Colorado Department of Public Health and Environment

OPERATING PERMIT

Trigen-Colorado Energy Corporation
Golden Facility

Issued: February 1, 2003

Last Revised: October 30, 2003

AIR POLLUTION CONTROL DIVISION
COLORADO OPERATING PERMIT

FACILITY NAME:	Trigen-Colorado Energy Corporation - Golden Facility	OPERATING PERMIT NUMBER
FACILITY ID:	0590820	**96OPJE143**
ISSUE DATE:	February 1, 2003	
EXPIRATION DATE:	January 31, 2008	
MODIFICATIONS:	See Appendix F of Permit	

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq. and applicable rules and regulations.

ISSUED TO:

Trigen-Nations Energy Company LLLP

PO Box 4088

Golden CO 80401-0088

PLANT SITE LOCATION:

25 10th Street

Golden, Jefferson County, CO 80401-0088

INFORMATION RELIED UPON

Operating Permit Application Received: February 21, 1996

And Additional Information Received: October 7, 1999; February 18, April 28, and July 21, 2000; August 30, 2002

Nature of Business: Steam Generation

Primary SIC: 4939

RESPONSIBLE OFFICIAL		FACILITY CONTACT PERSON	
Name:	Jeffrey K. Richie	Name:	Suzanne C. Stevens
Title:	Vice-President, General Manager	Title:	EHS Specialist
Phone:	303-277-5811	Phone:	303-277-6940

SUBMITTAL DEADLINES

Semi-Annual Monitoring Period:	January 1 – June 30, July 1 – December 31
Semi-Annual Monitoring Report:	August 1, 2003 & February 1, 2004 & subsequent years
Annual Compliance Period:	January 1 to December 31
Annual Compliance Certification:	February 1, 2004 and subsequent years

NOTE: The Semi-Annual Monitoring reports and the Annual Compliance report must be received at the Division office by 5:00 PM on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports.

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SECTION I - General Activities and Summary

1. Permitted Activities

1.1 This facility consists of five (5) boilers and the associated equipment for coal and ash handling. The boilers provide steam for one (1) 20 MWe generator, two (2) 10 MWe generators, and for industrial use. The Coors Brewery currently contracts for the purchase of the total electricity and steam output.

Boilers 1 and 2 are equipped to combust only natural gas and fuel oil. Boiler 3 uses only coal as fuel. Boilers 1, 2 and 3 have grandfathered status for the requirement to have a construction permit.

Boilers 4 and 5 are equipped to use coal as the primary fuel. Boiler 4 uses natural gas for the ignitors and natural gas or fuel oil may be used for backup fuel. Boiler 5 uses natural gas for the ignitors and start-up, and fuel oil is used for backup fuel. Ethanol, sludge from the Coors Brewery process wastewater treatment plant, and on-site generated on-spec oil are used in these boilers as auxiliary fuel with the coal.

Boilers 4 and 5 are subject to 40 CFR Part 60, New Source Performance Standards (NSPS) Subpart A and Subpart D – "Standards for Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971". NSPS Subpart D requires Boilers 4 and 5 to be equipped with continuous emission monitors for nitrogen oxides, sulfur dioxide, and opacity. Stack gas flow monitors have been installed to replace the need for oxygen or carbon dioxide monitors.

No coal processing is performed on-site. The coal is received ready for feed to the boilers. Boilers 4 and 5 are equipped with pulverizers that process the coal directly into the fire zone. The ash and flyash from the boilers may be sold or transported off-site for disposal.

1.2 The facility is located in Jefferson County in Golden, Colorado. 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 and Eagles Nest Wilderness Area are Federal Class I designated areas within 100 kilometers of the plant.

1.3 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this facility in accordance with the requirements, limitations, and conditions of this permit.

1.4 This Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Colorado Regulation No. 3, Part C. These Part C procedures meet all applicable substantive New Source Review requirements for purposes of this Operating Permit and shall survive

reissuance. This Operating Permit incorporates the applicable requirements (except as noted in Section II) from the following Colorado Construction Permit(s):

10JE660	11JE199	11JE305-1	11JE305-2	11JE305-3
13JE488	84JE375-1	84JE375-2	84JE375-3	92JE074-2

1.5 All conditions in this permit are enforceable by US Environmental Protection Agency, Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:**

Section II -	Condition 21	(Boiler 3, 4 and 5 Lead Modeling)
Section IV -	Condition 14	(Odor)
	Condition 18	(Ozone Depleting Compounds as noted)

1.6 All information gathered pursuant to the requirements of this permit is subject to the Record keeping and Reporting requirements listed under Condition 22 of the General Conditions in Section IV of this permit.

2. Alternative Operating Scenarios

2.1 The permittee shall be allowed to make the following changes to its method of operation without applying for a revision of this permit.

2.1.1 No separate operating scenarios have been specified.

3. Prevention of Significant Deterioration

3.1 This facility is located in an area designated as attainment for all criteria pollutants. It is classified as a major stationary source (potential to emit of any criteria pollutant > 100 tons per year as a listed source) for carbon monoxide, sulfur dioxide, nitrogen oxides, particulate matter and particulate matter smaller than ten (10) microns (PM_{10}) for the Prevention of Significant Deterioration/New Source Review (PSD/NSR) provisions (Colorado Regulation No. 3, Part B, Section IV.D.3). The existing facility is currently not a PSD-permitted facility. Future modifications at this facility resulting in a significant net emissions increase (see Colorado Regulation No. 3, Part A, Section I.B.37 and 58) for any pollutant as listed in Colorado Regulation No. 3, Part A, Section I.B.58 or a modification which is major by itself may result in the application of the PSD review requirements.

3.2 This Operating Permit is associated with the following Coors Brewing Company Title V Operating Permits for purposes of determining applicability of Prevention of Significant Deterioration regulations:

Golden Business Units 96OPJE140 Can Manufacturing 96OPJE139

4. Accidental Release Prevention Program (112(r))

4.1 Based on the information provided by the applicant, this facility is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act).

5. Summary of Emission Units

5.1 The emissions units regulated by this permit are the following:

Emission Unit	AIRS Stack Number	Description	Size	Pollution Control Device	Construction Permit
B001	S001	Combustion Engineering Model VU40, SN 17047, front firing oil and natural gas	288 MMBtu/hr	None	Grandfathered
B002	S002	Combustion Engineering Model VU40, SN 17049, front firing oil and natural gas	288 MMBtu/hr	None	Grandfathered
B003	S003	Combustion Engineering Model VU40, SN 17051, traveling grate spreader stoker, firing coal	225 MMBtu/hr	Carter Day 376RF10 H1-T, fabric filter baghouse with 4 compartments	Grandfathered
B004	S004	Combustion Engineering Model CE-VU40, SN 21321, tangential fired, firing coal, natural gas, #2 fuel oil, ethanol, on-site generated on-spec used oil and sludge from IWWTP	504 MMBtu/hr w/ NG 360 MMBtu/hr w/ Coal 427 MMBtu/hr w/ FO	Wheelabrator-Frye Model 264, Series 8R5 fabric filter with 8 compartments	10JE660

Emission Unit	AIRS Stack Number	Description	Size	Pollution Control Device	Construction Permit
B005	S006	Combustion Engineering Model CE-VU40, SN 27576, tangential fired, firing coal, natural gas, #2 fuel oil, ethanol, on-site generated on-spec used oil and sludge from IWWTP	650 MMBtu/hr	Carter Day 376RF10, fabric filter baghouse with 12 modules	11JE305-1
M001/ C004	S005	Rail car dumper to coal hoppers		Carter Day CLG2-144-RJ-120 fabric filter baghouse	11JE199
M001/ C005		Dumper hoppers to transfer conveyor		Carter Day CFS2-72R72 fabric filter baghouse	
M001/ C006	S005	Coal conveyor to Unit 4 silos		Carter Day CFM3-24-RJ-72 fabric filter baghouse	11JE199
M001/ C008	S007	Coal conveyor to Unit 5 silos		Carter Day CFM4-24-RJ-72 fabric filter baghouse	11JE305-2
M002/ C009	S008	General ash silo		Nuveyor Fia VCC 3-1211-7-4 36-inch cyclone in series	11JE305-3
M002/ C010				with Nuveyor Fia VCC 3-1261-15-A 20-inch cyclone then to	
M002/ C011				United Conveyor Fia VCC 5-3205-40C fabric filter baghouse	
M002/ C012				United Conveyor Fia VCC 3-3201-23 fabric filter baghouse on bin vent	

Emission Unit	AIRS Stack Number	Description	Size	Pollution Control Device	Construction Permit
M001/ C007	S009	Coal conveyor to Unit 3 silos		Carter Day 24RJ72 fabric filter baghouse	13JE488
M003/ C013 C014 C015	S010	Boiler #4 & #5 fly ash collection		36 inch UCC cyclone in series with 16 inch UCC cyclone followed by Carter Day 124RF8 fabric filter baghouse	84JE375-1
M003/ C016	S011	Flyash silo loadout		Midwest International MCD Vaculoader MV-22-429 fabric filter baghouse	84JE375-2
M003/ C017	S012	Flyash silo bin vent		Mikro Pulsair 8BV fabric filter	84JE375-3
E018	S013	General Motors diesel engine (Model SP250DH, SN 574162) for backup operation of Gardner-Denver air compressor,	250 HP	None	92JE074-2
M004		Cold cleaner solvent vents		None	Title V

SECTION II - Specific Permit Terms

1. B001 - CE Model VU40 SN 17047, Front Fired, 288 MMBtu/hr
B002 - CE Model VU40 SN 17049, Front Fired, 288 MMBtu/hr

Firing Natural Gas with #2 Fuel Oil as backup

Parameter	Permit Condition Number	Limitations	Emission Factors		Monitoring	
			NG, lb/MMscf	FO, lb/Mgallons	Method	Interval
PM	1.2 1.4	$0.5(FI)^{-0.26}$ lb/MMBtu	7.6	2	Record keeping and calculation	Annual
Fuel Usage	1.1					
PM_{10}	1.4		7.6	1.0		
NOx			280	24		
VOC			8.7	0.2		
CO			84	5		
SO_2	1.3 1.4	1.5 lbs/MMBtu - Fuel Oil	0.6	157S	Fuel Quality Demonstration	Monthly when fuel oil is delivered
Opacity	1.5 1.6	Colorado Regulation No. 1 §II.A.1 - Not to exceed 20 %			Natural Gas	
					Record keeping	None
Opacity - Fire Building, Cleaning of Fire Boxes, Soot Blowing, Start-up, or Process Modification		Colorado Regulation No. 1 §II.A.4 - Not to exceed 30% for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes			Fuel Oil	
					Visual observations, Method 9, Record keeping	Visual observations – AM & PM daily Method 9 – As necessary

1.1 The terms and conditions of this permit are based on the boiler burning natural gas and fuel oil. The use of any other fuel may require the permit to be re-opened prior to any use of the fuel. No. 2 distillate oil is ASTM Grade 2 distillate oil as defined by ASTM D396 or other methods approved in writing by the Division.

1.2 This source shall not emit or cause to be emitted total particulate emissions in excess of the limitation set by the Colorado Regulation No. 1, Section III, A.1.b. where the limit in pounds per million Btu of heat input is calculated from the equation $PE = 0.5(FI)^{-0.26}$, where PE = Particulate Emissions in lbs/MMBtu and FI = Fuel input in million Btu per hour. In the absence of credible

evidence to the contrary, compliance with the limit shall be presumed whenever natural gas or #2 fuel oil is used as fuel. A one-time calculation demonstrating the compliance with the particulate limit shall be completed, kept on record and made available for Division review upon request.

1.3 Colorado Regulation No. 1, Section VI, 'A.3.b.i. sets the sulfur dioxide limit when fuel oil is burned. The sulfur and heat content of the fuel oil may be obtained from purchasing contract specifications, vendor receipts or by fuel sampling and testing. The sulfur and heat content shall be determined in accordance with the appropriate ASTM methods or other methods approved in writing by the Division. If the values from the vendor receipts are to be used, each vendor shall provide a one-time written certification that the fuel oil testing is in accordance with the approved methods. The certification shall be kept with the compliance determination records and made available for Division review upon request. If the values are obtained from the purchasing contract specifications, a copy of specifications and any testing results shall be kept with the compliance determination records. If the values are to be determined from fuel sampling and testing by the permittee, the permittee shall prepare and submit for Division approval a fuel oil sampling and testing plan within six (6) calendar months of the date of issuance of this operating permit. The values used for the compliance determinations shall be the values from the most recent shipment of fuel oil delivered to the storage tank.

1.4 The actual annual emission estimates shall be calculated using the fuel usage and the emission factor shown. The boiler is subject to the General Conditions in Section IV of this Permit including Record keeping and Reporting requirements listed under Condition 21 and Fee Payment under Condition 7. Sulfur dioxide emissions are dependent on the sulfur content of the fuel oil. The fuel parameter variable “S” refers to the sulfur content of the fuel oil expressed in terms of percent weight. For example, if the sulfur content of the distillate fuel oil is 0.29 percent by weight, then “S” equals 0.29. Using “S” equals 0.29, the SO_2 emission factor for SO_2 emission calculations is 157 X 0.29 = 45.53 lb/Mgallons.

1.5 Natural Gas - The opacity compliance standard is set not to exceed 20% by Colorado Regulation No. 1 'II.A.1, except for periods of building of a new fire, cleaning of fire boxes, soot blowing, startup, or any process modification. During such periods the opacity of emissions is not to exceed 30% as set by Colorado Regulation No. 1 'II.A.4. In the absence of credible evidence to the contrary, compliance with the opacity limits shall be presumed whenever only natural gas is being fired as fuel and the unit is being operated in accordance with good engineering practices to control air pollution. Records shall be maintained of when the unit is operating on natural gas only.

1.6 Fuel Oil - The opacity compliance standard is set not to exceed 20% by Colorado Regulation No. 1 'II.A.1, except for periods of building of a new fire, cleaning of fire boxes, soot blowing, startup, or any process modification. During such periods the opacity of emissions is not to exceed 30% as set by Colorado Regulation No. 1 'II.A.4.

Whenever fuel oil is being fired to operate the unit, non-Method 9 observations for visible emissions, other than steam, persisting longer than six (6) minutes shall be performed once in the morning and once in the afternoon during daylight hours for each day of operation. Records of the observations

shall be maintained and made available to the Division for review upon request. A Method 9 observation shall be performed if visible emissions, other than steam, are observed to persist for longer than six (6) minutes.

If the Method 9 observation indicates an exceedance of the opacity limit, additional Method 9 observations shall be performed. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows that the opacity is less than the opacity limit. A written explanation for the visible emissions shall be prepared and filed with the copy of the Method 9 observation. Such records shall be made available for Division review upon request.

All Method 9 opacity observations shall be performed by an observer with a current and valid certification. A clear and readable copy of the observer's certificate shall be kept on file with the copies of the observations. Copies of the certification(s) and observation(s) shall be made available for Division review upon request.

The requirement for visual inspection of the emissions during fuel oil firing shall not pertain to routine maintenance testing of the standby status of the fuel oil delivery system lasting less than thirty (30) minutes.

2. B003 - CE Model VU40 SN 17051, Traveling Grate Stoker, 225 MMBtu/hr Firing Coal

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Fuel Usage	2.1			Record keeping and calculation	Annual
PM_{10}	2.4				
NOx					
VOC					
CO					
PM	2.2 2.4	$0.5(FI)^{-0.26}$ lb/MMBtu		Fuel quality demonstration	Annual
SO_2	2.3 2.4	1.8 lbs/MMBtu			
Opacity	2.5 2.6	Colorado Regulation No. 1 §II.A.1 - Not to exceed 20 %		Visual observations, Method 9, Record keeping	Visual observations – AM & PM daily Method 9 – As necessary
Opacity - Fire Building, Cleaning of Fire Boxes, Soot Blowing, Start-up, or Process Modification		Colorado Regulation No. 1 §II.A.4 - Not to exceed 30%, for a period or periods aggregating more than six (6) consecutive minutes in any 60 consecutive minutes			
Lead - State Only	21	State Only - Ambient air concentration not to exceed 1.5 micrograms per standard cubic meter averaged over a one-month period		Modeling, record keeping and calculation	One time demonstration

2.1 The terms and conditions of this permit are based on the boiler burning coal as the primary fuel. The use of any other fuel as the primary fuel may require the permit to be re-opened prior to any use of the fuel.

2.2 This source shall not emit or cause to be emitted total particulate emissions in excess of the limitation set by the Colorado Regulation No. 1, Section III, A.1.b. where the limit in pounds per million Btu of heat input is calculated from the equation $PE = 0.5(FI)^{-0.26}$, where PE = Particulate Emissions in lbs/MMBtu and FI = Fuel input in million Btu per hour. In the absence of credible evidence to the contrary, compliance with the limit shall be presumed whenever coal is used as fuel and the baghouse and boiler are being operated in accordance with good engineering practices to

control air pollution emissions. Records demonstrating that the permittee is using good engineering practices, such as following the manufacturer's recommendations or documented operating practices and procedures shall be kept and made available for Division review upon request. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request.

2.3 Colorado Regulation No. 1, Section VI, §A.3.a.i. sets the sulfur dioxide limit. The sulfur and heat content of the coal may be obtained from purchasing contract specifications, vendor receipts or by fuel sampling and testing. The sulfur and heat content shall be determined in accordance with the appropriate ASTM methods or other methods approved in writing by the Division. If the values from the vendor receipts are to be used the vendor shall provide a one-time written certification that the coal was tested in accordance with the approved methods. The certification shall be kept with the compliance determination records and made available for Division review upon request. If the values are obtained from the purchasing contract specifications, a copy of specifications and any testing results shall be kept with the compliance determination records. If the values are to be determined from fuel sampling and testing by the permittee, the permittee shall prepare and submit for Division approval a coal sampling and testing plan within six (6) months of the date of issuance of this operating permit. The values used for the compliance determinations shall be the values from the most recent shipment of coal delivered. Compliance may be determined by estimating emissions using calculations incorporating the heat content and sulfur content.

If records are available to demonstrate that coal shipments with a combination of a heat content less than 19 million Btu per ton and a sulfur content greater than 0.9% are not received, a copy of these records and a demonstration of the compliance may be made and maintained. The records shall be made available for Division review upon request. In the event of delivery of any coal shipments with any combination of a heat content lower than 19 million Btu per ton and a sulfur content greater than 0.9%, compliance with the sulfur limit shall be demonstrated for the shipment and records of the compliance demonstration maintained and made available for Division review upon request. Compliance may be determined by estimating emissions using calculations incorporating the heat content and percent sulfur of the coal.

2.4 The actual annual emission estimates shall be calculated using the fuel usage and the emission factors from the following table appropriate for the coal type, or calculation indicated:

	Coal Emissions, lb/ton			
Pollutant	Sub-bituminous	Bituminous	Lignite	Anthracite
NOx	8.8	11	5.8	3
CO	5	5	- - -	0.6
NMTOC	0.06	0.05	0.03	0.30
PM	66*(1-RE)[a]	66*(1-RE)	8.0*%A*(1-RE)	0.8*%A(1-RE)
PM_{10}	13.2*(1-RE)	13.2*(1-RE)	1.6*%A*(1-RE)	- - -
SO_2	35 * %S	38*%S	30*%S	39*%S
Lead[b]	507lb/10^{12} Btu	507lb/10^{12} Btu	$3.4*(C/A*PM)^{0.80}$	0.0089

A= Ash S= Sulfur C = lead concentration in coal in ppmwt

[a] RE = Removal Efficiency of baghouse
[b] See also Condition 21 of this Operating Permit

The boiler is subject to the General Conditions in Section IV of this Permit including Record keeping and Reporting requirements listed under Condition 21 and Fee Payment under Condition 7. Sulfur dioxide emissions are dependent on the sulfur content of the coal. The fuel parameter variable "S" refers to the sulfur content of the coal expressed in terms of percent weight. For example, if the sulfur content of the coal is 0.45 percent by weight, then "S" equals 0.45. Using "S" equals 0.45, the SO_2 emission factor for SO_2 emission calculations is 35 X 0.45 = 15.75 lb/ton.

2.5 The opacity compliance standard is set not to exceed 20% by Colorado Regulation No. 1 'II.A.1, except for periods of building of a new fire, cleaning of fire boxes, soot blowing, startup, or any process modification. During such periods the opacity of emissions is not to exceed 30% as set by Colorado Regulation No. 1 'II.A.4. Shutdown, upsets and offline emissions are subject to the 20% opacity limit.

Non-Method 9 observations for visible emissions, other than steam, persisting longer than six (6) minutes shall be performed once in the morning and once in the afternoon during daylight hours for each day of operation. Records of the observations shall be maintained and made available to the Division for review upon request. A Method 9 observation shall be performed if visible emissions, other than steam, are observed to persist for longer than six (6) minutes.

If the Method 9 observation indicates an exceedance of the opacity limit, additional Method 9 observations shall be performed. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows that the opacity is less than the opacity limit. A written explanation for the visible

emissions shall be prepared and filed with the copy of the Method 9 observation. Such records shall be made available for Division review upon request.

All Method 9 opacity observations shall be performed by an observer with a current and valid certification. A clear and readable copy of the observer's certificate shall be kept on file with the copies of the observations. Copies of the certification(s) and observation(s) shall be made available for Division review upon request.

2.6 As an alternative to the Method 9 observations required in Condition 2.5 immediately above , a Continuous Opacity Monitoring (COM) system may be installed to monitor opacity from this unit. If installed, the COM system shall meet the relevant requirements found in Condition 19 (Continuous Emission Monitoring and Continuous Opacity Monitoring Systems) and Condition 20 (Opacity Requirements and Periodic Monitoring) of this permit, and the requirements of Condition 2.5. The Division shall be provided written notification of the decision to provide the COM, and a written notification of the placed in service date within fourteen (14) calendar days of the COM startup.

3. B004 - CE Model CE-VU40 SN 21321, Tangential Fired, 360 MMBtu/hr

Design Rate = 504 MMBtu per hour burning natural gas
360 MMBtu per hour burning coal
427 MMBtu per hour burning fuel oil

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Fuel Usage					
Coal	3.1	150,171 TPY		Record keeping and calculation 12 month rolling total	Monthly
Natural Gas		4415 MMscf/year			
#2 Fuel Oil		27.1 MMgallons/year			
Sludge		71,200 TPY *			
Ethanol		34 TPY*			
On-Spec Oil		600,000 gallon/year*			
PM PM_{10}	3.5 18.1	Coal, FO & NG - 0.10 lb/MMBtu ---------- 158.0 TPY			
SO_2	3.2 3.4 19	Fuel Oil - 0.8 lb/MMBtu ---------- Coal - 1.2 lb/MMBtu ---------- Limit for Boiler 4 only 1892.0 TPY ---------- Combined Limit for Boilers 4 & 5 4888.0 TPY		CEM, 3 hour rolling average	Continuous
NOx	3.3 3.4 19	0.2 lb/MMBtu - NG ---------- 0.3 lb/MMBtu - FO ---------- 0.7 lb/MMBtu - Coal ---------- Limit for Boiler 4 only 1104.0 TPY ---------- Combined Limit for Boilers 4 & 5 2587.0 TPY		CEM, 3 hour rolling average	Continuous

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Emission Reductions Required	3.4	Combined Reductions from Boilers 4 & 5 SO_2 = 420 TPY NO_X = 510 TPY			
VOC	3.7	19.21 TPY		Record keeping and calculation 12 month rolling total	Monthly
CO	3.6	88.3 TPY			
Opacity	20.1	Colorado Regulation No. 1 §II.A.1 - Not to exceed 20% except as provided for in Condition 20.2 ---------- NSPS Subpart D - Not to exceed 20% except for one six-minute period per hour not to exceed 27%.		COM	Average of six (6) consecutive minutes
	20.2	Colorado Regulation No. 1 §II.A.4 - Not to exceed 30%, for a period or periods aggregating more than six (6) consecutive minutes in any 60 consecutive minutes		COM	Average of six (6) consecutive minutes
Stack gas flow rate	3.4 19			CEM	Continuous
Lead - State Only	21	State Only - Ambient air concentration not to exceed 1.5 micrograms per standard cubic meter averaged over a one-month period		Modeling, record keeping and calculation	One time demonstration
Compliance Test	18.2			EPA or other Division Approved Methods	As defined in Condition 18.2

* These values are the limits for the total combined use of Boiler 4 (CE VU40 SN 21321) and Boiler 5 (CE VU40 SN 27576)

3.1 The terms and conditions of this permit are based on the use of coal, natural gas, and #2 fuel oil as the primary fuels. A change to a different primary fuel may require the permit to be reopened. On-Spec oil is to be waste oil meeting EPA used oil specification, generated on-site by Coors Brewery or Trigen. On-Spec oil, ethanol and sludge are to be burned as auxiliary fuels with coal. No. 2 fuel oil is ASTM Grade 2 distillate oil as defined by ASTM or other methods approved in writing by the Division. Fuel oil is to be used for backup fuel only. Natural gas shall be used for the ignitors or as a primary fuel. (Construction Permit 10JE660 Condition 13)

The consumption limits for coal, natural gas, #2 fuel oil, and the respective total consumption limits for Boiler 4 and Boiler 5 of sludge, ethanol, and On-Spec waste oil (meeting EPA's used oil specifications) were established by Construction Permit 10JE660 Condition 13.

3.2 The annual sulfur dioxide emissions for Boiler 4 shall not exceed 1892 tons per year. The combined sulfur dioxide limit for Boiler 4 and Boiler 5 is subject to the reduction specified in Condition 3.4. (Construction Permit 10JE660 Condition 11) The combined sulfur dioxide limit for Boiler 4 and Boiler 5 is 4888.0 tons per year after the mandatory reduction.

The Btu based sulfur dioxide limit is set by Colorado Regulation No. 1, Part VI, Section A.3.b and 40 CFR Part 60 '60.43 (a) (1) when burning fuel oil. The Btu based sulfur dioxide limit is set by Colorado Regulation No.1, Part VI, Section A.3.a.ii and 40 CFR Part 60 '60.43 (a) (2) when burning coal.

3.3 The annual nitrogen oxide emissions for Boiler 4 shall not exceed 1104.0 tons per year. The combined nitrogen oxide limit for Boiler 4 and Boiler 5 is subject to the reduction specified in Condition 3.4. (Construction Permit 10JE660 Condition 11) The combined nitrogen oxides limit for Boiler 4 and Boiler 5 is 2587.0 tons per year after the mandatory reduction.

The Btu based nitrogen oxides limit is set by 40 CFR Part 60 '60.44(a)(2) when burning fuel oil. The Btu based nitrogen oxides limit is set by Regulation 40 CFR Part 60 '60.44(a)(3) when burning coal. The Btu based nitrogen oxides limit is set by 40 CFR Part 60 '60.44(a)(1) when burning natural gas.

3.4 The annual permit limits for emissions of sulfur dioxide and nitrogen oxides are based on permit limits of 1.2 pounds per million Btu for sulfur dioxide and 0.7 pounds per million Btu for nitrogen oxides, a design rate of 360 million Btu per hour when burning coal, and full operation at 8760 hours per year. Reductions in the allowable sulfur dioxide and nitrogen oxides emissions are required by the Colorado State Implementation Plan for Particulate Matter (PM10), referred to as the PM10 SIP, and the February 1994 Settlement Agreement between Coors Brewing Company and the Air Pollution Control Division. The reductions required may be taken from the permit limits for Boiler #4, Boiler #5, or as a combination of reductions from Boilers 4 and 5. The emission reductions required are as follows:

PM10 SIP:	Sulfur dioxide reduction of 135 tons per year Nitrogen oxides reduction of 225 tons per year
Agreement:	Sulfur dioxide reduction of 285 tons per year Nitrogen oxides reduction of 285 tons per year
Total:	Sulfur dioxide reduction of 420 tons per year Nitrogen oxides reduction of 510 tons per year

Compliance with the emission limits shall be demonstrated as follows. The stack gas flow monitors installed shall be used to allow for measurement of monitored SO_2 and NOx in pounds per hour and converted to pounds per million Btu in accordance with the method submitted in Trigen's letter dated June 18, 1997. (Construction Permit 10JE660 Condition 12) The approved method is included in Appendix G of this permit for reference.

3.5 The annual particulate limit is based on the permit limit of 0.1 pounds per million Btu times 360 million Btu per hour (maximum Btu per hour burning coal) times 8760 hours per year. (Construction Permit 10JE660 Condition 11)

The Btu based particulate emissions limit is set by 40 CFR Part 60 '60.42 (a) (1) when burning fuel oil, coal or natural gas at 0.10 pounds per million Btu. This is the most stringent standard for the particulate emissions.

3.6 The carbon monoxide limit is based on natural gas consumption at the 504 million Btu per hour design rate times an emission rate of 40 pounds per million standard cubic feet times 8760 hours per year and divided by an assumed heating value of 1000 Btu per standard cubic of natural gas.(Construction Permit 10JE660 Condition 11)

3.7 The volatile organic compound limit is based on natural gas consumption at the 504 million Btu per hour design rate times an emission rate of 8.7 pounds TNMOC per million standard cubic feet (ref. AP-42, Table 1.4-2: TOC - methane = TNMOC: 11.0 - 2.3 = 8.7) times 8760 hours per year and divided by an assumed heating value of 1000 Btu per standard cubic of natural gas. (Construction Permit 10JE660 Condition 11 as modified directly in this Operating Permit in accordance with Section I, Condition 1.4)

3.8 The fuel oil sulfur content, the coal sulfur content and the fuel heat content shall be determined by the appropriate ASTM methods or equivalent methods approved in writing by the Division. The Btu content shall be based on the lower heating value of the fuel (Colorado Regulation No. 1, Section VI. 'C.1.d)

3.9 The monthly fuel consumption, auxiliary fuel consumption and emissions for the previous calendar month and the 12 month rolling total for the previous 12 calendar months shall be determined and the compliance evaluated by the end of each new calendar month. Records of the calculations and the compliance determinations shall be maintained and made available for Division review upon request.

The emission estimates shall be calculated using the fuel usage and the emission factors from the following table appropriate for the coal type, or calculation indicated.

Pollutant	#2 FO, lb/Mgallons	NG, lb/MMscf	Ethanol, lb/Mgallons	Waste Oil, lb/Mgallons
CO	5	24	3.6	5
VOC	0.2	8.7	0.4[a]	1.0
PM	2	7.6	0.6	64 * %A
PM_{10}	50% * PM	7.6	0.6	51% * %A

[a] TOC - CH_4 = 0.6 - 0.2 = 0.4

	Coal Emissions, lb/ton			
Pollutant	Sub-bituminous	Bituminous	Lignite	Anthracite
CO	0.5	0.5	0.25	
NMTOC	0.06	0.06	0.04	
PM	10*%A	10*%A	6.5*%A	10*%A
PM_{10}	2.3*%A	2.3*%A	2.3*%A	2.3*%A

A= Ash S= Sulfur

3.10 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (Construction Permit 10JE660 Condition 3)

4. B005 - CE Model CE-VU40 SN 27576, Tangential Fired, 650 MMBtu/hr

Parameter		Permit Condition Number	Limitations	Emission Factors	Monitoring	
					Method	Interval
Fuel Usage						
	Coal	4.1	316,333 tons per year		Record keeping and calculation 12 month rolling total	Monthly
	Natural gas		350 MMscf /yr			
	#2 Fuel Oil		41.26 MMgallons/year			
	Ethanol		34 TPY*			
	Sludge		71,200 TPY*			
	On-Spec Oil		600,000 gallons/year*			
	Btu Input		5,694,000 MMBtu/year			
PM/PM_{10}		4.4 18.1	0.1 lb/MMBtu and 285.0 TPY			
VOC		4.4	9.5 tons/year			
CO			103.1 tons/year			
SO_2		4.2 4.5 19	0.8 lb/MMBtu - Fuel Oil ---------- 1.2 lb/MMBtu - Coal ---------- Limit for Boiler 5 only 3416.0 TPY ---------- Combined Limit for Boilers 4 & 5 4888.0 TPY		CEM 3 hour rolling average	Continuous

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
NOx	4.3 4.5 19	0.2 lb/MMBtu - NG ---------- 0.3 lb/MMBtu - FO ---------- 0.7 lb/MMBtu - Coal ---------- Limit for Boiler 5 only 1993.0 TPY ---------- Combined Limit for Boilers 4 & 5 2587.0 TPY		CEM 3 hour rolling average	Continuous
Emission Reductions Required	4.5	Combined Reductions from Boilers 4 & 5 SO_2 = 420 tons/year NO_X = 510 tons/year			
Stack Gas Flow Rate	4.5 19			CEM	Continuous
Opacity	20.1	Colorado Regulation No. 1 §II.A.1 - Not to exceed 20% except as provided for in Condition 20.2 ---------- NSPS Subpart D - Not to exceed 20% except for one six-minute period per hour not to exceed 27%.		COM	Average of six (6) consecutive minutes
Opacity	20.2	Colorado Regulation No. 1 §II.A.4 - Not to exceed 30%, for a period or periods aggregating more than six (6) consecutive minutes in any 60 consecutive minutes		COM	Average of six (6) consecutive minutes
Lead - State Only	21	State Only - Ambient air concentration not to exceed 1.5 micrograms per standard cubic meter averaged over a one-month period		Modeling, record keeping and calculation	One time demonstration
Compliance Test	18.2			EPA or other Division Approved Methods	As defined in Condition 18.2

* These values are the limits for the total combined use of Boiler 4 (CE VU40 SN21321) and Boiler 5 (CE VU40 SN 27576)

4.1 The terms and conditions of this permit are based on the use of coal and #2 fuel oil as the primary fuels. A change to a different primary fuel may require the permit to be reopened. On-Spec oil is to be waste oil meeting EPA use oil specifications, generated on-site by Coors Brewery or

Trigen. On-Spec oil, ethanol and sludge are to be burned as auxiliary fuels with coal. No. 2 fuel oil is ASTM Grade 2 distillate oil as defined by ASTM D396 or other methods approved in writing by the Division.

The consumption limits for coal, natural gas, #2 fuel oil, and the respective total consumption limits for Boiler 4 and Boiler 5 of sludge, ethanol, and On-Spec waste oil (meeting EPA's used oil specifications) were established by Construction Permit 11JE305-1 Condition 13.

The heat input shall not exceed 650 MMBtu/hr or 5,694,000 MMBtu/year. Natural gas is used as an ignitor fuel only. On-Spec waste oil, ethanol and sludge are burned as auxiliary fuels with the coal. Fuel oil is a backup fuel. (Construction Permit 11JE305-1 Condition 13)

4.2 The annual sulfur dioxide emissions for Boiler 5 shall not exceed 3416 tons per year. The combined sulfur dioxide limit for Boiler 4 and Boiler 5 is subject to the reduction specified in Condition 4.5. (Construction Permit 10JE660 Condition 11) The combined sulfur dioxide limit for Boiler 4 and Boiler 5 is 4888.0 tons per year after the mandatory reduction.

The Btu based sulfur dioxide limit is set by Colorado Regulation No. 1, Part VI, Section A.3.b and 40 CFR Part 60 '60.43 (a) (1) when burning fuel oil. The Btu based sulfur dioxide limit is set by Colorado Regulation No.1, Part VI, Section A.3.a.ii and 40 CFR Part 60 '60.43 (a) (2) when burning coal.

4.3 The annual nitrogen oxides emissions for Boiler 5 shall not exceed 1993.0 tons per year. The combined nitrogen oxide limit for Boiler 4 and Boiler 5 is subject to the reduction specified in Condition 4.5. (Construction Permit 10JE660 Condition 11) The combined nitrogen oxides limit for Boiler 4 and Boiler 5 is 2587.0 tons per year after the mandatory reduction.

The Btu based nitrogen oxides standard is set by 40 CFR Part 60 '60.44(a)(2) when burning fuel oil. The Btu based nitrogen oxides limit is set by 40 CFR Part 60 '60.44(a)(3) when burning coal. The Btu based nitrogen oxides limit is set by 40 CFR Part 60 '60.44(a)(1) when burning natural gas.

4.4 Particulate limits based on an allowable of 0.1 lb/MMBtu times 650 MMBtu/hr (maximum Btu/hr burning coal) times 8760 hours per year (annual limit).(Construction Permit 11JE305-1 Condition 11) The Btu based particulate emissions limit is set 40 CFR Part 60 '60.42 (a) (1) when burning fuel oil, coal or natural gas at 0.10 pounds per million Btu. This is the most stringent standard for the particulate emissions.

CO limits are based on #2 fuel oil consumption at the 650 MMBtu/hr design rate times an emission factor of 5 pounds per thousand gallons of fuel oil (ref. AP-42) and an assumed heating value of 138,000 Btu/gallon. (Construction Permit 11JE305-1 Condition 11)

VOC limits based on coal consumption at a design rate of 650 MMBtu/hr, heating value of 18 MMBtu/ton of coal, and an emission factor of 0.06 lb/ton TNMOC (ref. AP-42, Table 1.1-18). (Construction Permit 11JE305-1 Condition 11)

4.5 The allowable permit limits for emissions of sulfur dioxide and nitrogen oxides are based on permit limits of 1.2 pounds per million Btu for sulfur dioxide and 0.7 lbs per million Btu for nitrogen oxides, a design rate of 650 million Btu per hour, and full operation at 8760 hours per year. Reductions in the allowable sulfur dioxides and nitrogen oxides emissions are required by the Colorado State Implementation Plan for Particulate Matter (PM_{10}), referred to as the PM_{10} SIP, and the February 1994 Settlement Agreement between Coors Brewing Company and the Air Pollution Control Division. The reductions required may be taken from the permit limits for Boiler #4, Boiler #5 or as a combination of reductions from Boilers 4 and 5. The emission reductions required are as follows:

PM_{10} SIP:	SO_2 reduction of 135 tons per year NOx reduction of 225 tons per year
Agreement:	SO_2 reduction of 285 tons per year NOx reduction of 285 tons per year
Total:	SO_2 reduction of 420 tons per year NOx reduction of 510 tons per year

Compliance with the emission limits shall be demonstrated as follows. The stack gas flow monitors installed shall be used to allow for measurement of monitored SO_2 and NOx in pounds per hour and converted to pounds per million Btu in accordance with the method submitted in Trigen's letter dated June 18, 1997.(Construction Permit 11JE305-1 Condition 12) The approved method is included in Appendix G of this permit for reference.

The monthly throughput, fuel consumption, auxiliary fuel consumption and emissions for the previous calendar month and the 12 month rolling total for the previous 12 calendar months shall be determined and the compliance evaluated by the end of each new calendar month. Records of the calculations and the compliance determinations shall be maintained and made available for Division review upon request.

The emission estimates shall be calculated using the fuel usage and the emission factors from the following table appropriate for the coal type, or calculation indicated.

Pollutant	#2 FO, lb/Mgallons	NG, lb/MMscf	Ethanol, lb/Mgallons	Waste Oil, lb/Mgallons
CO	5	24	3.6	5
VOC	0.2	8.7	0.4[a]	1.0
PM	2	7.6	0.6	64 * %A
PM_{10}	50% * PM	7.6	0.6	51% * %A

[a] TOC - CH_4 = 0.6 - 0.2 = 0.4

	Coal Emissions, lb/ton			
Pollutant	Sub-bituminous	Bituminous	Lignite	Anthracite
CO	0.5	0.5	0.25	
NMTOC	0.06	0.06	0.04	
PM	10*%A	10*%A	6.5*%A	10*%A
PM_{10}	2.3*%A	2.3*%A	2.3*%A	2.3*%A

A= Ash S= Sulfur

4.6 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (Construction Permit 11JE305-1 Condition 3)

4.7 The fuel oil sulfur content, the coal sulfur content and the fuel heat content shall be determined by the appropriate ASTM methods or equivalent methods approved in writing by the Division. The Btu content shall be based on the lower heating value of the fuel (Colorado Regulation No. 1, Section VI. 'C.1.d)

5. M001 - Coal Handling

C004 - Rail car dumper to coal hoppers
C005 - Dumper hopper to transfer conveyor
C006 - Coal conveyor to Unit 4 silos

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Coal Processed	5.1 5.3 5.4 5.5 5.6	553,228 tons per year total for Boilers 3, 4, & 5 combined and 150,171 tons per year for Boiler 4		Record keeping and calculation 12 month rolling total	Monthly
PM/PM_{10}		51.6 tons per year	AP-42		
Opacity	16	Not to exceed 20%		Visual observations Method 9	As necessary
Coal Analysis	5.2			ASTM, EPA or other Division approved methods	Each shipment

5.1 The coal throughput and emission limits were set by Conditions 1, 2 and 3 of Construction Permit 11JE199.

5.2 The coal sulfur content and the fuel heat content shall be determined by the appropriate ASTM methods or equivalent methods approved in writing by the Division. The Btu content shall be based on the lower heating value of the fuel (Colorado Regulation No. 1, Section VI. 'C.1.d)

A composite representative sample of each shipment of coal shall be obtained and submitted for analysis of the heat content, the sulfur content and the ash content. Within six (6) calendar months of the issue date of this permit Division approved procedures for sampling, chain-of-custody and testing shall be implemented.

The annual certification shall include a summary report of the coal sulfur, heat and ash content for the reporting period. The report shall identify the maximum, minimum and average values for each parameter, and the date of the shipment associated with each maximum and minimum test result.

5.3 The amount of coal handled and the appropriate AP-42 emission factor shall be used to estimate the emissions. Documentation of the source of each of the AP-42 emission factors used shall be maintained and made available for Division review upon request.

5.4 Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work

records shall be maintained and made available to the Division for review upon request. The information obtained from the opacity observations of Condition 16 of this Operating Permit and the records of the baghouse maintenance shall be used in determining appropriate amount of particulate matter reduction to be applied in the emissions estimate.

5.5 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR Part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

5.6 Compliance with the annual limits shall be determined on a rolling twelve (12) calendar month total. The amount of coal conveyed and the emissions shall be calculated for each calendar month within thirty (30) calendar days of the end of each calendar month. A new twelve (12) calendar month total shall be calculated and compliance with the annual limits shall be determined. The calculations and compliance determinations shall be kept on file and made available for Division review upon request.

6. M001 - Coal Handling

C008 - Coal Conveyor to Unit 5 silos

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Coal Throughput	6.1 6.2 6.3 6.4 6.5	316,333 tons per year		Record keeping and calculation 12 month rolling total	Monthly
PM / PM_{10}		22.7 tons per year	AP-42		
Opacity	16	Not to exceed 20%		Visible Emissions and Method 9	As required

6.1 The coal throughput and emission limits were set by Conditions 1, 2 and 3 of Construction Permit 11JE305-2.

6.2 The amount of coal conveyed and the appropriate AP-42 emission factor shall be used to estimate the emissions. Documentation of the source of each of the AP-42 emission factors used shall be maintained and made available for Division review upon request.

6.3 Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work records shall be maintained and made available to the Division for review upon request. The information obtained from the opacity observations of Condition 16 of this Operating Permit and the records of the baghouse maintenance shall be used in determining the appropriate amount of particulate matter reduction to be applied in the emissions estimate.

6.4 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

6.5 Compliance with the annual limits shall be determined on a rolling twelve (12) calendar month total. The coal conveyed and the emissions shall be calculated for each calendar month within thirty (30) calendar days of the end of each calendar month. A new twelve (12) calendar month total shall be calculated and compliance with the annual limits shall be determined. The calculations and compliance determinations shall be kept on file and made available for Division review upon request.

7. M002 - General Ash Handling

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Flyash processing/ production	7.1 7.2 7.3 7.4 7.5	61,300 tons per year		Record keeping and calculation 12 month rolling total	Monthly
PM / PM_{10}		37.51 tons per year	AP-42		
Opacity	16	Not to exceed 20%		Visible emissions and Method 9	As required

7.1 The general ash throughput and emission limits were set by Conditions 1, 2 and 3 of Construction Permit 11JE305-3.

7.2 The amount of ash handled and the appropriate AP-42 emission factor shall be used to estimate the emissions. Documentation of the source of each of the AP-42 emission factors used shall be maintained and made available for Division review upon request.

7.3 Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work records shall be maintained and made available to the Division for review upon request. The information obtained from the opacity observations of Condition 16 of this Operating Permit and the records of the baghouse maintenance shall be used in determining the appropriate amount of particulate matter reduction to be applied in the emissions estimate.

7.4 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

7.5 Compliance with the annual limits shall be determined on a rolling twelve (12) calendar month total. The amount of ash handled and the emissions shall be calculated for each calendar month within thirty (30) calendar days of the end of each calendar month. A new twelve (12) calendar month total shall be calculated and compliance with the annual limits shall be determined. The calculations and compliance determinations shall be kept on file and made available for Division review upon request.

8. M001 - Coal Conveyor to Unit 3 Silos

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Coal Consumption	8.1 8.2 8.3 8.4 8.5	86,724 tons per year		Record keeping and calculation 12 month rolling total	Monthly
PM / PM_{10}		0.015 TPY	AP-42		
Opacity	16	Not to exceed 20%		Visible emissions and Method 9	As required

8.1 The coal throughput and emission limits were set by Conditions 1, 2 and 3 of Construction Permit 13JE488.

8.2 The amount of coal conveyed and the appropriate AP-42 emission factor shall be used to estimate the emissions. Documentation of the source of each of the AP-42 emission factors used shall be maintained and made available for Division review upon request.

8.3 Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work records shall be maintained and made available to the Division for review upon request. The information obtained from the opacity observations of Condition 16 of this Operating Permit and the records of the baghouse maintenance shall be used in determining the appropriate amount of particulate matter reduction to be applied in the emissions estimate.

8.4 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

8.5 Compliance with the annual limits shall be determined on a rolling twelve (12) calendar month total. The amount of coal conveyed and the emissions shall be calculated for each calendar month within thirty (30) calendar days of the end of each calendar month. A new twelve (12) calendar month total shall be calculated and compliance with the annual limits shall be determined. The calculations and compliance determinations shall be kept on file and made available for Division review upon request.

9. M003 - Boiler 4 & 5 Flyash Collection

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Flyash processing/ production	9.1 9.2 9.3 9.4 9.5	61,300 tons per year		Record keeping and calculation 12 month rolling total	Monthly
PM / PM_{10}		10.2 tons per year	AP-42		
Opacity	16	Not to exceed 20%		Visible emissions and Method 9	As required

9.1 The flyash throughput and emission limits were set by Conditions 1, 2 and 3 of Construction Permit 84JE375-1.

9.2 The amount of flyash collected and the appropriate AP-42 emission factor shall be used to estimate the emissions. Documentation of the source of each of the AP-42 emission factors used shall be maintained and made available for Division review upon request.

9.3 Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work records shall be maintained and made available to the Division for review upon request. The information obtained from the opacity observations of Condition 16 of this Operating Permit and the records of the baghouse maintenance shall be used in determining the appropriate amount of particulate matter reduction to be applied in the emissions estimate.

9.4 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

9.5 Compliance with the annual limits shall be determined on a rolling twelve (12) calendar month total. The amount of flyash handled and the emissions shall be calculated for each calendar month within thirty (30) calendar days of the end of each calendar month. A new twelve (12) calendar month total shall be calculated and compliance with the annual limits shall be determined. The calculations and compliance determinations shall be kept on file and made available for Division review upon request.

10. M003 - Flyash Silo Loadout

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Flyash Processing/Production	10.1 10.2 10.3 10.4 10.5	61,300 tons per year		Record keeping and calculation 12 month rolling total	Annual
PM / PM_{10}		0.022 TPY	AP-42		
Opacity	16	Not to exceed 20%		Visible emissions and Method 9	As required

10.1 The flyash throughput and emission limits were set by Conditions 1, 2 and 3 of Construction Permit 84JE375-2.

10.2 The amount of flyash loadout and the appropriate AP-42 emission factor shall be used to estimate the emissions. Documentation of the source of each of the AP-42 emission factors used shall be maintained and made available for Division review upon request.

10.3 Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work records shall be maintained and made available to the Division for review upon request. The information obtained from the opacity observations of Condition 16 of this Operating Permit and the records of the baghouse maintenance shall be used in determining the appropriate amount of particulate matter reduction to be applied in the emissions estimate.

10.4 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

10.5 Compliance with the annual limits shall be determined on a rolling twelve (12) calendar month total. The amount of ash loadout and the emissions shall be calculated for each calendar month within thirty (30) calendar days of the end of each calendar month. A new twelve (12) calendar month total shall be calculated and compliance with the annual limits shall be determined. The calculations and compliance determinations shall be kept on file and made available for Division review upon request.

11. M003 - Flyash Silo Bin Vent

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Flyash Processing/Production	11.1 11.2 11.3 11.4 11.5	61,300 tons per year		Record keeping and calculation 12 month rolling total	Monthly
PM / PM_{10}		0.219 tons per year	AP-42		
Opacity	16	Not to exceed 20%		Visible emissions and Method 9	As required

11.1 The flyash throughput and emission limits were set by Conditions 1, 2 and 3 of Construction Permit 84JE375-3.

11.2 The flyash throughput and the appropriate AP-42 emission factor shall be used to estimate the emissions. Documentation of the source of each of the AP-42 emission factors used shall be maintained and made available for Division review upon request.

11.3 Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work records shall be maintained and made available to the Division for review upon request. The information obtained from the opacity observations of Condition 16 of this Operating Permit and the records of the baghouse maintenance shall be used in determining the appropriate amount of particulate matter reduction to be applied in the emissions estimate.

11.4 At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

11.5 Compliance with the annual limits shall be determined on a rolling twelve (12) calendar month total. The flyash throughput and the emissions shall be calculated for each calendar month within thirty (30) calendar days of the end of each calendar month. A new twelve (12) calendar month total shall be calculated and compliance with the annual limits shall be determined. The calculations and compliance determinations shall be kept on file and made available for Division review upon request.

12. E018 - General Motors 250 HP Diesel Fired IC Engine

Parameter	Permit Condition Number	Limitations	Compliance Emission Factors lb/hp-hr	Monitoring	
				Method	Interval
Operating Hours	12.2	Not to exceed 500 hours per year		Record keeping and calculation 12 month rolling total	Monthly
NO_X		1.9 tons per year	0.031		
CO		0.42 tons per year	0.00668		
PM / PM_{10}		0.14 tons per year	0.0022		
SO_2		0.13 tons per year	0.00205		
VOC		0.15 tons per year	0.00247		
Opacity	12.3	Colorado Regulation No. 1 §II.A.1 - Not to exceed 20% Colorado Regulation No. 1 §II.A.4 - Not to exceed 30% for a period or periods aggregating more that six (6) minutes in any sixty (60) consecutive minutes		Method 9	Each 1500 hours of engine operation
				Visual observations and Method 9	As required

12.1 The terms and conditions of this permit are based on the diesel engine burning No. 2 distillate. The use of any other fuel may require the permit to be re-opened prior to any use of the fuel. No. 2 distillate oil is ASTM Grade 2 distillate oil as defined by the appropriate ASTM method or other methods approved in writing by the Division.

12.2 The limit for the operating hours and the emissions were established by Conditions 3 and 4 of Construction Permit 92JE074-2.

The actual operating hours for the engine shall be recorded monthly and used with the emission factors shown to calculate the annual emissions. Compliance with the emission limits for the previous calendar month and the previous 12 month rolling total shall be determined by the end of each new calendar month. The compliance determinations shall be recorded and the results made available to the Division for review upon request.

The engine is subject to the General Conditions in Section IV of this Permit including Record keeping and Reporting requirements listed under Condition 21 and Fee Payment under Condition 7.

12.3 The 20% opacity limit was established by Condition 1 of Construction Permit 92JE074-2. The 30% opacity limit is being established directly in this Operating Permit in accordance with Section I, Condition 1.3 of this permit.

12.3.1 Opacity of emissions from this engine shall not exceed 20% (Colorado Regulation No.1, Section II.A.1) except during the conditions identified in Condition 12.3.2 below. A Method 9 opacity observation shall be performed for each 1500 hours of engine operation.

12.3.2 Opacity of emissions during start-up, process modifications or adjustment of control equipment shall not exceed 30% for a period or periods aggregating more than six (6) consecutive minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). A Method 9 observation shall be performed any time an engine start-up requires longer than ten (10) consecutive minutes and visible emissions are observed. This requirement is not applicable for planned routine engine exercise cycles.

12.3.3 If the Method 9 observation indicates an exceedance of the opacity limit, additional Method 9 observations shall be performed. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows that the opacity is less than the opacity limit.

12.3.4 All Method 9 opacity observations shall be performed by an observer with a current and valid certification. A clear and readable copy of the observer's certificate shall be kept on file with the copies of the observations. Copies of the observations and the observer's certificates shall be made available for Division inspection upon request.

12.3.5 Records of the dates, time and results of the qualitative emissions shall be maintained and made available for Division review upon request.

13. M004 - Cold Cleaner Solvent Vats

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Work Practice Standards	13.1 13.3			Certification	Annual
Transfer and Storage of Waste/Used Solvents	13.2 13.3				

13.1 Operation of the cold cleaner solvent vats shall meet the following standards (Colorado Regulation No. 7 Section X.B.)

13.1.1 Control of Solvent Cold-Cleaners

13.1.1.1 Control Equipment

a. Covers

(i) All cold-cleaners shall have a properly fitting cover.

(ii) Covers shall be designed to be easily operable with one hand under any of the following conditions:

(A) Solvent true vapor pressure is greater than 15 torr (0.3 psia) at 38°C (100°F).

(B) The solvent is agitated by an agitating mechanism.

(C) The solvent is heated.

b. Drainage Facility

(i) All cold-cleaners shall have a drainage facility that captures the drained liquid solvent from the cleaned parts.

(ii) For cold-cleaners using solvent which has a vapor pressure greater than 32 torr (0.62 psia) measured at 38°C (100°F) either:

(A) There shall be an internal drainage facility within the confines of the cold-cleaner, so that parts are enclosed under the (closed) cover to drain after cleaning, or if such a facility will not fit within;

(B) An enclosed, external drainage facility that captures the drained solvent liquid from the cleaned parts.

c. A permanent, clearly visible sign shall be mounted on or next to the cold-cleaner. The sign shall list the operating requirements.

d. Solvent spray apparatus shall not have a splashing, fine atomizing, or

shower type action but rather should produce a solid, cohesive stream. Solvent spray shall be used at a pressure that does not cause excessive splashing.

e. For solvents with a true vapor pressure above 32 torr (0.62 psia) at 38°C (100° F), or, for solvents heated above 50°C(120°F), one of the following techniques shall be used:

(i) a freeboard ratio greater than or equal to 0.7.

(ii) a water or a non-volatile liquid cover. The cover liquid shall not be soluble in the solvent and shall not be more dense than the solvent and the depth of the cover liquid shall be sufficient to prevent the escape of solvent vapors.

13.1.2 Operating requirements

13.1.2.1 The cold-cleaner cover shall be closed whenever parts are not being handled within the cleaner confines.

13.1.2.2 Cleaned parts shall be drained for at least 15 seconds and/or until dripping ceases. Any pools of solvent shall be tipped out on the clean part back into the tank.

13.2 The transfer and storage of waste and used solvents from the cold cleaner solvent vats are subject to the following requirements (Colorado Regulation No. 7, Section X.A.3 and 4):

13.2.1 In any disposal or transfer of waste or used solvent, at least 80 percent by weight of the solvent/waste liquid shall be retained (i.e., no more than 20 percent of the liquid solvent/solute mixture shall evaporate or otherwise be lost during transfers).

13.2.2 Waste or used solvent shall be stored in closed containers unless otherwise required by law.

13.3 APEN exemptions taken on emissions units under this Condition do not affect the applicability of the regulations to the source.

14. VOC Fugitive Emission Control

Fugitive emissions shall be controlled by the following practices:

14.1 Control techniques and work practices shall be implemented at all times to reduce volatile organic compound (VOC) emissions from fugitive sources. Control techniques and work practices include, but are not limited to:

(i) tight-fitting covers for open tanks;
(ii) covered containers for solvent wiping cloths;
(iii) proper disposal of dirty clean-up solvent.

14.2 Emissions of organic material released during clean-up operations, disposal, and other fugitive emissions shall be included when determining total emissions, unless the source owner or operator documents that the VOC emissions are collected and disposed of in a manner that prevents evaporation to the atmosphere.

15. Substitution for Manufacturer's Recommendations

Some of the terms and conditions of this permit require operation of a source in accordance with the manufacturer's recommendations. In the event the manufacturer's recommendations are no longer available, the permittee shall develop a written document, within 180 calendar days of issuance of this permit, to identify the operations and procedures to be followed to ensure the source and the air pollution control equipment is maintained and operated to properly control emissions. The document shall be kept on-site and made available to the Division for review upon request.

16. Coal, Ash and Flyash Handling Opacity

Control measures and operating procedures as are necessary to minimize visible particulate emissions into the atmosphere shall be employed.

In the absence of credible evidence to the contrary, compliance with the particulate emissions limits shall be presumed whenever the baghouse is being operated in accordance with good engineering practices for controlling air pollution. Records demonstrating that the permittee is following good engineering practices for controlling air pollution shall be maintained and made available for Division review upon request. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request.

At least once each week the coal, ash and flyash handling systems are operated, observations for non-Method 9 visible emissions from the blower vents, storage silo vents, the silo unloading area, and the coal off-loading area shall be made.

If the non-Method 9 visible emissions are observed and persist for more than six (6) minutes, the source of the non-Method 9 visible emissions shall be investigated, corrected and noted in a record. If the non-Method 9 visible emissions persist after the correction(s) have been made, a Method 9 opacity observation shall be performed by a certified observer. A clear and readable copy of the observer's certificate and any opacity observations shall be kept on file and made available to the Division for review upon request.

If the Method 9 observation indicates an exceedance of the opacity limit, additional Method 9 observations shall be performed. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows that the opacity is less than the opacity limit. A written explanation for the visible

emissions shall be prepared and filed with the copy of the Method 9 observation. Such records shall be made available for Division review upon request.

If no required Method 9 opacity observations for any particular emission point exceed 15% opacity during the first 12 calendar months after the issuance of this permit, the visual observation monitoring frequency for such point may be relaxed to once per calendar month. If during the monthly monitoring frequency, any Method 9 opacity observations exceed twenty percent (20%), the visual observation frequency for that emission point shall immediately revert back to the weekly frequency. If during the monthly monitoring frequency, any Method 9 opacity observations exceed fifteen percent (15%) in two separate months, the visual observation frequency for that emission point shall revert back to the weekly frequency immediately following the second month with a Method 9 opacity observation exceeding fifteen percent (15%). After reverting to weekly monitoring for any point, Trigen may again relax the monitoring frequency for that emission point if no required Method 9 opacity observations for the emission point exceed 15% opacity during the next 12 calendar months of weekly observations.

17. Fuel Use Restrictions

17.1 Boilers 1, 2, 3, 4, and 5 shall not burn fuel oil from November 1 to March 1 of each year except under the following circumstances (Colorado Regulation No. 1, Section VIII, A.3 & B):

17.1.1 The supplier or transporter of natural gas imposes a curtailment or an interruption of service.

17.1.2 For necessary testing of equipment used to operate the boiler on oil, testing of fuel and training of personnel.

17.1.3 When an equipment malfunction at the facility makes it impossible or unsafe for the boiler to operate on natural gas.

17.2 When burning fuel oil under Condition 17.1, records shall be maintained of the information listed below (Colorado Regulation No. 1, Section VIII, C). These records shall be maintained for a period of five (5) years. In addition, a report containing the following information shall be submitted to the Division for the previous calendar year by April 1 of each new calendar year (Colorado Regulation No. 1, Section VIII, D).

17.2.1 Dates and number of hours fuel oil is burned.

17.2.2 Percent sulfur analysis of the fuel oil that is burned.

17.2.3 Number of gallons burned each day.

17.2.4 Reason(s) for the use of the fuel oil.

18. Particulate Matter Emission Periodic Monitoring Requirements

18.1 Operation and Maintenance Requirements (Boilers #4 and #5)

18.1.1 The baghouse shall be equipped with an operating pressure drop measuring device. The operational procedures will reflect the proper baghouse cleaning control configurations and the boiler and Continuous Opacity Monitor parameters used to monitor and maintain the baghouse performance in the event the baghouse pressure drop device malfunctions. Routine maintenance and operational procedures for the baghouse shall be performed in accordance with good engineering practices to control air pollution. The manufacturer's recommendations or the documented operating practices and procedures shall be made available for Division review upon request. The documentation shall include the manufacturer's recommended operating range if less than the procedure range being used. Justification will be provided if the procedure's operating range is outside of the manufacturer's recommended operating range. Any baghouse maintenance work performed shall be documented. The manufacturer's recommendations, the permittee's operational procedures and the maintenance work records shall be maintained and made available to the Division for review upon request.

18.1.2 The continuous opacity monitoring data shall be used for monitoring the performance of the baghouse. An opacity spike, especially during a compartment cleaning cycle, shall signal the need for action. The permittee shall prepare and submit for Division approval a written plan of practices and procedures to be followed as a result of opacity spikes. The plan shall include a definition of an opacity spike requiring a response, the appropriate response to a given spiking profile, time frames for response/actions and the documentation to be maintained of the problem and the resolution of the problem. The Division approved plan shall be placed in action within ninety (90) calendar days of the issuance of this Operating Permit. A copy of the approved plan shall be kept on-site and made available for Division review upon request.

18.2 Stack Testing

18.2.1 An initial particulate matter compliance test shall be performed for Boiler 4 and Boiler 5 within 180 calendar days of the issuance of this permit. Subsequent testing of each boiler shall be required based on the following table:

Last Test Result	Schedule
Less than 25% of emission limits	No additional testing during permit term
25% to less than 50% of emission limits	Test again in last calendar year before permit expires
50% to less than 75% of emission limits	Testing required every other calendar year
75% or more of emission limits	Testing required each calendar year

Performance testing for particulate emissions shall be performed in accordance with the requirements and procedures set forth in EPA Test Method 5 as set forth in 40 CFR Part 60, Appendix A. A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior to any performance of the test. No performance stack test for an official compliance demonstration shall be performed without prior written approval by the Division. The Division reserves the right to witness the test. The required number of copies of the compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test.

19. Boiler 4 and Boiler 5 Continuous Emission Monitoring and Continuous Opacity Monitoring Systems

19.1 CEM and COM Monitoring Systems QA/QC Plan

Continuous Emission Monitoring (CEM) and Continuous Opacity Monitoring (COM) systems are required for measurement of the stack SO_2, NOx, gas flow rate and opacity emissions for Boiler 4 and Boiler 5. A quality assurance/quality control plan shall be implemented within six (6) calendar months of the issuance date of this permit. This plan shall be made available to the Division for review upon request.

19.2 General Provisions

19.2.1 The permittee shall ensure that all continuous emission and opacity monitoring systems required are in operation and monitoring unit emissions or opacity at all times except for monitoring system breakdowns, repairs, calibration checks and zero and span adjustments required (40 CFR Subpart 60 Subpart A '60.13(e)). The monitoring systems shall meet the minimum frequency of operation requirements set forth in the appropriate sections of the 40 CFR Part 60. The permittee shall also ensure, subject to the exceptions just noted, that the continuous opacity monitoring systems required are in operation and monitoring opacity during the time following combustion when fans are still operating unless fan operation is not required to be included under any other applicable requirement.

19.2.2 Alternative monitoring systems, alternative reference methods, or any other alternatives for the required continuous emission monitoring systems shall not be used without having obtained prior written approval from the Division in addition to any

EPA approvals required. Any alternative continuous emission monitoring systems or continuous opacity monitoring systems must be certified in accordance with the requirements of 40 CFR Part 60 prior to use.

19.2.3 All test and monitoring equipment, methods, procedures and reporting shall be subject to the review and approval by the Division prior to any official use. The Division shall have the right to inspect such equipment, methods and procedures and data obtained at any time. The Division may provide a witness(s) for any and all tests as Division resources permit.

19.2.4 A file suitable for inspection shall be maintained of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by applicable portions of 40 CFR Part 60.

19.2.5 Records shall be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

19.2.6 The Division shall be notified by telephone or electronic mail within 24 hours of the discovery by any employee of the permittee of a monitoring system not functioning properly. The problem shall be documented in that quarter's excess emissions report.

19.3 Continuous Emission Monitoring (CEM) Systems

19.3.1 The Continuous Emission Monitoring (CEM) Systems are subject to the requirements of 40 CFR Part 60. Each monitoring system shall meet the equipment, installation and performance specifications of 40 CFR Part 60, Appendix A.

19.3.2 The permittee shall follow the 40 CFR Part 60 quality assurance and quality control procedures of Appendix F. If backup monitors are used as described in 40 CFR Part 75 Subpart C, the next quarterly report shall identify the dates and times the backup monitors were in use.

19.4 Continuous Opacity Monitoring (COM) Systems

19.4.1 The Continuous Opacity Monitoring (COM) Systems are subject to the requirements of 40 CFR Part 60. Each continuous opacity monitoring system shall meet the design, installation, equipment and performance specifications in 40 CFR Part 60, Appendix B, Performance Specification 1.

19.4.2 The permittee shall follow the quality assurance and quality control procedures of 40 CFR Part 60, Subpart A '60.13. If backup monitors are used as described in 40 CFR Part 75, Subpart C, the next quarterly report shall identify the dates and times the backup monitors were in use.

If Method 9 opacity observations are used when the opacity monitoring system is unable to provide quality assured data, the Method 9 opacity observations shall be taken as follows. A minimum of two (2) Method 9 opacity observations per calendar day shall be made by a certified opacity observer. The observations shall be equally spaced over the daylight hours. A clear, readable, and permanent copy of the observer's certificate shall be kept with the observations. The observations and the copy of the certificate shall be made available to the Division for review upon request.

If the Method 9 observation indicates an exceedance of the opacity limit, additional Method 9 observations shall be performed. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows that the opacity is less than the opacity limit. A written explanation for the visible emissions shall be prepared and filed with the copy of the Method 9 observation. Such records shall be made available for Division review upon request.

19.4.3 If both Method 9 and COM data are available, the Method 9 data shall be used to determine compliance. Method 9 opacity observations shall also be used to determine compliance during periods when the COM is out of service.

19.5 Notification and Record keeping

The owner or operator of a facility required to install, maintain, and calibrate continuous monitoring equipment shall submit to the Division, by the end of the calendar month following the end of each calendar quarter, a report of excess emissions for all pollutants monitored for that quarter. This report shall consist of the following information and/or reporting requirements as specified by the Division.

19.5.1 The magnitude of excess emissions computed in accordance with Division guidelines, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.

19.5.2 The nature and cause of the excess emissions, if known.

19.5.3 The date and time identifying each period of equipment malfunction and the nature of the system repairs or adjustments, if any, made to correct the malfunction.

19.5.4 A schedule of the calibration and maintenance of the continuous monitoring system.

19.5.5 Compliance with the reporting requirements of this condition shall not relieve the owner or operator of the reporting requirements of Section II.E of the Colorado Common Provisions Regulation concerning upset conditions and breakdowns.

20. Boiler 4 and Boiler 5 Opacity Requirements and Periodic Monitoring

20.1 Opacity Requirements

The opacity standards are set by the relevant Construction Permit, NSPS Subpart D and Colorado Regulation No. 1, Section II.A.1 and apply at all times except as provided in the subsequent paragraphs of this Condition 20.1. The permittee shall operate, calibrate and maintain a continuous in-stack monitoring device for the measurement of opacity. The requirements for the opacity monitoring system are defined in Condition 19 of this permit. The continuous opacity monitor (COM) shall be used for identification of when the average opacity value for six (6) consecutive minutes exceeds the 20% compliance standard. Shutdown, upsets and offline emissions are subject to the 20% opacity limit.

At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

The NSPS Subpart D opacity standard shall not apply during periods of startup, shutdown and malfunction. A report summarizing the data for the quarterly compliance demonstration shall be submitted as part of the Excess Emissions Report (EER) required in Condition 19.5.

20.2 Opacity Requirements of Colorado Regulation No. 1, Section II.A.4

Opacity of emissions during fire building, cleaning of fire boxes, soot blowing, start-up, process modifications or adjustment of control equipment shall not exceed 30% for a period or periods aggregating more than six (6) consecutive minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4). Monitoring for this standard shall be performed, during the aforementioned events, using the continuous opacity monitor (COM).

A record shall be kept of the type, date and time of the commencement and completion of each and every fire building, soot blowing, start-up, process modification or adjustment of control equipment that results in opacity exceeding 30% for periods aggregating more than six (6) consecutive minutes

in any sixty consecutive minute period. The records shall be made available for review upon request by the Division.

At all times, including periods of start-up, shutdown, and malfunction, the facility and control equipment shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, Method 9 opacity observations, review of operating and maintenance procedures, and inspection of the source. (40 CFR part 60.11(d) as adopted by reference in Colorado Regulation No. 6, Part B.I.A).

20.3 Monitoring

If 40 CFR Part 60 Appendix A Method 9 opacity observations are used when the opacity monitoring system is unable to provide quality assured data, the Method 9 opacity observations shall be performed by a certified opacity observer once per day. If visible emissions are present, a Method 9 opacity observation shall be performed by a certified observer at least once per hour, between sunrise and sunset, while visible emissions are present.

If the Method 9 observation indicates an exceedance of the opacity limit, additional Method 9 observations shall be performed. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows that the opacity is less than the opacity limit. A written explanation for the visible emissions shall be prepared and filed with the copy of the Method 9 observation. Such records shall be made available for Division review upon request.

21. State Only - Lead Periodic Monitoring

21.1 Emissions of Lead (Pb) shall not be such that emissions result in an ambient lead concentration exceeding 1.5 micrograms per standard cubic meter averaged over a one-month period (Colorado Regulation No. 8, Part C, Section I.B). Within six (6) months of permit issuance, the source shall model lead emissions to demonstrate compliance with the standard. The lead emission rate used in the model shall be based on the maximum quantity of lead, as determined by analysis, in coal received at the facility over the last year <u>or</u> the maximum acceptable lead content of coal as required by vendor contracts. In addition, the model shall assume that there are no controls on lead emissions and that all lead in the coal will exit the stack at the design rate of the unit. The model shall be performed using Division Modeling Guidance or a model approved by the Division. A written report shall be submitted to the Division that describes the model used, inputs to the model and any assumptions made and includes the results of the model. The Division will review the report submitted and provide a written response identifying any additional lead modeling required.

21.2 In addition, annual emissions of lead shall be calculated for the purposes of APEN reporting and payment of annual fees by one of two means:

1) using the emission factor identified in the following table in the equation following the table:

	Coal Emissions, lb/ton				Spec Oil[a], lb/Mgal	Distillate Oil, lb/Mgal
	Sub-bituminous	Bituminous	Lignite	Anthracite		
Lead	$507 lb/10^{12}$ Btu	$507 lb/10^{12}$ Btu	$3.4*(C/A*PM)^{0.80}$	- - -	55*%Pb	0.0013

A= Ash C = lead concentration in coal in ppmwt
[a] Spec Oil or combustion of any mixture of spec oil and distillate oil

$$\text{Tons/yr} = \frac{\text{EF(lbs/Btu) x heat content of coal (Btu/ton) x annual fuel use (tons/yr)}}{\text{2,000 lbs/ton}}$$

The average heat content of coal, determined by CEM or coal sampling, for the year shall be used in this equation.

2) using actual analysis data in the equation to determine actual lead emissions.

SECTION III - Permit Shield

Colorado Regulation No. 3, 5 CCR 1001-5, Part A, ' I.B.43; Part C, " V.C.1.b. & D., XIII; " 25-7-111(2)(I), 25-7-114.4(3)(a), C.R.S.

1. Specific Non-Applicable Requirements

Based upon information available to the Division and supplied by the applicant, the following parameters and requirements have been specifically identified as non-applicable to the facility to which this permit has been issued. This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modifications or reconstruction on which construction commenced prior to permit issuance.

Emission Unit Description & Number	Applicable Requirement	Justification
Coal Handling S005 - Unit 4 S006 - Unit 5 S009 - Unit 3	Colorado Regulation No. 6: 40 CFR Part 60, Subpart Y - Standards of Performance for Coal Preparation Plants	The Subpart Y definition for a coal preparation plant includes breaking and crushing. No coal crushing or breaking is done prior to the pulverizers that discharge directly into the boilers.
Boilers 1, 2, 3, 4 & 5	Acid Rain Pollutants - 40 CFR Part 72; Colorado Regulation No. 18	40 CFR '72.6(b)(4)(i) exempts cogeneration units supplying less than or equal to one third of their nameplate output to a utility distribution system or equal to or less than 219,000 MWe-hrs actual electric output on an annual basis.
	Colorado Regulation No. 6, Part B, Section II.A: Standards of Performance for New Stationary Sources, Specific Facilities and Sources, Non-Federal NSPS	The units were in existence prior to January 30, 1979.
Boilers 1, 2, 3, 4 & 5	40 CFR Part 63: National Emission Standards for Hazardous Air Pollutants for Source Category	Does not satisfy any applicability requirements for these standards and no reconstruction or modifications have been made that would trigger NESHAP applicability.

Emission Unit Description & Number	Applicable Requirement	Justification
Boilers 1, 2, & 3	40 CFR Part 60:Standards of Performance for New Stationary Sources: Subpart A - General Provisions Subpart D - Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971 Subpart Da - Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After September 18, 1978 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	The units were constructed prior to the applicability dates.
	Colorado Regulation No. 3, Part B: Concerning Construction Permits, Including Regulations for Prevention of Significant Deterioration (PSD)	The units were constructed prior to February 1, 1972.
Boiler 4	40 CFR Part 60:Standards of Performance for New Stationary Sources: Subpart Da - Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After September 18, 1978 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	This unit was constructed prior to the applicability dates.
Boiler 5	40 CFR Part 60:Standards of Performance for New Stationary Sources: Subpart A - General Provisions Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	This unit was constructed prior to the applicability date.

Emission Unit Description & Number	Applicable Requirement	Justification
Fuel Oil Storage Tank	40 CFR Part 60:Standards of Performance for New Stationary Sources: Subpart K: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 Subpart Ka: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984. Subpart B: 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.	The fuel oil storage tank was constructed prior to June 11, 1973.
Cold Cleaner Solvent Vats M004	40 CFR Part 63: Subpart T: National Emission Standards for Halogenated Solvent Cleaning	Cold cleaner solvent vat utilizes a solvent consisting of a total halogenated hazardous air pollution compounds of less than five percent (5%) by weight.

2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

2.1 The provisions of §§25-7-112 and 25-7-113, C.R.S., or §303 of the federal act, concerning enforcement in cases of emergency;

2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

2.3 The applicable requirements of the federal Acid Rain Program, consistent with '408(a) of the federal act;

2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to '25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to '114 of the federal act;

2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Colorado Regulation No. 3, Part C, ' XIII.

2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

3. Streamlined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will also serve as a compliance demonstration for purposes of the associated subsumed requirements.

Permit Condition	Streamlined (Subsumed) Requirements
3.5	Colorado Regulation No. 1, Section III, 'A.1.b - 0.11 lbs/MMBtu when burning coal
	Colorado Regulation No. 1, Section III, 'A.1.b - 0.10 lbs/MMBtu when burning fuel oil
	Colorado Regulation No. 1, Section III, 'A.1.c - 0.1 lbs/MMBtu when natural gas

SECTION IV - General Permit Conditions (Ver 11/14//02)

1. Administrative Changes

Regulation No. 3, 5 CCR 1001-5, Part A, III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.36.a. The permittee may immediately make the change upon submission of the application to the Division.

2. Certification Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.&e. and V.C.17.

a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless the Division in the Operating Permit specifies in the applicable requirement or a more frequent period.

c. Compliance certifications shall contain:

(i) the identification of each permit term and condition that is the basis of the certification;

(ii) the compliance status of the source;

(iii) whether compliance was continuous or intermittent;

(iv) the method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.

d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

3. Common Provisions

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II,.E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations. Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

(i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;

(ii) approves the use of an equivalent method;

(iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or

(iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7 1973, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for test methods applicable to such facility,

(ii) Safe sampling platform(s),

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Upset Conditions and Breakdowns

Upset conditions, as defined, shall not be deemed to be in violation of the Colorado regulations, provided that the Division is notified as soon as possible, but no later than two (2) hours after the start of the next working day, followed by a written notice to the Division explaining the cause of the occurrence and that proper action has been or is being taken to correct the conditions causing the violation and to prevent such excess emission in the future.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

(i) Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

(ii) Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

(i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;

(ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;

(iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;

(iii) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

(iv) All emissions monitoring systems were kept in operation (if at all possible);

(v) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,

(vi) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards (NSPS) or national emissions standards for hazardous air pollutants (NESHAPS), any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

4. Compliance Requirements

Regulation No. 3 and 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d., § 25-7-122.1(2), C.R.S.

a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.

b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.

d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a

claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.

e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.

f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

5. Emergency Provisions

Regulation No. 3, 5 CCR 1001-5, Part C, § VII.

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or upset provision contained in any applicable requirement.

6. Emission Standards for Asbestos

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, "emission standards for asbestos."

7. Emissions Trading, Marketable Permits, Economic Incentives

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

8. Fee Payment

C.R.S §§ 25-7-114.1(6) and 25-7-114.7

a. The permittee shall pay an annual emissions fee in accordance with the provisions of C.R.S. § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.

b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S. § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

c. The permittee shall pay an APEN fee in accordance with the provisions of C.R.S. § 25-7-114.1(6) for each APEN or revised APEN filed.

9. Fugitive Particulate Emissions

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

10. Inspection and Entry

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;

b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;

d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

11. Minor Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

12. New Source Review

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

13. No Property Rights Conveyed

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

14. Odor

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

15. Off-Permit Changes to the Source

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit . The permit shield shall not apply to any off-permit change.

16. Opacity

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.-II.

17. Open Burning

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

18. Ozone Depleting Compounds

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds.

19. Permit Expiration and Renewal

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.

b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

20. Portable Sources

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

21. Prompt Deviation Reporting

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Unless required by a permit term or condition to report deviations on a more frequent basis, "prompt" reporting shall entail submission of reports of deviations from permit requirements every six (6) months in accordance with paragraph 21.d. below. "Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

22. Record Keeping and Reporting Requirements

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:

(i) date, place as defined in the Operating Permit, and time of sampling or measurements;

(ii) date(s) on which analyses were performed;

(iii) the company or entity that performed the analysis;

(iv) the analytical techniques or methods used;

(v) the results of such analysis; and

(vi) the operating conditions at the time of sampling or measurement.

b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.

c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the enhanced monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.

e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

23. Reopenings for Cause

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.

b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.

c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.

d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

24. Section 502(b)(10) Changes

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

25. Severability Clause

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

26. Significant Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit" application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

27. Special Provisions Concerning the Acid Rain Program

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.

b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

28. Transfer or Assignment of Ownership

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

29. Volatile Organic Compounds

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

a. For sources located in an ozone non-attainment area or the Denver Metro Attainment Maintenance Area, all storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

b. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.

c. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

END OF PERMIT REQUIREMENTS

OPERATING PERMIT APPENDICES

A - INSPECTION INFORMATION
B - COMPLIANCE MONITORING REPORT FORMAT
C - COMPLIANCE CERTIFICATION REPORT FORMAT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - PERMIT MODIFICATIONS
G - EMISSION CALCULATIONS

***DISCLAIMER:**

None of the information found in these Appendices shall be considered to be State or Federally enforceable, except as otherwise provided in the permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

APPENDIX A
Inspection Information

1. Directions to Plant:

Steam production facility located at 12th and Ford. The plant access is by way of the main entrance to the Coors facility on 10th Street in Golden, CO.

2. Safety Equipment Required:

Hard hat Eye Protection Safety Shoes Hearing Protection

3. Facility Plot Plan:

Figure 1 (following page) shows the plot plan as submitted on February 21, 1996, with the source's Title V Operating Permit Application.

4. List of Insignificant Activities:

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

Insignificant activities and/or sources of emissions as submitted in the application are as follows:

Chemical storage containers that hold less than 500 gallons and which have daily throughputs less than 25 gallons.

Chemical storage areas where both solid and liquid chemicals are stored in closed containers and where storage capacity does not exceed 5000 gallons.

Lubricating oil storage tanks with storage capacity of less than 40,000 gallons.

Storage tanks meeting all of the following criteria:

(i) annual throughput is less than 400,000 gallons; and

(ii) the liquid stored is one of the following:

(A) diesel fuels 1-D, 2-D, or 4-D;

(B) fuel oils #1 through #6;

(C) gas turbine fuels 1-GT through 4-GT;

(D) an oil/water mixture with a vapor pressure lower than that of diesel fuel (Reid vapor pressure of .025 PSIA).

Each individual piece of fuel burning equipment which uses gaseous fuel, and which has a design rate less than or equal to 10 million Btu per hour, and which is used solely for heating buildings for personal comfort.

Stationary Internal Combustion Engines which:

(i) power portable drilling rigs; or

(ii) are emergency power generators which have a rated horsepower of less than 260 or; operate no more than 250 hours per year and have a rate horsepower of less than 737; or operate no more than 100 hours per year and have a rated horsepower of less than 1840; or

(iii) have actual emissions less than five tons per year or rated horsepower of less than 50.

Air pollution emissions units, operations and activities with emissions less than the de minimus reporting level.

Specific insignificant sources reported:

Propane portable heaters	Battery storage area	Landscaping activities - Devices < 10 HP	Landscaping activities - fugitives
Portable welding machines	Oil drum storage area	Janitorial activities	Office emissions
Rejected rocks from coal handling system	Main mixing tanks	Small hydraulic oil storage tank	Turbine lube oil storage tank
Turbine lube oil systems	Plant laboratory	Stray coal handling	Stray rock handling
Welding machine	Sandblasting machine	Power building fuel oil storage tank	Boiler #5 Ignitor oil storage (#2 diesel fuel)
Main condensate tank	Clear well water storage tank	Cellar 9 demineralized water storage	DI water storage tank
DA heater tanks (3)	Caustic tank	Sulfuric acid storage tanks (3)	Surge tanks (2)
Power building blowdown tank	Boiler #5 blowdown tank	Boiler steam vents	Wastewater operations
Solvent cold cleaners	Sludge tank	AC/Ventilation systems	Emergency events (e.g. fires)
Venting of natural gas and leaks			

APPENDIX B
Monitoring and Permit Deviation Reporting

with no codes ver 2/1/01

Reporting Requirements and Definitions

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

(A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);

(B) fails to notify or report as required under the Act; or

(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits. All required reports must be certified by a responsible official.

Report #1: Monitoring Deviation Report (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the record keeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

Report #2: Permit Deviation Report (must be reported "promptly")

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit requirements, including those attributable to upset conditions and malfunctions as defined in this Appendix, the probable cause of such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "upset" shall refer to both emergency conditions and upsets. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due every six months unless otherwise noted in the permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

(1) A situation where emissions exceed an emission limitation or standard contained in the permit;

(2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;

(3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,

(4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report.

Report #3: Compliance Certification (annually, as defined in the permit)

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and

monitoring methods specified in the permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;

- The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each permit term and condition during the certification period and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;

- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.[1]

- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

1 For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event. Further, periods of excess emissions during startup, shutdown and malfunction may not be found to be a violation of an emission limitation or standard where the source adequately shows that any potential deviations as a result of these infrequent periods were minimized to the extent practicable and could not have been prevented through careful planning, design, or were unavoidable to prevent loss of life, personal injury, or severe property damage.

Startup, Shutdown, Malfunctions, Emergencies, and Upsets

Understanding the application of Startup, Shutdown, Malfunctions, Emergency provisions, and the Upset provisions is very important in both the deviation reports and the annual compliance certifications.

Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

Emergencies and Upsets

Under the Emergency provisions of Part 70 and the Upset provisions of the State regulations, certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

DEFINITIONS

Malfunction (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Malfunction (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Upset means an unpredictable failure of air pollution control or process equipment which results in the violation of emission control regulations and which is not due to poor maintenance, improper or careless operations, or is otherwise preventable through exercise of reasonable care.

Monitoring and Permit Deviation Report - Part I

1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division on a semi-annual basis unless otherwise noted in the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or upset or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or Upsets) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: Trigen-Colorado Energy Corporation – Golden Power Plant
OPERATING PERMIT NO: 96OPJE143
REPORTING PERIOD: _____ (see first page of the permit for specific reporting period and dates)

Operating Permit Unit ID	Unit Description	Deviations noted During Period?[1]		Deviation Code [2]	Upset/Emergency Condition Reported During Period?	
		YES	NO		YES	NO
B001	CE Model VU40 SN 17047, front fired, 288 MMBtu/hr					
B002	CE Model VU40 SN 17049, front fired, 288 MMBtu/hr					
B003	CE Model VU40 SN 17051, traveling grate spreader stoker, 225 MMBtu/hr					
B004	CE Model CE-VU40 SN 21321, tangential fired, 504 MMBtu/hr					
B005	CE Model CE-VU40 SN 25576, tangential fired, 650 MMBtu/hr					
M001/C004	Rail car dumper to hoppers					
M001/C005	Dumper hoppers to transfer conveyor					
M001/C006	Coal conveyor to Unit 4 silos					
M001/C008	Coal conveyor to Unit 5 silos					
M002/C009	General ash silo - 36-inch cyclone					
M002/C010	General ash silo - 20-inch cyclone					
M002/C011	General ash silo - baghouse					

Operating Permit Unit ID	Unit Description	Deviations noted During Period?[1]		Deviation Code [2]	Upset/Emergency Condition Reported During Period?	
		YES	NO		YES	NO
M001/C007	Coal conveyor to Unit 3 silos					
M003/C013	Flyash silo - 36-inch cyclone					
M003/C014	Flyash silo - 20-inch cyclone					
M003/C015	Flyash silo - baghouse					
M003/C016	Flyash silo loadout					
M003/C017	Flyash silo bin vent					
E018	General Motors Diesel IC engine for air compressor					
M004	Cold cleaner solvent vents					
General Conditions						
Insignificant Activities						

[1] See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: [Company Name] - [Facility Name]
OPERATING PERMIT NO: [Permit #
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Upset _____ N/A _____

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____
Malfunction _____ Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Upsets/Emergencies Reported (if applicable)

Deviation Code _____ Division Code QA: _____

SEE EXAMPLE ON THE NEXT PAGE

EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/96 - 6/30/96

Is the deviation being claimed as an: Emergency _____ Upset _XX_ N/A _____

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown ____
Malfunction _____ Normal Operation ____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/96
END- 1800 4/10/96

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Upsets/Emergencies Reported (if applicable)

4/10/96 to S. Busch, APCD

Deviation Code _____ Division Code QA: _____

Monitoring and Permit Deviation Report - Part III

REPORT CERTIFICATION

SOURCE NAME: Trigen-Colorado Energy Corporation – Golden Power Plant

FACILITY IDENTIFICATION NUMBER: 0590820

PERMIT NUMBER: 96OPJE143

REPORTING PERIOD _____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.54. This signed certification document must be packaged with the documents being submitted.

STATEMENT OF COMPLETENESS

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.

_____

Printed or Typed Name Title

_____

Signature of Responsible Official Date Signed

Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.

APPENDIX C
Required Format for Annual Compliance Certification Reports

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: Trigen-Colorado Energy Corporation – Golden Power Plant
OPERATING PERMIT NO: 96OPJE143
REPORTING PERIOD: _____

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was compliance continuous or intermittent?[3]		Was Data Continuous?[4]	
		Previous	Current	Yes	No	Continuous	Intermittent	Yes	No
B001	CE Model VU40 SN 17047, front fired, 288 MMBtu/hr								
B002	CE Model VU40 SN 17049, front fired, 288 MMBtu/hr								
B003	CE Model VU40 SN 17051, traveling grate spreader stoker, 225 MMBtu/hr								
B004	CE Model CE-VU40 SN 21321, tangential fired, 504 MMBtu/hr								
B005	CE Model CE-VU40 SN 25576, tangential fired, 650 MMBtu/hr								

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was compliance continuous or intermittent?[3]		Was Data Continuous?[4]	
		Previous	Current	Yes	No	Continuous	Intermittent	Yes	No
M001/C004	Rail car dumper to hoppers								
M001/C005	Dumper hoppers to transfer conveyor								
M001/C006	Coal conveyor to Unit 4 silos								
M001/C008	Coal conveyor to Unit 5 silos								
M002/C009	General ash silo - 36-inch cyclone								
M002/C010	General ash silo - 20-inch cyclone								
M002/C011	General ash silo - baghouse								
M001/C007	Coal conveyor to Unit 3 silos								
M003/C013	Flyash silo - 36-inch cyclone								
M003/C014	Flyash silo - 20-inch cyclone								
M003/C015	Flyash silo - baghouse								
M003/C016	Flyash silo loadout								
M003/C017	Flyash silo bin vent								
E018	General Motors Diesel IC engine for air compressor								
M004	Cold cleaner solvent vents								
General Conditions									
Insignificant Activities									

[1] If deviations were noted in the previous deviation report (i.e. for the first six months of the annual reporting period), put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

[2] Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

[3] Note whether the compliance status with of each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and record keeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and record keeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

[4] Note whether the method(s) used to determine the compliance status with each term and condition provided continuous or intermittent data.

[5] Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)

B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).

1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in §18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of §25-7 122.1, C.R.S.

Printed or Typed Name	Title

Signature	Date Signed

NOTE: All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

APPENDIX D
Notification Addresses

1. **Air Pollution Control Division**

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Jim King

2. **United States Environmental Protection Agency**

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-T
U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 300
Denver, CO 80202

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 300
Denver, CO 80202

APPENDIX E
Permit Acronyms

Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42 -	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BACT -	Best Available Control Technology
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEM -	Continuous Emissions Monitor
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CRS -	Colorado Revised Statute
EF -	Emission Factor
EPA -	Environmental Protection Agency
FI -	Fuel Input Rate in Lbs/mmBtu
FR -	Federal Register
G -	Grams
Gal -	Gallon
GPM -	Gallons per Minute
HAPs -	Hazardous Air Pollutants
HP -	Horsepower
HP-HR -	Horsepower Hour (G/HP-HR = Grams per Horsepower Hour)
LAER -	Lowest Achievable Emission Rate
LBS -	Pounds
M -	Thousand
MM -	Million
MMscf -	Million Standard Cubic Feet
MMscfd -	Million Standard Cubic Feet per Day
N/A or NA -	Not Applicable
NOx -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions
PM -	Particulate Matter

PM_{10} -	Particulate Matter Under 10 Microns
PSD -	Prevention of Significant Deterioration
PTE -	Potential To Emit
RACT -	Reasonably Available Control Technology
SCC -	Source Classification Code
SCF -	Standard Cubic Feet
SIC -	Standard Industrial Classification
SO_2 -	Sulfur Dioxide
TPY -	Tons Per Year
TSP -	Total Suspended Particulate
VOC -	Volatile Organic Compounds

APPENDIX F
Permit Modifications

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
January 9, 2003	Administrative Amendment	Information Sheet – Page 3	Clarify address to be: 25 10th Street
		Section II, Condition 19.1	Correct the first sentence by adding requirement for continuous monitoring of NOx inadvertently left out of sentence, and remove the requirement for monitoring CO_2 and O_2 per EPA approval of alternative monitoring procedure.
		Section II, Condition 19.3.3	Per EPA approval of alternative monitoring procedure, requirement to obtain EPA approval for stack gas monitoring system no longer necessary. Remove Condition 19.3.3 from permit.
		Section II, Condition 19.4.2	Add space between "9" and "observation" in 1st sentence.
		Appendix G	1st paragraph – Insert sentence to note EPA approval of alterative monitoring method (gas flow monitoring)
March 26, 2003	Administrative Amendment	Section II, Summary Table 5	Correct PM/PM_{10} limit to show 51.6 tons per year, not 51.6 tons per month.
October 30, 20003	Administrative Amendment	Section II, Summary Table 3 & Section II, Summary Table 4	Correct SO_2 limit on both tables to 4888.0 TPY, not 4880.0 TPY.

APPENDIX G
Emission Calculation Procedure for Sulfur Dioxide and Nitrogen Oxides

In a March 31, 1998, letter from the Division to Trigen, the Division stated it concurred that oxygen sensors would not be required to compute lb/MMBtu because the stack gas flow rate was now being continuously monitored. In a December 10, 2002, letter from EPA Region VIII to Trigen, the EPA stated that this alternative method meets the minimum requirements for compliance with the monitoring requirements of Subpart D of 40 CFR Part 60. The Division identified the following equation to be used to calculate compliance:

$[lb/MMBtu]_p = (PPM*C_p*T_c*ACFM*60)/Fuel$

where:

$[lb/MMBtu]_p$ = emissions of pollutant in lb/MMBtu

PPM = concentration of pollutant in parts per million

C_p = concentration conversion factor (wet and based on 350°F stack temperature) to convert ppm to lb/ft3

For NO_x, $C_p = 6.3054 \times 10^{-8}$
For SO_2, $C_p = 8.780 \times 10^{-8}$

ACFM = actual gas flow rate in cubic feet per minute (acfm)

T_c = Temperature correction from 350°F base = $(460 + 350)/T_s + 460)$, where T_s = stack gas temperature in °F

Fuel = fuel input to the boiler in MMBtu per hour

APPENDIX H
NSPS Subparts A & D

Copies of the provisions of New Source Performance Standard Subpart A "General Provisions" and Subpart D "Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced after August 17, 1971" follow this page.