TECHNICAL REVIEW DOCUMENT
for
OPERATING PERMIT 95OPWE057
to be issued to:

KN Wattenberg Transmission Company, LLC
Hudson Compressor Station
Weld County
Source ID 1230048

Prepared on May 29, 1997
Revised on August 14, 1997
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I. Purpose:

This document will establish 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. The conclusions made in this report are based on information provided in the original application submittal of March 1, 1995, additional supplemental technical submittals of April 5, May 25, August 29, 1995, December 3, 1996, May 20, 1997, October 13, 1997 and March 3, 1998, pre-review comments and telephone conversations with the source. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

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 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 hours of operation.

II. Source Description:

This facility is located approximately 5 miles northeast of Hudson, a community of approximately 5,000 people, in Weld County (SW ¼ of SW ¼ of Section 23, T3N, R65W). This facility is situated in rolling hills and is surrounded by pasture land. There are no affected states within 50 miles of this facility and Rocky Mountain National Park, a Federal Class I designated area, is located within 100 km of the facility. This source is considered to be a major source in an attainment area (Potential to Emit > 250 tons per year) and is considered major for purposes of Prevention of Significant Deterioration (PSD) regulations. Future modifications to this facility which are in excess of significance levels as defined in Colorado Regulation No. 3, Part A, Section I.B.58 will result in the application of the PSD review requirements. Facility wide emissions are as follows:

Pollutant	Potential to Emit (tpy)	Actual (tpy)
NO_X	1,414.6	1,123.6
VOC	162.7	105.7
CO	266	206
HAPs	75	6.5

For units with Colorado Construction permits, the potential to emit is the same as the permit limit and for units without permits the potential to emit is based on the information provided in the Title V permit application. Actual emissions are based on the fuel usage information provided by the source in their May 25, 1995 submittal for the period from March 1994 through February 1995. The source indicated in their supplemental technical submittal of May 20, 1997 that this facility was not subject to the 112(r) Accidental Release requirements. This facility has no applicable Maximum Achievable Control Technology (MACT) standards at the time of permit issuance. However, a future MACT standard is being developed for operations at Oil and Gas facilities which may apply to this facility.

III. Emission Sources:

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

A. Units P001 thru P004: Clark, Model TLAD-8, 2-Cycle Internal Combustion Engines, Rated at 3,000 HP (Maximum), Serial Nos. 139005, 139004, 139006 and 139007. Natural Gas Fired.

1. Applicable Requirements - These engines were first placed in service in 1977. The applicable requirements for these engines are identified in Construction Permit 10WE471 (final approval/transfer of ownership, July 5,

1995). Note that this permit may have been issued with the incorrect permit number 10WE1047. This permit includes the 4 engines, as well as 4 natural gas liquid tanks and 1 glycol dehydrator. The natural gas liquid tanks have been included in the Operating Permit as insignificant activities and the glycol dehydrator was permanently taken out of service November 29, 1996.

The applicable requirements for these engines as identified in permit 10WE471 are 20% Opacity (condition 1) and APEN reporting (condition 5).

2. Emission Factors - Emissions from reciprocating engines are produced during the combustion process, and are dependent upon the air to fuel ratio adjustment, engine design and specific properties of the natural gas being burned. The pollutants of concern are Nitrogen Oxides (NO_x), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC). Small quantities of HAPs are also emitted when combustion is incomplete. Approval of emission factors for these units is necessary to the extent that accurate actual emissions are required to verify the need to submit revised APENs to update the Division's Emission Inventory. The source is proposing to use emission factors from EPA's Compilation of Emission Factors (AP-42). The emission factors are as follows:

Pollutant	Emission Factor
NO_X	11 g/hp-hr
CO	1.5 g/hp-hr
VOC	0.5 g/hp-hr

3. Monitoring Plan - The source did not specifically identify how they would demonstrate compliance with the applicable requirements. Based on the Internal Combustion Engine monitoring grid (see attached), the Division is requiring the source to verify compliance by calculating annual emissions based on the following equation:

$$\text{tons/yr} = \frac{[\text{EF (g/hp-hr) x maximum hp x annual hrs of operation}]}{[453.6 \text{ g/lbs x } 2{,}000 \text{ lbs/ton}]}$$

The source will be required to calculate emissions annually and submit a revised APEN either every 5 years or as required by Colorado Regulation No. 3, Part A, Section II.C.1. Use of natural gas is sufficient to demonstrate compliance with the Opacity requirements.

4. Compliance Status - The source indicated that they were in compliance with all applicable requirements. Specifically, they indicated that the units are in compliance with opacity requirements because only natural gas is burned and revised APENs were submitted with the Operating Permit application.

B. Unit P005: Waukesha, Model L5108GU, 4-Cycle Internal Combustion Engine,

Rated at 570 HP (Site), Serial No. 241169. Natural Gas Fired. Equipped with a Non-Selective Catalytic Reduction System for the Control of Nitrogen Oxides.

1. Applicable Requirements - This unit was first placed in service in 1981 and modified in 1996 by adding a control device (non-selective catalytic reduction) to reduce emissions. This unit is covered under Construction Permit 96WE1084 (initial approval, May 8, 1997), which is a synthetic minor permit for PSD. This permit was moved to final approval status based upon the self-certification by the source that the unit was fully in compliance with each applicable requirement. The pertinent applicable requirements from this permit are as follows:

a. Visible emissions not to exceed 20% Opacity (condition 1)

b. Emission limits (condition 4):

Nitrogen Oxides:	7.6 lbs/hr	and	33.0 tons/yr
Carbon Monoxide:	6.3 lbs/hr	and	27.5 tons/yr
Volatile Organic Compounds:	1.3 lbs/hr	and	5.5 tons/yr

Permit 96WE1084 originally identified emission limits for Particulate Matter (PM and PM_{10}), however, they have not been included in the Operating Permit because the emission limits are below APEN de minimis levels (< 2 tpy).

c. Fuel Consumption (condition 3)*:

Natural Gas:	4,886 SCF/hr	and	42.8 mmSCF/yr

Compliance with the annual limits shall be determined on a rolling twelve (12) month total. Each month a new twelve month total shall be calculated using the previous twelve calendar months' data. The permit holder shall calculate monthly emissions and keep a compliance record on site for Division review (condition 7).

*To account for the use of the lower heating value in the calculation of emissions the throughput limit above has been increased by 10%. The changes have been directly incorporated into the operating permit.

The short term limits have been removed per policy change stated above.

d. Performance Test (condition 5):
A performance test will be conducted to measure the emission rates for Oxides of Nitrogen and Carbon Monoxide using EPA approved methods.

2. Emission Factors - See discussion under Units P001-P004. Approval of emission factors for these units is necessary to the extent that the source must demonstrate compliance with the emission limits. The source has proposed to use emission factors based on operating experience. The proposed emission factors

are as follows:

Pollutant	Emission Factor
NO_x	6.0 g/hp-hr*
CO	5.0 g/hp-hr
VOC	1.0 g/hp-hr

* The NO_x emission factor is actually 15 g/hp-hr x (1 - 0.6). An efficiency of 60% is assumed for the catalytic reduction unit.

The proposed emission factors for NO_x and VOC are greater than those in AP-42 (October 1996), Section 3.2, Table 3.2-3 for 4-cycle engines equipped with non-selective catalytic reduction. The proposed emission factor for CO is less than the AP-42 emission factor for 4-cycle engines equipped with non-selective catalytic reduction (Table 3.2-3).

For the Operating Permit, these emission factors have been converted to fuel-based emission factors using the following equation:

$$EF\ (lbs/mmBtu) = \frac{[EF\ (g/hp\text{-}hr) \times 1\ lb/453.6\ g \times 10^6\ Btu/1\ mmBtu]}{\text{Design heat rate (Btu/hp-hr)}}$$

3. Monitoring Plan - Conditions 2.1 through 2.8 of the Operating Permit list the Monitoring and Recordkeeping provisions necessary to verify compliance with Applicable Requirements for this engine.

The source indicated that they would do monthly portable monitoring for NO_x, CO and % O_2. They also indicated that they would monitor and record engine parameters (average RPMs, average suction and discharge pressure and engine temperature) monthly when portable monitoring was performed. They also indicated that they would monitor fuel consumption and hours of operation monthly. This is fairly consistent with the Internal Combustion Engine monitoring grid (see attached) which the Division developed to provide consistent monitoring requirements for similar emission units.

The monitoring grid identifies quarterly portable monitoring and monthly emission calculations, fuel use monitoring and recording of catalyst parameters (pressure and temperature difference) and the air to fuel ratio. Although the source indicated that they will perform monthly portable monitoring, the Division will only require quarterly portable monitoring. The Division is only requiring portable monitoring of NO_x and CO. In addition, the Btu content of the natural gas consumed must be determined semi-annually. A stack test was performed on November 17, 1997 that demonstrated compliance with the NOx and CO emission limits.

4. Compliance Status - The source certified that they were in compliance with all

applicable requirements in the original permit application. This engine was originally installed in 1981 and because it was less than 1000 hp, this engine was not required to get a permit. However, during technical review of the application the Division determined that the installation of this engine was a major modification (NO_x emissions greater than 40 tpy) to a PSD major source and should have triggered PSD review. The source opted to install a control device on the engine and therefore reduce emissions to below significance levels. Upon final approval of the construction permit (96WE1084) this unit is in compliance with all applicable requirements.

C. Unit P006: Caterpillar, Model G399TA, 4-Cycle Internal Combustion Engine, Rated at 600 HP (Maximum), Serial No. 49C327. Natural Gas Fired.

1. Applicable Requirements - This unit was first placed in service in 1985. This unit is covered under Construction Permit 85WE117 (initial approval, dated July 24, 1995). This permit was moved to final approval based upon a final approval inspection performed 4/8/97. The pertinent applicable requirements from this permit are as follows:

a. Visible emissions not to exceed 20% opacity (condition 1)

b. Emission limits (condition 3)

Nitrogen Oxides	19.8 lbs/hr	and	86.9 tons/yr
Carbon Monoxide	16.3 lbs/hr	and	71.4 tons/yr*
Volatile Organic Compounds	1.3 lbs/hr	and	5.8 tons/yr

* The emission limit for CO was increased from 6.6 lbs/hr and 29 tons/yr due to the results of a stack test performed on August 30, 1996. This modification was made directly in the Operating Permit as no new applicable requirements were triggered as a result of this modification.

c. Fuel consumption (condition 4)*

Natural gas	5,287 SCF/hr	and	46.3 mmSCF/yr

Compliance with the annual limits shall be determined on a rolling twelve (12) month total. Each month a new twelve month total shall be calculated using the previous twelve calendar months' data. The permit holder shall calculate monthly emissions and keep a compliance record on site for Division review (condition 7).

*To account for the use of the lower heating value in the calculation of emissions the throughput limit above has been increased by 10%. The changes have been directly incorporated into the operating permit.

The short term limits have been removed per policy change stated above.

2. Emission Factors - See discussion under Units P001 - P004. Approval of emission factors for these units is necessary to the extent that the source must demonstrate compliance with the emission limits. The source has proposed to use emission factors based on operating experience. The proposed emission factors are as follows:

Pollutant	Emission Factor
NO_X	15.0 g/hp-hr
CO	12.3 g/hp-hr
VOC	1.0 g/hp-hr

The proposed emission factors are greater than the emission factors identified in AP-42 (October 1996), Section 3.2, Table 3.2-1 for 4-cycle engines.

For the Operating Permit, these emission factors have been converted to fuel-based emission factors using the following equation:

$$EF\ (lbs/mmBtu) = \frac{[EF\ (g/hp\text{-}hr) \times 1\ lb/453.6\ g \times 10^6\ Btu/1\ mmBtu]}{\text{Design heat rate (Btu/hp-hr)}}$$

3. Monitoring Plan - Conditions 3.1 through 3.6 of the Operating Permit list the Monitoring and Recordkeeping provisions necessary to verify compliance with the Applicable Requirements for this engine.

The source proposed to monitor fuel consumption and calculate emissions. This is consistent with the requirements in the Internal Combustion Engine monitoring grid (see attached). In addition, the Btu content of the natural gas consumed must be determined semi-annually.

4. Compliance Status - The source certified that this unit was out of compliance with the emission limits at the time of the original operating permit application submittal. The source submitted a revised APEN and an application to modify the construction permit with the operating permit application. Upon issuance of the modified construction permit this source was deemed to be in compliance with all applicable requirements.

During its review the Division determined that although this unit, upon installation, had a PTE which exceeded the significance level (> 40 tpy of NO_x) its installation did not trigger PSD review as this engine replaced two (2) 300 HP engines and the net emissions increase was less than 5 tpy of NO_x.

D. Unit P007: Waukesha, Model L7042GU, 4-Cycle Internal Combustion Engine, Rated at 727 HP (Maximum), Serial No. 296452. Natural Gas Fired. Equipped with a Non-Selective Catalytic Reduction System for the Control of Nitrogen Oxides, Carbon Monoxide and Volatile Organic Compounds.

1. Applicable Requirements - This unit was first placed in service in 1994. This unit is covered under Construction Permit 94WE338-1 (initial approval, modification 2, dated November 4, 1996). This permit was moved to final approval status based upon the self-certification by the source that the unit was fully in compliance with each applicable requirement. The pertinent applicable requirements from this permit are as follows:

a. Visible emissions shall not exceed 20% Opacity (condition 1)

b. Emission limits (condition 3)

Nitrogen Oxides	3.85 lbs/hr	and	16.9 tons/yr
Carbon Monoxide	4.8 lbs/hr	and	21.1 tons/yr
Volatile Organic Compound	1.9 lbs/hr	and	8.4 tons/yr

c. Fuel consumption (condition 4)*

Natural gas	6,241 SCF/hr	and	54.7 mmSCF/day

Compliance with the annual limits shall be determined on a rolling twelve (12) month total. Each month a new twelve month total shall be calculated using the previous twelve calendar months' data. The permit holder shall calculate monthly emissions and keep a compliance record on site for Division review (condition 7).

*To account for the use of the lower heating value in the calculation of emissions the throughput limit above has been increased by 10%. The changes have been directly incorporated into the operating permit.

The short term limits have been removed per policy change stated above.

2. Emission Factors - See discussion under Units P001 - P004. Approval of emission factors for these units is necessary to the extent that the source must demonstrate compliance with the emission limits. The source has proposed to use emission factors based on operating experience. The proposed emission factors are as follows:

Pollutant	Emission Factor
NO_x	2.4 g/hp-hr
CO	3.0 g/hp-hr
VOC	1.2 g/hp-hr

The proposed NO_x and VOC emission factors are greater than those in AP-42 (October 1996), Section 3.2, Table 3.2-3 for 4-cycle engines equipped with non-selective catalytic reduction. The proposed emission factor for CO is less than the AP-42 emission factor for 4-cycle engines equipped with non-selective catalytic reduction (Table 3.2-3).

For the Operating Permit, these emission factors have been converted to fuel-based emission factors using the following equation:

$$EF\ (lbs/mmBtu) = \frac{[EF\ (g/hp\text{-}hr) \times 1\ lb/453.6\ g \times 10^6\ Btu/1\ mmBtu]}{\text{Design heat rate (Btu/hp-hr)}}$$

3. Monitoring Plan - Conditions 4.1 through 4.8 of the Operating Permit list the Monitoring and Recordkeeping provisions necessary to verify compliance with the Applicable Requirements for this engine.

The source proposed weekly portable monitoring for NO_x, CO and % O_2 as well as recording certain engine parameters when portable monitoring is done. The engine parameters to be recorded are operating hours, average rpms, average suction and discharge pressure, and engine temperature. The source also proposed that fuel usage would be monitored weekly. This is fairly consistent with the Internal Combustion Engine monitoring grid (see attached) which the Division developed to provide consistent monitoring requirements for similar emission units.

The monitoring grid identifies portable monitoring and monthly emission calculations, fuel use monitoring and recording of catalyst parameters (pressure and temperature differences) and the air to fuel ratio. The grid identifies quarterly portable monitoring for NO_X and CO and semi-annually portable monitoring for VOC. Although the source indicated that they would perform weekly portable monitoring, the Division will only require quarterly portable monitoring. The Division will require portable monitoring of NO_X and CO emissions. Although the grid specifies semi-annual portable monitoring for VOC, the Division will not require portable monitoring for VOC since the VOC emissions are relatively low and the emission factor used is greater the AP-42 uncontrolled emission factor. In addition, the Btu content of the natural gas consumed must be determined semi-annually.

4. Compliance Status - The source certified in the permit application that this engine was in compliance with all applicable requirements. However, upon source testing of the engine it was determined that the engine did not comply with the CO and NO_x limits. The source submitted a revised APEN and an application to modify the construction permit. Upon issuance of the modified construction permit the engine was deemed to be in compliance.

E. Unit P010: Q. B. Johnson Triethylene Glycol Dehydration Unit, Rated at 120 mmSCF/day, Model and Serial No. Unavailable. Equipped with a Flare Industries, Inc MAVP-18 Flare.

1. Applicable Requirements - This unit was first placed in service in June 1996. This unit is covered under Construction Permit 95WE774 (initial approval, May 23, 1996). This permit was moved to final approval status based upon the self-certification by the source that the unit was fully in compliance with each applicable

requirement. The pertinent applicable requirements from this permit are as follows:

a. Emission limits (condition 3)

Volatile Organic Compounds	212.1 lbs/day	and	38.7 tons/yr*

* Permit 95WE774 originally identified short term VOC emission limits as 8.1 lbs/hr. The short term limits have been removed per policy change stated above. Also, the VOC emissions due to combustion in the flare have been added to the limit.

b. Process rates (condition 4)

Natural Gas	120 mmSCF/day	and	43,800 mmSCF/yr

Annual records of the monthly rates of the following shall be maintained by the applicant and made available to the Division for inspection upon request: actual natural gas pipeline throughput and consumption of triethylene glycol.*

* Because triethylene glycol is not a HAP, the Division will not require the source to maintain records of triethylene glycol.

Compliance with annual limits shall be determined on a rolling twelve (12) month total. Each month a new twelve month total is calculated using the previous twelve months' data. The permit holder shall calculate monthly emissions and keep compliance records on site for Division review (condition 7).

The short term limits have been removed per policy change stated above.

c. Control device efficiency (condition 5)

Condenser unit shall be capable of reducing VOC emissions by 91.9 %. A plan for demonstrating compliance for this unit shall be developed and submitted and shall include the following:

Daily circulation rate of glycol shall not exceed 8.9 GPM
Monthly pipeline gas analysis (including BTEX if previous BTEX exceeded analysis)

In October 1997, the source requested to route the still vent to a flare and remove the conditions concerning the condenser as a control device. The following changes were incorporated into the operating permit:

Daily Circulation rate of glycol shall not exceed 18.0 GPM.
The Flare shall be capable of reducing VOC emissions by 98%.
Monthly pipeline gas analysis
Additional emission limits due to combustion:

Nitrogen Oxide	0.59 lb/hr	2.6 tons/yr

Carbon Monoxide	3.2 lb/hr	14.0 tons/yr

The control device efficiency will not be included in the Operating Permit as an applicable requirement, however, the Division will require monitoring to ensure that the control device is operating effectively. The Division will require a quarterly BTEX analysis to be compared to a "worst case" BTEX composition.

2. Emission Factors - Triethylene glycol is contacted with the natural gas stream to remove moisture. This mixture is heated in the still vent portion of the unit which drives off the water and some entrained VOCs. Still vent emissions are routed to the Flare which has a destruction efficiency of 98 %. Emissions from this process are typically predicted using the Gas Research Institute's GLYCalc Model. Emission factors for VOCs and various HAPs are dependent upon the variables input into this Model. These variables include glycol recirculation rate, cubic feet of gas processed, desired moisture content (dew point) of processed gas, and percentage breakdown by weight of constituents in the natural gas. Combustion emissions from the heater are exhausted through a separate stack. This heater is rated at 1.5 mmBtu/hr and falls under the insignificant activity category of Colorado Regulation 3, Part C, Section II.E.3.k. Therefore, these combustion emissions do not need to be considered for the Operating Permit.

The combustion emissions from the flare need to be considered. The following emission factors are from AP-42, Table 13.5-1 and 13.5-2 and are based on the amount of fuel combusted (waste gas and supplemental gas combined).

Pollutant	EF (lb/MMBtu)
NOx	0.37
CO	0.068
VOC*	0.0448

*Based on 32% of TOC being VOC (AP-42, Table 13.5-2).

3. Monitoring Plan - The Gas Research Institute's manual for their GLYCalc Version 3.0 Model defines the wet gas (inlet) temperature, glycol recirculation rate, and gas BTEX content as the three critical inputs to the Model for triethylene glycol units. Changes to the gas flow rate and inlet pressure do not radically affect emissions from glycol dehydrators.

Therefore, parametric monitoring of the inlet temperature, recirculation rate, flash tank pressure and temperature and BTEX composition of the natural gas processed will be required as detailed in Condition 5.1. Inlet pressure will be held constant for modeling purposes. Modeling will only be required when the defined values for the parameters monitored are not indicative of operating conditions during the month.

In addition, calculation and recordkeeping of the amount of gas throughput to the flare must be done monthly on a twelve month rolling total.

4. Compliance Status - This dehydrator is a new unit and was not included in the original application submitted by the source. The original application included two (2) triethylene glycol dehydrators which were installed in 1978 and 1983. At the time of installation, neither the Division or the source realized that the still vents of these units were significant sources of VOC emissions. Upon submittal of the Operating Permit application, it became apparent to both the source and the Division that these dehydrators both had emissions that exceeded the significance level (> 40 tpy) for PSD review. Therefore, the source opted to consolidate operations at two facilities and removed the two dehydrators that were originally identified in the Operating Permit application and installed this new controlled unit with emissions below the significance level. This unit is in compliance with all applicable requirements.

F. Unit F001: Fugitive VOC Emissions 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. At the request of the Division, the source calculated fugitive VOC emissions and submitted an APEN. The APEN requested 13.1 tons/yr VOC emissions which exceed Colorado Construction permit de minimis levels (Colorado Regulation 3, Part B, Section III). Fugitive emissions at compressor stations have traditionally not been permitted unless requirements of New Source Performance Standard (NSPS) Subpart KKK apply. In this case the Division has determined that NSPS KKK does not apply to this facility. However, as part of the Title V process, equipment leak estimates at these sources will be included in the Operating Permit if the state permitting thresholds are exceeded. Therefore, the requested emissions identified in the APEN submitted by the source have been incorporated into the Operating Permit as an applicable requirement.

2. Emission Factors - The source proposed to use emission factors from EPA's "Protocol for Equipment Leak Emission Estimates", EPA-453/R-95-017, dated November 1995. These factors are multiplied by the number of components of each type (e.g. Valves) and the weight percent VOC in the organic portion of the gas stream as determined in the most recent analysis. The emission factors are as follows:

Component	Emission Factor
Connector	4.41×10^{-4} lbs/comp/hr
Flange	8.60×10^{-4} lbs/comp/hr
Open-Ended Line	4.41×10^{-3} lbs/comp/hr
Other	1.94×10^{-2} lbs/comp/hr

Pump Seals	5.29×10^{-3} lbs/comp/hr
Valve	9.92×10^{-3} lbs/comp/hr

Annual emissions are determined by summing emissions for each component. Emissions for each component are calculated using the following equation:

$$\text{tons/yr} = \frac{[\text{\# of comp.} \times \text{EF (lbs/comp./hr)} \times 8760 \text{ hrs/yr} \times \text{\% VOC in gas}]}{2{,}000 \text{ lbs/ton}}$$

3. Monitoring Plan - Conditions 6.1 through 6.2 of the Operating Permit list the Monitoring and Recordkeeping provisions necessary to verify compliance with the Applicable Requirements for fugitive VOC emissions. An initial physical hard-count of facility components will be conducted within 90 days of permit issuance to verify existing hardware inventory. Records shall be kept of all component additions and deletions, and a running tally maintained. A physical hard-count of facility components shall be conducted every five years following the initial count required.

4. Compliance Status - An APEN was submitted May 25, 1995 at the request of the Division. This unit is currently considered to be in compliance with all applicable requirements.

IV. Insignificant Activities

General categories of insignificant activities include: fuel burning equipment less than 5 MMBTU/hr or if used for heating less than 10 MMBtu/hr, chemical storage tanks (less than 500 gal) and storage areas (total capacity less than 5,000 gal), landscaping and site housekeeping equipment, oil production wastewater tanks (less than 1% by volume crude oil), storage tanks less than 40,000 gal (lube oils, crude oil or condensate) and sources with emissions less than APEN de minimis levels. The specific insignificant activities that were identified in the permit application are as follows:

<u>Units with emissions below APEN de minimis levels (Reg 3, Part C.II.E.3.a)</u>

Tank T002 - glycol storage tank (2,915 gal)
Tanks T003 thru T005 - glycol storage tanks (1,000 gal each)
Tank T006 - methanol storage tank (10,150 gal)
Tanks T008 and T009 - methanol storage tank (500 gal each)
Tank T010 - mineral spirits tank (500 gal)
Blowdown emissions

<u>Fuel burning equipment less than 5 MMBtu/hr (Reg 3, Part C.II.E.3.k)</u>

Glycol dehydration unit burner (1.5 MMBtu/hr)
Heat medium heater

Crude oil or condensate loading equipment less than 10,000 gal/day (Reg 3, Part C.II.E.3.ee)

Condensate loading equipment

Storage tanks less than 40,000 gal - lube oil (Reg 3, Part C.II.E.3.aaa)

Tank T001 - lube oil storage tank (7,260 gal)

Storage tanks less than 40,000 gal - crude oil or condensate (Reg 3, Part C.II.E.3.ddd)

Tank T007 - condensate storage tank (12,690 gal)

V. Alternate Operating Scenarios

KN Energy has requested that temporary replacement of engines during times of engine overhaul be considered an Alternative Operating Scenario under the existing Operating Permit. The Division has concluded that temporary replacement will be defined as less than a 3 month period. The Division will allow 2 scenarios for temporary engine replacement.

The first scenario is to use an engine with an existing construction permit that has emission limits equal to or below that of the engine to be replaced and has demonstrated compliance with the construction permit limits. The second scenario is to use a grandfathered engine on site, to bring an engine in from out-of-state or to use a newly-purchased engine that does not have a Colorado Construction permit. With this option flue gas analyzer testing is required and the source must be willing to accept a determination of non-compliance should flue gas analyzer testing indicate that the emissions for the engine exceeded those defined in the Operating Permit. Non-compliance will be considered from the day the engine was replaced.

VI. Permit Shield

The source requested the permit shield for those requirements it identified as applicable to the emission unit. There are two permit shields that can be obtained for the Operating Permit. In general, the permit shield applies to the applicable requirements and that compliance with the Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the Operating Permit. If the source specifically requests and provides a justification, they can be shielded from requirements that are not applicable to the facility or to an emission unit. Because the source only identified applicable requirements and did not identify any non-applicable requirements that they wished to be shielded from the Division did not include any specific non-applicable requirements in the permit

shield.