11} - 40 \quad (P > 30)$$

P is process weight rate in tons/hour and E is emission rate limit in lb/hour

**Potential PM Emission Rate:**

$$\text{Emission Rate (lb/hr)} = \text{Process Weight Rate (ton/hr)} * \text{PM Emission Factor (lb/ton)}$$

Emission Point #	Associated Equipment	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Emission Factor Reference	Potential Emission Rate (lb/hr)	Emission Rate Limit (lb/hr)
SV012	EU026 DDGS Dryer	9.00	0.221	Stack Test	1.99	17.9
SV007	EU027 Cooling Cyclone	9.00	0.061	AP -42 Table 9.1.1-1	0.55	17.9

**The following table can be used to verify compliance with the limit of 0.3 grains/dscf:**

Emission rate (gr/dscf) = Emission Rate (lb/hr)\*7000 (grains/lb)/Stack flow rate (SCFM)/60(min/hr)  
 Flow rates converted from actual to standard conditions using the ideal gas law.

Emission Point #	Associated Equipment	Potential Emission Rate (lb/hr)	Stack Temp. °F	Stack Flow Rate		Potential Emission Rate (gr/scf)	Emission Rate Limit (gr/scf)
				ACFM	SCFM		
SV012	EU026 DDGS Dryer	1.99	251	30,263	10,900	0.021	0.3

The permit application did not contain information regarding stack temperature or volumetric flow rate for SV007. Therefore, the following calculation was performed to determine the minimum standard volumetric stack flow rate necessary to comply with the limit of 0.3 gr/scf:

$$\begin{aligned} X \text{ scfm} &= (0.55 \text{ lbPM/hr}) * (7000 \text{ gr/lb}) \div (0.30 \text{ gr PM/scf}) \div (60 \text{ min/hr}) \\ &= 214 \text{ scfm} \end{aligned}$$

Based upon engineering judgment, it is highly unlikely that the cyclone(s) operate at a volumetric flow rate less than 214 scfm. Compliance is assumed for SV007 at stack flow rates greater than 214 scfm.

The information used to complete this compliance assessment is found in the Air Construction Permit Application for Golden Triangle Energy received by the MDNR-APCP on March 21, 2007.



# STATEMENT OF BASIS

## **Voluntary Limitations**

In order to qualify for this Intermediate State Operating Permit, the permittee has accepted voluntary, federally enforceable emission limitations. Per 10 CSR 10-6.065(5)(C)1.A.(VI), if these limitations are exceeded, the installation immediately becomes subject to 10 CSR 10-6.065(6) and enforcement action for operating without a valid part 70 operating permit. It is the permittee's responsibility to monitor emission levels and apply for a part 70 operating permit far enough in advance to avoid this situation. This may mean applying more than eighteen months in advance of the exceedance, since it can take that long or longer to obtain a part 70 operating permit.

## **Permit Reference Documents**

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Intermediate Operating Permit Application, received June 28, 2006; revised November 20, 2008;
- 2) 2007 Emissions Inventory Questionnaire, received May 30, 2008;
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.
- 4) Construction Permit 022000-004
- 5) Construction Permit 052003-014
- 6) Construction Permit 072005-033
- 7) Construction Permit 122005-004

## **Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits**

None.

## **Other Air Regulations Determined Not to Apply to the Operating Permit**

The Air Pollution Control Program (APCP) has determined that the following requirements are not applicable to this installation at this time for the reasons stated.

### *10 CSR 3.060, Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*

The permittee marked this rule as applicable in the permit application. According to §(3)(E), this rule does not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070. Boilers #1 and #2 (EU028 and EU034) are subject to 10 CSR 10-6.070, NSPS, Subpart Dc, *New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units* and therefore are not subject to this rule. In addition, the DDGS Dryer - Thermal Oxidizer (EU026) and the Flare (EU039) are direct heating sources and are also not subject to this rule.

### *10 CSR 10-6.100, Alternate Emission Limits*

This rule is not applicable because the installation is located in Holt County, an attainment area for all criteria air pollutants.

10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*

This rule is not applicable because the only equipment utilized at Golden Triangle Energy that has the potential to emit SO<sub>x</sub> is combustion equipment that exclusively uses pipeline grade natural gas and is exempt per 10 CSR 10-6.260(1)(A)2.

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*

This rule is not applicable because all emission units that have the potential to emit PM have a PTE of less than 0.5 pounds per hour with the exception of EU026 and EU027 and are exempt per 10 CSR 10-6.400. The PM PTE information used to justify this statement is found in the construction permit application received by the air program March 21, 2007.

**Construction Permit Revisions**

Construction Permit 072008-001

Condition 9.C. of this permit requires the permittee to conduct visual indicator checks on stacks SV001 and SV003 at least once every 24 hours. Some confusion existed regarding whether this requirement was for visible stack emissions or indication of negative pressure as required by Condition 9.B. However, correspondence with the permittee indicated that their interpretation is that the requirement exists for the purpose of visible stack emissions and they have been conducting monitoring accordingly since issuance of the construction permit. Consequently, the language of the construction permit condition was clarified and this requirement was combined with 10 CSR 10-6.220 (opacity rule) in the operating permit condition. The requirement for daily visible emissions checks is considered sufficient to demonstrate compliance with opacity requirements contained in 10 CSR 10-6.220.

Condition 12.A. of this permit states:

*“The flare must be in use at all times during denatured ethanol truck/rail load out (FS001).”*

Correspondence with the construction permit engineer and GTE indicates that the flare controls only truck load out (FS007) and that rail load out (FS001) emissions are controlled through the use of ethanol dedicated railcars. Consequently, the operating permit uses corrected language when incorporating this condition (see Permit Condition FS007-001).

Permit action 072008-001A (project 2008-12-004) supersedes Condition 8.C.3. of permit 072008-001 and invalidates Condition 2. of permit 072008-001. Consequently, these conditions are not included in the operating permit. Permit 072008-001A is incorporated by reference into the operating permit.

**New Source Performance Standards (NSPS) Applicability**

40 CFR Part 60, Subpart Dc, *New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units*

This rule is applicable to Boilers #1 and #2 (EU0028 and EU0034).

40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*

This rule requires is applicable to T801, T802, T803, T804, T805, and T811.

equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

40 CFR Part 60, Subpart DD, *Standards of Performance for Grain Elevators*

This rule does not apply because the installation has permanent grain storage capacity less than 88,100 m<sup>3</sup> (ca. 2.5 million U.S. bushels).

40 CFR Part 60, Subpart XX, *Standards of Performance for Bulk Gasoline Terminals*

This rule does not apply because the fuel ethanol manufactured by the installation does not satisfy the Subpart XX definition of gasoline.

40 CFR Part 60, Subpart III, *Standards of Performance for VOC Emissions from SOCM I Air Oxidation Unit Processes*

This rule does not apply to the installation because there are no air oxidation units involved in the processes.

40 CFR Part 60, Subpart NNN, *Standards of Performance for VOC Emissions from SOCM I Distillation Operations*

40 CFR Part 60, Subpart RRR, *Standards of Performance for VOC Emissions from SOCM I Reactor Processes*

These rules do not apply to manufacturing facilities that produce ethanol (fuel or beverage grade) through fermentation (biological synthesis).

40 CFR Part 60, Subpart VV, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006*

This rule is applicable to FS002 equipment which meets the applicability criteria of Subpart VV.

40 CFR Part 60, Subpart VVa, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006*

This rule is applicable to FS002 equipment which meets the applicability criteria of Subpart VVa.

**Maximum Available Control Technology (MACT) Applicability**

40 CFR Part 63, Subpart Q, *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*

This rule applies to industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources hazardous air pollutants (HAP) or are integral parts of installations that are major sources of HAP. Cooling towers #1 and #2 (FS005 and FS006) located at this installation do not use chromium-based water treatment chemicals, and based on the emission limitations in Permit Condition PW001; the installation is not a major source of HAP.

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

None.

### **Other Regulatory Determinations**

#### **10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants***

Based upon engineering judgment, SV004 is not expected to produce visible emissions since it predominantly controls VOC emissions from the fermentation process. Also, SV005 is not expected to produce visible emissions since it predominantly controls VOC emissions from the distillation process. Therefore the requirements of 10 CSR 10-6.220 will not be applied to SV004 and SV005.

SV008 and SV011 emissions are exempt from the requirements of 10 CSR 10-6.220 since emissions from these stacks are associated with operation of the boilers which are subject to provisions of NSPS Part 60, Subpart Dc.

#### **EU033 – Hominy flour unload**

This equipment was included in the original operating permit application, however it has since been dismantled and taken out of service and is not included in the operating permit.

### **Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis**

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons.

- 1) The specific pollutant regulated by that rule is not emitted by the installation.
- 2) The installation is not in the source category regulated by that rule.
- 3) The installation is not in the county or specific area that is regulated under the authority of that rule.
- 4) The installation does not contain the type of emission unit which is regulated by that rule.
- 5) The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the Air Pollution Control Program a schedule for achieving compliance for that regulation(s).

Prepared by:

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Don Murphy  
Environmental Engineer