TECHNICAL REVIEW DOCUMENT
for
OPERATING PERMIT 95OPWE039
to be issued to:

Duke Energy Field Services, Inc
Spindle Gas Processing Plant
Weld County
Source ID 1230015

Prepared by Michael E. Jensen
March 3, 1999

I. PURPOSE:

This document establishes the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA and during Public Comment. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Conclusions in this document are based on information provided in the original application submittal of February 23, 1995, and the supplemental Title V technical information submittals of December 8, 1995, February 28 and March 20, 1997, as well as numerous technical information submittals needed for the preparation of the construction permit, as well as numerous telephone contacts with the applicant.

On April 16, 1998, the Colorado Air Quality Control Commission directed the Division to implement new procedures regarding the use of short term emission and production/throughput limits on Construction Permits. These procedures are being directly implemented in all Operating Permits that had not started their Public Comment period as of April 16, 1998. All short term emission and production/throughput limits that appeared in the Construction Permits associated with this facility that are not required by a specific State or Federal standard or by the above referenced Division procedures have been deleted and all annual emission and production/throughput limits converted to a rolling twelve (12) month total. Note that, if applicable, appropriate modeling to demonstrate compliance with the National Ambient Air Quality Standards was conducted as part of the Construction Permit processing procedures. If required by this permit, portable monitoring results and/or EPA reference test method results will be multiplied by 8760 hours for comparison to annual emission limits unless there is a specific condition in the permit restricting the hours of operation.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit

incorporates and shall be considered to be a combined construction/operating permit for any such revisions, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. Source Description:

This plant is classified as a natural gas processing plant as set forth under Standard Industrial Classification 1321. The Spindle Gas Processing Plant (Spindle Plant) consists of two operations: a gas processing skid and a fractionation assembly. The gas plant skid consists of two expander plants identified as Plant A and Plant B. The gas processing skid utilizes straight refrigeration coupled with cryogenic expander processes to recover natural gas liquid (NGL) mixtures from the inlet gas stream. The NGL stream is sent to the fractionation assembly to make various fuel products. A high Btu content methane/ethane residue gas stream is created by the removal of the NGL. The residue gas stream is recompressed and routed to the sales pipeline. A triethylene glycol (TEG) dehydration system operates to dehydrate a slip stream of the residue gas used to regenerate the mole sieves. The mole sieves function to dehydrate the inlet gas. Fugitive volatile organic compound (VOC) emissions from Plant B are subject to the leak control provisions of 40 CFR Part 60 Subpart KKK, Standards of Performance for Equipment Leaks from Onshore Natural Gas Processing Plants. Fugitive VOC emissions from Plant A are not subject to the leak control provisions Subpart KKK because the plant was constructed prior to the January 20, 1984 effective date of the provisions.

The fractionation assembly separates the NGL product from the gas plant into pure streams consisting of ethane, propane, and butane/gasoline mix (BG Mix). The ethane is recompressed and routed to the pipeline. The propane and BG mix are each stored in pressurized bullet tanks for transport off-site by truck. Fugitive VOC emissions from the fractionation assembly are subject to the leak control provisions of Subpart KKK.

There are twelve (12) engines powering natural gas compressors operating in inlet, residue, refrigeration or air compressor service. As noted previously, one TEG dehydration unit operates to remove the water from the residue gas used to regenerate the mole sieves. The site also operates with a 15 million Btu per hour hot oil heater, one condensate loadout rack, one propane and BG mix loadout rack, four (4) 300 barrel condensate storage tanks, six (6) small natural gas fired heaters for various purposes, and one emergency flare stack.

At the time the Spindle Plant Title V application was prepared, a natural gas pipeline pressure booster station, identified as Spindle-CIG and located immediately adjacent to the Spindle Plant was owned by Colorado Interstate Gas, Inc. (CIG), but operated by Duke Energy. A separate Title V application was submitted by Duke Energy for the CIG operation. Duke Energy has subsequently acquired this facility. The Division finds that the two formerly separate operations now constitute one contiguous operation. This Title V Operating Permit for the Spindle Plant addresses the now single source by combining all the emissions and operations from the Spindle Plant and the Spindle-CIG Booster Station. The Spindle-CIG Booster Station no longer exists as a separate source.

The former Spindle-CIG Booster Station consists of four (4) engines powering natural gas compressors, and one 210 barrel (8,400 gallon) condensate storage tank. Fugitive VOC emissions from the Spindle-CIG Booster Station are not subject to the provisions of Subpart KKK because the Station is not considered an affected facility. Subpart KKK is limited to onshore natural gas processing plants.

The Spindle Gas Plant (including the Spindle-CIG Booster Station) is located in Weld County, Colorado, adjacent to Weld County Road (WCR) 14 about 1/4 mile east from the intersection of WCR 14 and WCR 19. The area in which the plant operates is designated as attainment for all criteria pollutants. There are no affected states within 50 miles of the plant. Rocky Mountain National Park is a Federal Class I designated area within 100 kilometers of the plant.

Construction Permit 97WE0287 set the Potential To Emit (PTE) for the entire plant as follows:

Pollutant	Potential to Emit (tpy)	Actual (tpy)
NOx	972.7	986.7
VOC	250.1	266.5
CO	825.3	840.7
HAPs	---	21.3

The estimated actual emissions are from the Division database for calendar year 1997 and are the total for Spindle and the former Spindle-CIG plant. The actual emissions were reported as being equal to the permitted limits. The difference in the values in the above table is a reflection of the recent removal of an engine from the CIG site and a change in some of the permitted limits.

The potential emissions are limited by the conditions in Construction Permit 97WE0287 to a level that classifies this source as major with respect to future Prevention of Significant Deterioration (PSD) requirements. The existing equipment has grandfather status for the PSD provisions, and there has been no major modifications of the equipment that would have required a PSD review to be performed.

At the time the Title V application was submitted the permittee submitted APENs and construction permit applications for all the sources at the plant. The documents were submitted to update, revise, or correct existing construction permits as necessary, or request a new construction permit. Further, the permittee requested a single permit be issued for the entire plant, rather than for each individual source.

At the time the Title V application was submitted a review of the file information indicated the plant was classified as a major source and subject to the regulatory provisions for Prevention of Significant Deterioration (PSD). The APENs submitted requested an emissions increase adequate to trigger the

requirement for a PSD review. The permittee disagreed with the review and prepared a report generated from a review of the Division and permittee files. The report was submitted with a letter to the Division on July 12, 1995. In summary, the report established that the sources being reported on the APENs had always existed at the site, and the changes being requested were below the PSD trigger levels. The Division agreed with this conclusion.

The Final Approval for Construction Permit 97WE0287 had not been issued at the time this operating permit was prepared. The Construction Permit required compliance testing for all the engines within 180 days of issuance of the permit. The testing has not been completed.

The new Construction Permit also required the submittal of a compliance plan for all the sources. The Division accepts the monitoring proposal provided in the Title V application as the submittal of the compliance plan required by the Construction Permit. The due date of the first semi-annual monitoring report required by this operating permit will be more than 180 days after the initial approval construction permit was issued and the equipment commenced operation. In the discussion in the following sections, the Division considers the Responsible Official certification submitted with the semi-annual report will serve as the self-certification for Construction Permit 97WE0287. The appropriate provisions of the Construction Permit have been directly incorporated into this Operating Permit.

The file review regarding the PSD issues previously mentioned also identified that appropriate modeling of the plant emissions impacts had not been accomplished. The request for the facility-wide construction permit and the combining of the Spindle and Spindle-CIG sources into one source justified the need to model the emissions. As noted previously, the Spindle plant is classified as an existing major stationary source for PSD considerations. However, the changes being addressed did not trigger the requirement for a PSD review. Since a PSD review was not triggered, the modeling did not have to address impacts on the PSD increments, only the impacts of the National Ambient Air Quality Standards (NAAQS). The modeling identified a violation of the nitrogen oxides NAAQS with the existing stack heights. Compliance with the NAAQS could be demonstrated with the proposed stack heights shown in the table at the end of this document. The permittee accomplished the construction of the increased stack heights before the draft of this Operating Permit was completed. Since the work has been completed the Operating Permit does not need to include a compliance plan for the stack height corrections.

The facility was the subject of a Notice of Violation / Compliance On Consent (NOV/COC) Order signed on January 8, 1999. The Order found there had been a failure to properly permit a number of engines that were replaced and to satisfy the LDAR reporting requirements. The Order requires the permittee to provide air/fuel ratio controllers and catalytic converters to reduce the emissions from seven (7) engines (P-160, P-161, P162, P-163, P-164, P-165 and P-166 each with 1000 HP) at the Spindle site, and three (3) engines (CIG-S-1, CIG-S-2 and CIG-S-3 each with 474 HP) at the West Spindle site. The installation is to be completed within 180 days of the signing of the Order.. The Order also directs the engines are to be performance tested after the modifications to identify the lower emissions, and the permitted emission limits are to be adjusted to reflect these lower values.

The magnitude and the nature of the discrepancies between the existing construction permits and the information submitted with the Title V application and the additional non-compliance issues discussed would preclude the Division from accepting the facility was in compliance. The Division accepts the signing of the Order as evidence the facility will achieve compliance upon satisfying the requirements of the Order.

After the Title V application had been submitted the permittee requested a modification of the alternative operating scenario. The permittee wanted less restrictions on the requirements whenever an engine was replaced. An extended dialogue between the Division and the permittee developed standard language to be used.

III. EMISSION SOURCES:

The following sources are specifically regulated under terms and conditions of the Operating Permit for this plant:

Internal Combustion Engines Powering Compressors

P160 - Waukesha L-7042 GSI	**1000 HP**	
P161 - Waukesha L-7042 GSI	**1000 HP**	
P162 - Waukesha L-7042 GSI	**1000 HP**	
P163 - Waukesha L-7042 GSI	**1000 HP**	
P164 - Waukesha L-7042 GSI	**1000 HP**	
P165 - Waukesha L-7042 GSI	**1000 HP**	
P166 - Waukesha L-7042 GSI	**1000 HP**	
P167 - Waukesha F-1197 GU	**125 HP**	**w/ AFR & NSCR**
P168 - CaterpillarG-342 NA	**230 HP**	
P169 - Waukesha L-7042 GU	**1000 HP**	**w/ AFR & NSCR**
P170 - Superior Ajax 8SGTB	**1215 HP**	
P171 - Superior 6G825	**600 HP**	**w/ AFR & NSCR**
CIG-S-1 - Superior 6G825	**474 HP**	
CIG-S-2 - Superior 6G825	**474 HP**	
CIG-S-3 - Superior 6G825	**474 HP**	
CIG-S-4 - Caterpillar G379	**206 HP**	

The following discussion of the engines pertains to the equipment before meeting the requirements of the NOV/COC. The modifications required by the COC must be completed before the applicable requirements and the related monitoring can be developed and incorporated into this permit.

1. Applicable Requirements: Construction Permit 97WE0287 was prepared after the Title V permit application was submitted and is being directly incorporated into this operating permit. The Construction Permit set pollutant limits for the total plant, commonly known as 'bubble limits', as well as limits for individual pieces of equipment.

All the engines are required to demonstrate compliance by stack tests to be conducted within 180 calendar days of the issuance of the operating permit if the stack tests have not already been completed.

Form 2000-604, Item 10, of the Title V application states that emissions of natural gas from compressor engine blowdown during maintenance and during engine start-up qualifies as an

insignificant source. The statement continues that emission limits do not apply during the first ½ hour of operation after a cold start. The Division agrees that if calculations to estimate the emissions released are below the APEN threshold when the maintenance blowdown and engine startup are limited to ½ hour, this activity may be considered an insignificant activity. Records will have to be maintained to demonstrate that these activities are performed in less than ½ hour. The permittee could not cite a regulatory basis for the startup statement. The Division does not accept that there is such a provision.

2. Emission Factors: Emissions from reciprocating engines are produced during the combustion process, and are dependent upon the fuel mixture, engine design specifications, and specific properties of the natural gas being burned. The pollutants of concern are Nitrogen Oxides (NOx), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC). Small quantities of Hazardous Air Pollutants (HAPs) are also emitted when combustion is incomplete. Approval of emission factors for use with engine emissions is necessary to the extent that accurate actual emissions are required to verify the need to submit Revised APENs to update the Division emission inventory, and for compliance determination and certification. Construction permit 97WE0287 required compliance testing to be performed on the engines to validate the proposed emission factors. At the time of the preparation of this operating permit the compliance testing had not been completed.

3. Monitoring Plan: Some of the engines are required to install emissions control equipment required by the NOV/COC. After the engines have been performance tested, the emissions limits will be incorporated into this permit. The portable monitoring requirements for engines equipped with control equipment will be incorporated at the same time the emission limits are modified. The following discussion pertains to the engines as they currently exist at the facility. The operating permit established a procedure for the calculation of the emissions based on fuel consumption and a fuel based emission factor. The emissions are to be calculated monthly to determine compliance with the hourly limits and the annual (12-month rolling total) limit. A Revised APEN must be submitted to the Division if criteria emissions increase by more than 50 tons per year or 5%, whichever is less, compared to the latest APEN on file with the Division.

A copy of a monitoring guidance grid developed by the Division is included at the end of this document. The grid and the Title V application monitoring proposals were used to define the monitoring requirements for the internal combustion engines. The Division monitoring guidance grid requires more intensive and extensive monitoring of the emissions from internal combustion engines when an engine is equipped with an emissions control device. The control devices are provided to protect the air quality. A small decrease in the control efficiency can result in significant increases in the emissions released. Increased monitoring is necessary to ensure that the control devices are functioning properly.

The Division has determined, based on AP-42 emission factors and engineering judgement, that particulate emissions from these type of internal combustion engines will be insignificant if natural gas is exclusively used as the fuel. The use of natural gas will also satisfy the opacity monitoring requirement.

A properly functioning Non-Selective Catalytic Reduction (NSCR) unit will demonstrate a heat rise across the unit as a result of the oxidation, destruction or conversion of the air pollutants. The media deteriorates with time and needs to be replaced or regenerated. Particulate matter from the engine can be trapped in the catalytic material and lead to an increase in the pressure drop across the control device. The accidental backfire of an engine can result in the loss or destruction of the media. The monitoring plan provides reasonable evidence of the presence and functioning of the catalytic media.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. Duke certified in the application that natural gas has been used exclusively as the fuel for this unit. As noted previously, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Triethylene Glycol Regeneration Unit

1. Applicable Requirements: Construction Permit 97WE0287 established the emission and throughput limits for this unit. A future Maximum Achievable Control Technology (MACT) standard is being developed by the US Environmental Protection Agency for operations at oil and gas facilities. The MACT may contain provisions for certain glycol dehydration units. Until such time as the MACT rule is promulgated, no control requirements exist for this point.

2. Emission Factors: Triethylene glycol is contacted with the natural gas stream to remove moisture. This mixture is heated in the still portion of the unit to drive off the water. Some volatile organic compounds and hazardous air pollutants are also released with the water vapor. Emissions from this process are typically measured with a glycol analysis (rich/lean analysis) or predicted using the Gas Research Institute's (GRI) computer software model GLYCalc. The model uses input values for the glycol recirculation rate, cubic feet of gas processed, desired moisture content (dew point) for the processed gas, and the amounts of various constituents in the natural gas in an algorithm to estimate VOC and HAP emissions.

The Division accepts the use of the GLYCalc model to estimate emissions in lieu of rich/lean testing. Once a month the parametric inputs for the GLYCalc model will be recorded. The record of the input parameters will provide a perspective on the range of the input values. The perspective developed will allow consideration of whether more frequent testing is needed for a better estimation of the results. An extended gas analysis will be performed annually. Each month the GLYCalc model will be used to estimate the emissions based on the parametric inputs and extended gas analysis.

Combustion emissions from the heater are exhausted through a stack separate from the still vent. This heater is rated at 1.75 million Btu/hr and falls under the insignificant activity category of

Colorado Regulation No. 3, Part C, Section II.E.3.k. As an insignificant activity the heater emissions do not need to be addressed directly by this Operating Permit.

3. Monitoring Plan: The monitoring requirements were established from Construction Permit 97WE0287, the Division guidance grid included at the end of this document, and the monitoring information provided in the Title V application. The permittee submitted information to demonstrate the gas composition was consistent enough to be represented by an annual extended gas analysis. If the gas analysis reveals a variation in the gas composition, the testing frequency will revert to a quarterly testing frequency.

Input parameters from the dehydrator for the GRI GLYCalc model will be recorded once per month. Each calendar month the newest version of the GRI GLYCalc computer model will be used to estimate the annual emissions of VOC and HAPs. Recording the values of model input parameters monthly allows the variability in the parameters to be followed.

A Revised APEN is required if a significant increase of VOC or HAPs occur as defined in Colorado Regulation No. 3, Part A, Section II.C.2. compared to the APEN currently on file with the Division.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. Duke certified in the application that natural gas has been used exclusively as the fuel for this unit. As noted previously, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Fugitive Emissions of Volatile Organic Compounds from Equipment Leaks

1. Applicable Requirements: The Division has made the determination that fugitive VOC emissions from equipment leaks at gas compression or processing facilities must be calculated and evaluated for the appropriate permitting requirements. The permittee requested to identify two categories of fugitive VOC emissions. One group of sources would include the fugitive VOC emissions from portions of the plant subject to the leak location/repair provisions of 40 CFR Part 60 Subpart KKK. The other group of sources would include the balance of the fugitive VOC emissions not subject to the Subpart KKK provisions.

2. Emission Factors: The fugitive leak emissions are calculated based on emission factors from EPA's Protocol for Emission Leak Estimates. These factors have changed several times in the recent past. The factors used were current at the time the construction permit was prepared. The EPA factors estimate the total organic compounds. The factors are multiplied by the number of components of each type (e.g. compressor seals, flanges, etc) and the VOC weight percentage in the gas stream as determined in the most recent gas analysis.

3. Monitoring Plan: Piping and equipment modifications at a facility are an on-going process. Sufficient time has lapsed since the Construction Permit component count was performed for modifications to have changed the component count. The permittee must perform an initial count of the components within 90 days of the issuance of the Operating Permit. The permittee is then required to maintain a running tally of the component count in order to perform the fugitive leak emissions estimate. The count must be re-established in order to provide the correct base for the running tally. An actual physical count of the number of process valves, relief valves, pump seals, compressor seals, flanges/connections and so forth is to be performed once every five years to verify the tally has been correctly and currently maintained. A 50% or 5 ton per year increase in criteria pollutant emissions, whichever is less, will necessitate the need for submittal of a Revised APEN.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. Duke Energy certified in the application that natural gas has been used exclusively as the fuel for this unit. As noted above, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Condensate Storage Tank Truck Loadout

1. Applicable Requirements: Construction Permit 97WE0287 established the applicable requirements for this source. The equipment and piping for the rack is not subject to the Subpart KKK leak testing requirements.

2. Emission Factors: The emissions are estimated by a formula provided by AP-42.

3. Monitoring Plan: Monitoring will consist of tracking the amount of condensate loaded onto trucks each month, and recording the number of days the trucks are loaded. The combination of the amount of the condensate loaded and the number of days trucks were loaded will be used to determine compliance.

A Revised APEN is required if a significant increase of VOC or HAPs occur as defined in Colorado Regulation No. 3, Part A, Section II.C.2. compared to the APEN currently on file with the Division.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. As noted previously, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Hot Oil Heater

1. Applicable Requirements: Construction Permit 97WE0287 established the applicable requirements for this source. The removal of the short term limits established by the Construction Permit makes this source subject to the fuel burning equipment particulate emission standard of Regulation No. 1, Part III. A.1.b. The standard is set by the equation $0.5(15.0)^{-0.26}$ as 0.25 pounds per million Btu of heat input. The estimated maximum particulate emissions are 0.0137 pounds per million Btu of heat input. Thus the heater will always be in compliance with the Regulation No. 1 particulate standard when burning natural gas.

This source is not subject to the requirements of the 40 CFR Part 60 New Source Performance Standards (NSPS) Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The APEN reports the unit was placed in service at an unknown date prior to the Subpart Dc applicability date of June 9, 1989.

2. Emission Factors: The emissions were developed from the appropriate section of AP-42.

3. Monitoring Plan: Monitoring will consist of tracking the amount of fuel combusted by the heater.

4. Compliance Status: The equipment at this site has been operating for an extended time. A current APEN reporting criteria emissions is on file with the Division. As noted previously, the Division accepts the compliance signature of the responsible official as evidence of compliance.

Insignificant Activities

The permittee needs to periodically review the insignificant activities to determine if they are still insignificant and in compliance with all applicable requirements. A record of review, the compliance determination, and any additions, deletions or changes to the insignificant source inventory should be maintained. The record will support the annual compliance certification for the insignificant sources. The inventory of insignificant sources provided in the permit application is included in Appendix A of the operating permit as a starting reference.

The Division's has some previous experience with purging/venting procedures during the startup and shutdown of compressor engines similar in size to the ones in this permit. The Division has generally found the engine dimensions and the presumption of a 20% VOC content in the gas stream results in the VOC emissions being less than two (2) tons per year. Since this estimated value is below the APEN reporting threshold established in Colorado Regulation 3 the Division concludes that these emissions are insignificant. The permittee will need to keep records to demonstrate the maintenance and startup blowdown procedures do not require more than 30 minutes.

The four (4) 300 barrel condensate storage tanks appear to be eligible candidates for construction permits because they satisfy the applicability provisions of 40 CFR Part 60 Subpart Kb based on capacity and installation date. The tanks are, however, exempt from Subpart Kb, based on §60.110.b.d.4 which states "Vessels with a design capacity of less than or equal to 1,589,874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer." Each tank has a capacity of 47.70 m^3 and is used for storage prior to custody transfer.

The two (2) 60,000 gallon pressure storage tanks are also eligible candidates for construction permits because they satisfy the applicability provisions of Subpart Kb based on capacity and installation date. The tanks are exempt from Subpart Kb based on §60.110.b.d.2 which states "Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere." The tanks satisfy these requirements for the exemption from Kb.

Alternative Operating Scenario

Engine Replacement

The permittee requested that both temporary and permanent replacements of the internal combustion engines be considered an Alternative Operating Scenario. A temporary engine could operate for less than 3 months in the same service while an existing engine was being repaired or overhauled. The Division acceptance of the operation of either a temporary or permanent engine is contingent upon emissions testing of the engine to demonstrate the emissions comply with the permit limits. Testing must be conducted under representative conditions for the engine being replaced. The permittee must be willing to accept a determination of non-compliance should the emissions testing determine the emissions from the engine in question exceed those defined in the Operating Permit. Any non-compliance will be considered to exist from the day the replacement engine started operation.

Hazardous Air Pollutants

The applicable requirement is for the reporting of estimated emissions above the appropriate bin thresholds established in Appendix D of Regulation No. 3. Hazardous air pollutant emissions for each source are estimated from manufacturer's information, AP-42 and GRI technical reports. Whenever there is an increase in the level of emissions of hazardous air pollutants, a Revised APEN must be submitted. The Division accepts this source was in compliance at the time the Title V application was submitted.

Permit Shield

The intent of the permit shield is to provide limited protection to the plant in the event of an error in the evaluation of whether a regulation, or portion of a regulation applies. The plant identifies the issue and presents its position. The Division reviews the position. If the Division and the plant mutually agree on the position, the issue is recorded in the permit. If, at a later date, it is determined that an error was made in the mutual decision, the plant is protected from enforcement action until the permit can be reopened and the correct requirements and a compliance schedule inserted.

In this application, an extensive list of non-applicable sections of the Federal and State regulations are identified for the sources, and the request for the shield justified.

Miscellaneous

From time to time published emission factors are changed based on new or improved data. A logical concern is what happens if the use of the new emission factor in a calculation results in a source being out of compliance with a permit limit. For this operating permit, the emission factors or emission factor equations included in the permit are considered to be fixed until changed by the permit. Obviously, factors dependent on the fuel sulfur content or heat content can not be fixed and will vary with the test results. The formula for determining the emission factors is, however, fixed. It is the responsibility of the permittee to be aware of changes in the factors, and to notify the Division in writing of impacts on the permit requirements when there is a change in factors. Upon notification, the Division will work with the permittee to address the situation.

Short Term Limits

As noted at the start of this review document, new procedures resulted in the removal of short term emission and production/throughput limits from Construction Permits. The table below documents existing short term Construction Permit limits that were not incorporated in the Operating Permit.

Construction Permit	Emission Point	NOx, lb/hr	CO, lb/hr	VOC, lb/hr	Fuel Use or Process rate
97WE0287	P160; P161; P162; P163; P164; P165; P166 - 1000 HP Engine	22.0	22.0	4.5	7,692 scf/hr
	CIG-S-1; CIG-S-2; CIG-S-3 - 474 HP Engine	15.7	2.1	0.6	4,472 scf/hr
	CIG-S-4	4.0	3.6	1.5	2,099 scf/hr
	P167 - 125 HP Engine	0.60	0.90	0.30	925 scf/hr
	P168 - 230 HP Engine	1.1	1.6	0.6	1,633 scf/hr
	P169 - 100 HP Engine	4.4	6.7	2.2	7,693 scf/hr
	P170 - 1215 HP Engine	5.4	10.7	5.4	8,509 scr/hr
	P171- 600 HP Engine	2.7	4.0	1.4	4,472 scf/hr
	P182 - Condensate Loadout			92.0 lb/day	15,000 gpd
	P179 - 15 MMBtu/hr Heater	2.1	0.6		14424 scf/hr
	P178 - TEG Dehydrator Unit			1.1	6.0 MMscf/d & 57.9 gph recirculation rate
	P181 - Fugitive VOC			11.6	
	Total Plant Emissions	226.0	192.0	61.0	Engines - 94,717 scf/hr Heaters - 23,265 scf hr

National Ambient Air Quality Standards
Proposed Stack Heights

Operating Permit Unit ID	Unit Description	Serial Number	HP	Proposed Stack Height		Reported Stack Height	
				meters	feet	meters	feet
P160	Waukesha Model L-7042 GSI	308261	1000	10.97	35.99	7.92	26.0
P161	Waukesha Model L-7042 GSI NG	241036	1232	10.97	35.99	7.92	26.0
P162	Waukesha Model L-7042 GSI	288037	1000	10.97	35.99	7.92	26.0
P163	Waukesha Model L-7042 GSI	364645	1000	10.97	35.99	7.92	26.0
P164	Waukesha Model L-7042 GSI	388531	1000	10.97	35.99	7.92	26.0
P165	Waukesha Model L-7042 GSI	288786	1000	10.97	35.99	7.92	26.0
P166	Waukesha Model L-7042 GSI	319041	1000	10.97	35.99	7.92	26.0
P167	Waukesha Model F 1197 GU	288037	125	5.12	16.80	5.12	16.8
P168	Caterpillar Model G-342	31P3191	230	4.27	14.01	4.27	14.0
P169	Waukesha Model L-7042 GU	288037	1000	7.92	25.98	7.92	26.0
P170	Superior Ajax Model 8SGTB	315909	1215	7.32	24.02	7.32	24.0
P171	Superior Model 6G825	19941	600	7.32	24.02	7.32	24.0
CIG-S-1	Superior Model 6G825	18257	474	9.14	29.99	4.18	13.7
CIG-S-2	Superior Model 6G825	18653	474	9.14	29.99	4.18	13.7
CIG-S-3	Superior Model 6G825	18652	474	9.14	29.99	4.18	13.7
CIG-S-4	Caterpillar Model G379	72B643	206	9.14	29.99	4.18	13.7
P179	Natural Gas Fired Heater for heating hot oil	J87426		10.00	32.81	10.06	33.0