DEC No.: 3-3928-1/9-0 Stony Point Compressor Station September 23, 1991

Special Conditions for Algonquin Gas Transmission Company NYSDEC Certificate to Operate Emission Points R0100, R0200, R0300, and R0400

I. Emission Limits

1. Total Nitrogen Oxide (NOx) emissions from all of the combustion sources at the station (existing emission points R0100, R0200, R0300, R0400, GT020, and 00006 and new emission point 00GT7) must not exceed 420 tons per year. A 52 week rolling total must be calculated and reported monthly by Algonquin Gas Transmission Company (Algonquin) to the Department as described in detail in Algonquin's "NOx Emission Cap Formula" document (attached to these special conditions) submitted with the permit applications and adjusted to incorporate weekly totalling.

II. Operating Requirements

1. Natural Gas shall be the only fuel used in the combustion sources.

III. Testing Requirements

- 1. Testing to verify the NOx emission factor used in the Emissions Cap Formula must be performed. This testing must be performed when the required testing for Emission Point 00GT7 is conducted.
- 2. The engines will be stack tested according to 40 CFR 60.8 and 6 NYCRR Part 202.
- 4. All testing must be done in accordance with protocols approved by NYSDEC in advance of testing. Protocols must be submitted for approval at least 60 days in advance of testing. NYSDEC must be provided with at least 30 days advanced notice of testing. Failure to notify or use approved protocols is grounds for rejection of such tests.

IV. Compliance Certification

- 1. NYSDEC reserves the right to require stack testing of facility emissions in order to determine compliance with the limits set forth in this permit if NYSDEC has cause to believe that the facility is in non-compliance. In such a case, NYSDEC will provide written documentation to Algonquin Gas Transmission Company describing the reason(s) for suspecting facility non-compliance. Testing required must be conducted within the time frame set forth by NYSDEC.
- 2. NYSDEC reserves the right to inspect this facility as deemed necessary to determine compliance with this permit. Such inspections may be performed without prior notification by NYSDEC. Routine inspections will be made during reasonable business hours, however, NYSDEC reserves the right to enter the facility at any time if there is cause to believe that the facility is in non-compliance.
- 3. All testing must be done in accordance with protocols approved by NYSDEC in advance of testing. Protocols must be submitted for approval at least 60 days in advance of testing. NYSDEC must be provided with at least 30 days advanced notice of testing. Failure to notify or use approved protocols is grounds for rejection of such tests.

V. Record Keeping and Reporting

- 1. A weekly rolling annual amount of fuel burned in the engines must be maintained in accordance with permit condition I.1. The total fuel burned per calendar year must be reported for each calendar year.
- 2. All copies of reports and notification required under this section must be submitted to the NYSDEC Region 3 Office, with two copies sent to the NYSDEC Bureau of Source Control in Albany. Unless stated otherwise, such reports or notification shall be submitted within thirty days after the end of each calendar year quarter. The addresses for the above offices are as follows:

NYSDEC Region 3 Office Attn: Air Quality Engineer 21 South Putts Corner Road New Paltz, NY 12561-1696 NYSDEC
Bureau of Source Control
50 Wolf Road
Albany, NY 12233-3254.

- 3. All records required by this permit must be kept at the facility for the three most recent years, and must be made available upon request of a NYSDEC authorized agent except for the total fuel burned per calendar year which must be kept for five most recent years.
- 4. A summary of the emission limits and operating restrictions of this permit must be posted in the control room of the facility and must be plainly visible (without obstructions) to the operator of the facility. A copy of this summary shall be submitted to NYSDEC prior to facility startup and is subject to NYSDEC approval.

VI. Compliance

1. Any violation of the conditions of this permit is subject to enforcement action under Article 71 of the New York State Environmental Conservation Law.

ATTACHMENT 1

Annual NOx Emissions Cap Formula

The following general formula will be used to develop Algonquin's monthly monitoring report to the NYSDEC. NOx emissions for the month preceding the report submittal month will be calculated for each engine. The total of emissions from all engines will be the weekly NOx emissions for the 52 weeks preceding the report month. The total emissions for the preceding 52 weeks will be shown on the report. Fuel heat value and fuel consumed by each engine will be reported as well.

The formula is as follows:

 $T_{\text{STATION}} = T_{\text{Charke}} + T_{\text{Currently}} + T_{\text{Mark}} < 421 \text{ Tons NOx/Year}$

 $T_{weak} = \Sigma (T_{weak} \text{ for most recent 52 weeks}) < 421 \text{ Tons NOx/Year}$

 $T_{week} = \Sigma (P_{week} * F) / (2000 Pounds/Ton) = Tons/Week$

Where:

T - NOx Tons/time (week or year)

Port - NOx Pounds/mmBTU for the natural gas used as fuel

Unit - Mars - 0.65 Pounds/mmBTU max
Centaurs - 0.38 Pounds/mmBTU max
Clarks - 5.25 Pounds/mmBTU max

F = mmBTU/week

Fuel heat value - 1031 BTU/SCF

New York State Department of Environmental Conservation 21 South Putt Corners Road, New Paltz, NY 12561-1696 (914) 256-3000 FAX (914) 255-3042



August 8, 1996

TERRANCE W DOYLE ALGONQUIN GAS TRANSMISSION CO 1284 SOLDIERS FIELD ROAD BOSTON MA 02135

RE: Permit No. 3-3928-00001/00010, 11, 12, 13
Town of Stony Point, Rockland County
Stony Point Compressor Station
Emission Points R0100, R0200, R0300, R0400

PERMIT CORRECTION

Dear Mr. Doyle:

The above permits are hereby corrected as follows: The last sentence in Special Condition 3, within section IV. Compliance Certification, is completed to read: "The name(s) of vendors which can independently verify the testing or engineering evaluation must also be supplied to the Commissioner's representative."

All other terms and conditions remain as written in the permits as last revised March 29, 1996. Please attach a copy of this modification to the front of each permit.

If there are any questions please contact me at (914) 256-3014.

Very truly yours,

Alexander F. Ciesluk, Jr.

Deputy Regional Permit Administrator

Celesarder F. Ceeluh, h.

Region 3

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SPECIAL CONDITIONS

For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: RO100 DATE: March 18, 1996

L Emission Limits.

Emission Point R0100
 Clark TLA-8 Reciprocating Engine

Emission Limits during Gas Firing:

NOx: 5.1 grams NOx per Brake horsepower hour

co: 27.1 pounds per hour - Inote: based on old PSD limits)

VOC: 12.9 pounds per hour - Inote: based on old PSD limits]

- 2. These limits apply at all loads of operation, except during periods of start-up, malfunctions (as stated in the paragraphs of subdivision 6NYCRR Part 201.5 (d)) and shutdown (not to exceed three hours per occurrence).
- 3. All emission limits are based on the higher heating value (HHV) of the fuel being burned.

II. Operating Limits

- 1. The Reciprocating Engine shall fire only natural gas.
- 2. This emission point R0100 shall continue to be subject to the facility wide NOX cap of 293 tpy as calculated in ATTACHMENT I.

III Testing Requirements

1.	. Stack	testing	for	emissions	of NOx,	CO,	and	VOC's	ÌS	required	from	the
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DEC PERMIT NUMBER			
FACILITY ID NUMBER	Program Number	Page 2 of	6



For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0100 DATE: March 18, 1996

- 2. All required stack testing must be performed and a report submitted to NYSDEC and USEPA within 180 days of initial start-up of the compressor engines, or within 60 days of commercial operation of the facility, whichever comes first. No extensions of this deadline will be granted by NYSDEC.
- 3. All testing must be done in accordance with protocols approved by NYSDEC in advance of testing. Protocols must be submitted for approval at least 60 days in advance of testing. NYSDEC must be provided with at least 30 days advanced notice of testing. Failure to notify or use approved protocols is grounds for rejection of such tests.

IV. Compliance Certification.

- 1. Continuous Fuel Monitoring
- a. The facility shall maintain a daily log of hours of operation of each Reciprocating Engine. A separate written log for the rolling daily annual total fuel gas limitation shall also be maintained at the facility. Both logs shall be made available to the DEC and EPA inspectors upon request.
- b. The total fuel gas consumption shall be limited to the requirements of V.7 This limitation shall be based on a 365 rolling daily annual total (ie., totalizing the total fuel consumption over 365 days, where each day starts the summing period for the new 365 day period).
- 2. NYSDEC reserves the right to inspect this facility as deemed necessary to determine compliance with this permit. Such inspections may be performed without prior notification by NYSDEC. Routine inspections will be made during reasonable business hours, however, NYSDEC reserves the right to enter the facility at any time if there is cause to believe that the facility is in non-compliance.
- 3. The following alternate emission limit (5.1 grams NOx per Brakehorse power hour) has been established. The source owner must continue to investigate compliance strategies and submit an annual report documenting the evaluation of abatement technology and/or process modification. The written report must include the results and specific dates of the testing or evaluation. The name(s) of vendors which can independently verify the testing or engineering evaluation must

DEC PERMIT NUMBER	***** continued *****	
FACILITY ID NUMBER	PROGRAM NUMBER	Page 3 of 6





For Article (19)
DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0100 DATE: March 18, 1996

4. The Department reserves the right to require the source owner to evaluate and implement innovative technology within a time frame established by the Commissioner's representative as per 621.14(a)(4).

V. Record Keeping and Reporting

- 1. Algonquin Gas must comply with the notification and record keeping requirements of 40 CFR 60.7 for each gas compressor. The major milestones of 40 CFR 60.7 are to notify USEPA and NYSDEC of construction and facility start-up.
- 2. Algonquin Gas must monitor the amount of fuel burned in each compressor. Such data must be accurate to \pm 5%.
- 3. All copies of reports and notification required under this section must be submitted to the NYSDEC Region 3 office, with **one copy** sent to the NYSDEC, attention: Bureau of Enforcement and Regional Support in Albany. Unless stated otherwise, such reports or notification shall be submitted within (30) days after the end of each calendar year quarter. The addresses for the above offices are as follows:

NYSDEC Region 3 office Attn: Robert Stanton, RAPCE 21 South Putt Corners Road New Paltz, NY 12561-1696 NYSDEC

Bureau of Enforcement and Regional Support

50 Wolf Road

Albany, NY 12233-3254

- 4. All records required by this permit must be kept at the facility for the five most recent years, and must be made available upon request of a NYSDEC authorized agent.
- 5. A summary of the emission limits and operating restrictions of this permit must be posted in the control room of the facility and must be plainly visible (without obstruction) to the operator of the facility. A copy of this summary shall be submitted to NYSDEC prior to facility start-up and is subject to NYSDEC approval.
- 6. A high energy ignition system with air/fuel ratio controls must be installed

DEC PERMIT NUMBER		
FACILITY ID NUMBER	PROGRAM NUMBER	Page 4 of 6



For Article (19)

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0100 DATE: March 18, 1996

by May 31, 1995.

7. During the Ozone Season(May 1st through September 15th) the facility shall limit the four reciprocating engines (Clarks) EPs R0100, R0200, R0300, R0400 to a maximum of one hundred and eleven (111 tons NOx).

 $T_{ICLARKSI} = T_{R0100} + T_{R0200} + T_{R0300} + T_{R0400} < 111 Tons NOx / Ozone Season$

T $_{\text{ozone Season}} = \sum (T_{\text{Ozone Days}}) < 111 \text{ Tons NOx } / \text{ Ozone Season}$

Tozone pay = \sum (P_{Unit} * F) / (2000 pounds/Ton) = Tons / Day

Where:

T = NOx Tons/time (day, week or year)

P unit = NOx Pounds/mmBTU for the natural gas used as fuel

 $u_{\text{mix}} = (1) \text{ Mars} \qquad (00GT7)$

= 0.06 Pounds/mmBTU (maximum)

(2) Centaurs (GT020 & 00006)

= 0.12 Pounds/mmBTU (maximum)

(4) Clarks (R0100,R0200,R0300,R0400) = 1.40 Pounds/mmBTU (maximum)

Note: Unit numbers are based on the highest results generated during stack testing and the March 12,1996 letter for the Clark Engines.

F = mmBTU/day

Fuel heat value = 1031 BTU / SCF

8. During the Ozone season the facility must "environmentally dispatch" (use the three turbine engines prior to utilizing the reciprocating engines) whenever possible. If environmental dispatch is not utilized, then Algonquin must demonstrate and document to the satisfaction of the Department the reason(s) why.

VI. Compliance

Any violation of the conditions of this permit is subject to penalty under Article 71 of the New York State Environmental Conservation Law.

DEC PERMIT NUMBER		
FACILITY ID NUMBER	PROCRAM NUMBER	Page 5 of 6



For Article (19) **DIVISION OF AIR**

FACILITY: ALCONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0100 DATE: March 18, 1996

ATTACHMENT 1

Annual NOx Emissions Cap Formula

The following general formula will be used to develop Algonquin's monthly monitoring report to the NYSDEC. NOx emissions for the month preceding the report submittal month will be calculated for each engine. The total of emissions from all engines will be the weekly NOx emissions for the preceding 52 weeks will be shown on the report. Fuel heat value and fuel consumed by each engine will be reported as well.

The formula is as follows:

T station = T clarks + T centaurs + T Mars < 293 Tons NOx / Year

 $T_{year} = \sum (T_{week})$ for the most recent 52 weeks) < 293 Tons NOx/YR

 $T_{\text{year}} = \sum (P_{\text{unit}} * F) / (2000 \text{ pounds/Ton}) = Tons / Week$

Where:

T = NOx Tons/time (week or year)

P unit = NOx Pounds/mmBTU for the natural gas used as fuel

= (1) Mars (00GT7) = 0.06 Pounds/mmBTU (maximum)

(2) Centaurs (GT020 & 00006) = 0.12 Pounds/mmBTU (maximum)

(4) Clarks $(R0100,R0200,R0300,R0400) = 1.40^{\circ} Pounds/mmBTU (maximum)$ 4 - 1.40 will be adjusted after the technology has been proven

Note: Unit numbers are based on the highest results generated during stack testing and the March 12,1996 letter for the Clark Engines.

F = mmBTU/week

Fuel heat value = 1031 BTU / SCF

DEC PERMIT NUMBER

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For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: RO200 DATE: March 18, 1996

I. Emission Limits.

Emission Point R0200
 Clark TLA-8 Reciprocating Engine

Emission Limits during Gas Firing:

NOx: 5.1 grams NOx per Brake horsepower hour

co: 27.1 pounds per hour - Inote: based on old PSD limits)

VOC: 12.9 pounds per hour - [note: based on old PSD limits]

- 2. These limits apply at all loads of operation, except during periods of start-up, malfunctions (as stated in the paragraphs of subdivision 6NYCRR Part 201.5 (d)) and shutdown (not to exceed three hours per occurrence).
- 3. All emission limits are based on the higher heating value (HHV) of the fuel being burned.

II. Operating Limits

- 1. The Reciprocating Engine shall fire only natural gas.
- 2. This emission point **R0200** shall continue to be subject to the facility wide **NOX** cap of **293** tpy as calculated in ATTACHMENT I.

III Testing Requirements

1. Stack testing for emissions	of NOx,	CO, a	and VOC's	is required	from	the
Reciprocating Engine.						

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DEC PERMIT NUMBER			
FACILITY ID NUMBER	PROCRAM NUMBER	Page 2 of 6	



For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: RO200 DATE: March 18, 1996

- 2. All required stack testing must be performed and a report submitted to NYSDEC and USEPA within 180 days of initial start-up of the compressor engines, or within 60 days of commercial operation of the facility, whichever comes first. No extensions of this deadline will be granted by NYSDEC.
- 3. All testing must be done in accordance with protocols approved by NYSDEC in advance of testing. Protocols must be submitted for approval at least 60 days in advance of testing. NYSDEC must be provided with at least 30 days advanced notice of testing. Failure to notify or use approved protocols is grounds for rejection of such tests.

IV. Compliance Certification.

- 1. Continuous Fuel Monitoring
- a. The facility shall maintain a daily log of hours of operation of each Reciprocating Engine. A separate written log for the rolling daily annual total fuel gas limitation shall also be maintained at the facility. Both logs shall be made available to the DEC and EPA inspectors upon request.
- b. The total fuel gas consumption shall be limited to the requirements of V.7 This limitation shall be based on a 365 rolling daily annual total (ie., totalizing the total fuel consumption over 365 days, where each day starts the summing period for the new 365 day period).
- 2. NYSDEC reserves the right to inspect this facility as deemed necessary to determine compliance with this permit. Such inspections may be performed without prior notification by NYSDEC. Routine inspections will be made during reasonable business hours, however, NYSDEC reserves the right to enter the facility at any time if there is cause to believe that the facility is in non-compliance.
- 3. The following alternate emission limit (5.1 grams NOx per Brakehorse power hour) has been established. The source owner must continue to investigate compliance strategies and submit an annual report documenting the evaluation of abatement technology and/or process modification. The written report must include the results and specific dates of the testing or evaluation. The name(s) of vendors which can independently verify the testing or engineering evaluation must

DEC PERMIT NUMBER	**** continued *****	
FACILITY ID NUMBER	PROGRAM NUMBER	Page 3 of 6





For Article (19)
DIVISION OF AIR

FACILITY: ALCONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0200 DATE: March 18, 1996

4. The Department reserves the right to require the source owner to evaluate and implement innovative technology within a time frame established by the Commissioner's representative as per 621.14(a)(4).

V. Record Keeping and Reporting

- 1. Algonquin Gas must comply with the notification and record keeping requirements of 40 CFR 60.7 for each gas compressor. The major milestones of 40 CFR 60.7 are to notify USEPA and NYSDEC of construction and facility start-up.
- 2. Algonquin Gas must monitor the amount of fuel burned in each compressor. Such data must be accurate to \pm 5%.
- 3. All copies of reports and notification required under this section must be submitted to the NYSDEC Region 3 office, with **one copy** sent to the NYSDEC, attention: Bureau of Enforcement and Regional Support in Albany. Unless stated otherwise, such reports or notification shall be submitted within (30) days after the end of each calendar year quarter. The addresses for the above offices are as follows:

NYSDEC Region 3 office Attn: Robert Stanton, RAPCE 21 South Putt Corners Road New Paitz, NY 12561-1696

NYSDEC

Bureau of Enforcement and Regional Support

50 Wolf Road

Albany, NY 12233-3254

- 4. All records required by this permit must be kept at the facility for the five most recent years, and must be made available upon request of a NYSDEC authorized agent .
- 5. A summary of the emission limits and operating restrictions of this permit must be posted in the control room of the facility and must be plainly visible (without obstruction) to the operator of the facility. A copy of this summary shall be submitted to NYSDEC prior to facility start-up and is subject to NYSDEC approval.
- 6. A high energy ignition system with air/fuel ratio controls must be installed

DEC PERMIT NUMBER		
FACILITY ID NUMBER	PROGRAM NUMBER	Page 4 of 6

For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION EMISSION POINT: R0200 DATE: March 18, 1996

by May 31, 1995.

7. During the Ozone Season(May 1st through September 15th) the facility shall limit the four reciprocating engines (Clarks) EPs R0100, R0200, R0300, R0400 to a maximum of one hundred and eleven (111 tons NOx).

 $T_{(CLARKS)} = T_{R0100} + T_{R0200} + T_{R0300} + T_{R0400} < 111 Tons NOX / Ozone Season$

T $_{\text{ozone Season}} = \sum (T_{\text{Ozone Days}}) < 111 \text{ Tons NOx } / \text{ Ozone Season}$

 $T_{ozone\ Day} = \sum (P_{unit} * F) / (2000\ pounds/Ton) = Tons / Day$

Where:

T - NOx Tons/time (day, week or year)

P unit = NOx Pounds/mmBTU for the natural gas used as fuel

unt - (1) Mars (00GT7)

= 0.06 Pounds/mmBTU (maximum)

(2) Centaurs (GTO20 & 00006)

= 0.12 Pounds/mmBTU (maximum)

(4) Clarks (R0100,R0200,R0300,R0400) = 1.40 Pounds/mmBTU (maximum)

Note: Unit numbers are based on the highest results generated during stack testing and the March 12,1996 letter for the Clark Engines.

F - mmBTU/day

Fuel heat value = 1031 BTU / SCF

8. During the Ozone season the facility must "environmentally dispatch" (use the three turbine engines prior to utilizing the reciprocating engines) whenever possible. If environmental dispatch is not utilized, then Algonquin must demonstrate and document to the satisfaction of the Department the reason(s) why.

VI. Compliance

Any violation of the conditions of this permit is subject to penalty under Article 71 of the New York State Environmental Conservation Law.

DEC PERMIT NUMBER		
FACILITY ID NUMBER	PROCRAM NUMBER	Page 5 of 6



For Article (19)
DIVISION OF AIR

FACILITY: ALCONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0200 DATE: March 18, 1996

ATTACHMENT 1

Annual NOx Emissions Cap Formula

The following general formula will be used to develop Algonquin's monthly monitoring report to the NYSDEC. NOx emissions for the month preceding the report submittal month will be calculated for each engine. The total of emissions from all engines will be the weekly NOx emissions for the preceding 52 weeks will be shown on the report. Fuel heat value and fuel consumed by each engine will be reported as well.

The formula is as follows:

$$T_{station} = T_{clarks} + T_{centaurs} + T_{mars} < 293 Tons NOx / Year$$

T $_{\text{vear}} = \sum$ (T $_{\text{week}}$ for the most recent 52 weeks) < 293 Tons NOx/YR

 $T_{year} = \sum (P_{unit} * F) / (2000 pounds/Ton) = Tons / Week$

Where:

T = NOx Tons/time (week or year)

P init = NOx Pounds/mmBTU for the natural gas used as fuel

 $_{nit}$ = (1) Mars (00GT7)

= 0.06 Pounds/mmBTU (maximum)

(2) Centaurs (GT020 & 00006)

= 0.12 Pounds/mmBTU (maximum)

(4) Clarks (R0100,R0200,R0300,R0400) = 1.40 ¹ Pounds/mmBTU (maximum) ¹ - 1.40 will be adjusted after the technology has been proven

Note: Unit numbers are based on the highest results generated during stack testing and the March 12,1996 letter for the Clark Engines.

F = mmBTU/week

Fuel heat value = 1031 BTU / SCF

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For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: RO300 DATE: March 18, 1996

t. Emission Limits.

1. Emission Point **R0300**Clark TLA-8 Reciprocating Engine

Emission Limits during Gas Firing:

NOx: 5.1 grams NOx per Brake horsepower hour

co: 27.1 pounds per hour - Inote: based on old PSD limits)

VOC: 12.9 pounds per hour - [note: based on old PSD limits]

- 2. These limits apply at all loads of operation, except during periods of start-up, malfunctions (as stated in the paragraphs of subdivision 6NYCRR Part 201.5 (d)) and shutdown (not to exceed three hours per occurrence).
- 3. All emission limits are based on the higher heating value (HHV) of the fuel being burned.

II. Operating Limits

- 1. The Reciprocating Engine shall fire only natural gas.
- 2. This emission point **R0300** shall continue to be subject to the facility wide **NO**x cap of **293** toy as calculated in ATTACHMENT I.

III Testing Requirements

 Stack testing for 	emissions of	NOX, CO,	and VOC's	is required	from	the
Reciprocating Engl	ne.					

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DEC PERMIT NUMBER		
FACILITY ID NUMBER	PROGRAM NUMBER	Page 2 of 6

For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0300 DATE: March 18, 1996

- 2. All required stack testing must be performed and a report submitted to NYSDEC and USEPA within 180 days of initial start-up of the compressor engines, or within 60 days of commercial operation of the facility, whichever comes first. No extensions of this deadline will be granted by NYSDEC.
- 3. All testing must be done in accordance with protocols approved by NYSDEC in advance of testing. Protocols must be submitted for approval at least 60 days in advance of testing. NYSDEC must be provided with at least 30 days advanced notice of testing. Failure to notify or use approved protocols is grounds for rejection of such tests.

IV. Compliance Certification.

- 1. Continuous Fuel Monitoring
- a. The facility shall maintain a daily log of hours of operation of each Reciprocating Engine. A separate written log for the rolling daily annual total fuel gas limitation shall also be maintained at the facility. Both logs shall be made available to the DEC and EPA inspectors upon request.
- b. The total fuel gas consumption shall be limited to the requirements of V.7 This limitation shall be based on a 365 rolling daily annual total (ie., totalizing the total fuel consumption over 365 days, where each day starts the summing period for the new 365 day period).
- 2. NYSDEC reserves the right to inspect this facility as deemed necessary to determine compliance with this permit. Such inspections may be performed without prior notification by NYSDEC. Routine inspections will be made during reasonable business hours, however, NYSDEC reserves the right to enter the facility at any time If there is cause to believe that the facility is in non-compliance.
- 3. The following alternate emission limit (5.1 grams NOx per Brakehorse power hour) has been established. The source owner must continue to investigate compliance strategies and submit an annual report documenting the evaluation of abatement technology and/or process modification. The written report must include the results and specific dates of the testing or evaluation. The name(s) of vendors which can independently verify the testing or engineering evaluation must

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For Article (19)
DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0300 DATE: March 18, 1996

4. The Department reserves the right to require the source owner to evaluate and implement innovative technology within a time frame established by the Commissioner's representative as per 621.14(a)(4).

V. Record Keeping and Reporting

- 1. Algonquin Gas must comply with the notification and record keeping requirements of 40 CFR 60.7 for each gas compressor. The major milestones of 40 CFR 60.7 are to notify USEPA and NYSDEC of construction and facility start-up.
- 2. Algonquin Gas must monitor the amount of fuel burned in each compressor. Such data must be accurate to \pm 5%.
- 3. All copies of reports and notification required under this section must be submitted to the NYSDEC Region 3 office, with **one copy** sent to the NYSDEC, attention: Bureau of Enforcement and Regional Support in Albany. Unless stated otherwise, such reports or notification shall be submitted within (30) days after the end of each calendar year quarter. The addresses for the above offices are as follows:

NYSDEC Region 3 office Attn: Robert Stanton, RAPCE 21 South Putt Corners Road New Paltz, NY 12561-1696

NYSDEC

Bureau of Enforcement and Regional Support

50 Wolf Road

Albany, NY 12233-3254

- 4. All records required by this permit must be kept at the facility for the five most recent years, and must be made available upon request of a NYSDEC authorized agent.
- 5. A summary of the emission limits and operating restrictions of this permit must be posted in the control room of the facility and must be plainly visible (without obstruction) to the operator of the facility. A copy of this summary shall be submitted to NYSDEC prior to facility start-up and is subject to NYSDEC approval.
- 6. A high energy ignition system with air/fuel ratio controls must be installed

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FACILITY ID NUMBER	Program Number	Page 4 of 6

For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0300 DATE: March 18, 1996

by May 31, 1995.

7. During the Ozone Season(May 1st through September 15th) the facility shall limit the four reciprocating engines (Clarks) EPs R0100, R0200, R0300, R0400 to a maximum of one hundred and eleven (111 tons NOx).

 $T_{(CLARKS)} = T_{R0100} + T_{R0200} + T_{R0200} + T_{R0400} < 111 Tons NOx / Ozone Season$

 $T_{ozone season} = \sum (T_{ozone pays}) < 111 Tons NOx / Ozone Season$

 $T_{ozone pay} = \sum (P_{unit} * F) / (2000 pounds/Ton) = Tons / Day$

Where:

T = NOx Tons/time (day,week or year)

 $P_{unit} = NOx Pounds/mmBTU$ for the natural gas used as fuel

untt = (1) Mars (00GT7)

= 0.06 Pounds/mmBTU (maximum)

(2) Centaurs (GT020 & 00006)

= 0.12 Pounds/mmBTU (maximum)

(4) Clarks (R0100,R0200,R0300,R0400) = 1.40 Pounds/mmBTU (maximum)

Note: Unit numbers are based on the highest results generated during stack testing and the March 12,1996 letter for the Clark Engines.

F = mmBTU/day

Fuel heat value = 1031 BTU / SCF

8. During the Ozone season the facility must "environmentally dispatch" (use the three turbine engines prior to utilizing the reciprocating engines) whenever possible. If environmental dispatch is not utilized, then Algonquin must demonstrate and document to the satisfaction of the Department the reason(s) why.

VI. Compliance

Any violation of the conditions of this permit is subject to penalty under Article 71 of the New York State Environmental Conservation Law.

DEC PERMIT NUMBER		
FACILITY ID NUMBER	PROCRAM NUMBER	Page 5 of 6
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For Article (19)
DIVISION OF AIR

FACILITY: ALCONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0300 DATE: March 18, 1996

ATTACHMENT 1

Annual NOx Emissions Cap Formula

The following general formula will be used to develop Algonquin's monthly monitoring report to the NYSDEC. NOx emissions for the month preceding the report submittal month will be calculated for each engine. The total of emissions from all engines will be the weekly NOx emissions for the preceding 52 weeks will be shown on the report. Fuel heat value and fuel consumed by each engine will be reported as well.

The formula is as follows:

T station = T clarks + T centaurs + T Mars < 293 Tons NOx / Year

T $_{\text{vear}} = \sum (T_{\text{Week}} \text{ for the most recent 52 weeks}) < 293 \text{ Tons NOx/YR}$

 $T_{\text{vear}} = \sum (P_{\text{unit}} * F) / (2000 \text{ pounds/Ton}) = \text{Tons} / \text{Week}$

Where:

T = NOx Tons/time (week or year)

P unit = NOx Pounds/mmBTU for the natural gas used as fuel

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Note: Unit numbers are based on the highest results generated during stack testing and the March 12,1996 letter for the Clark Engines.

F = mmBTU/week

Fuel heat value = 1031 BTU / SCF

DEC PERMIT NUMBER		
FACILITY ID NUMBER	PROCRAM NUMBER	Page 6 of 6

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For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: RO400 DATE: March 18, 1996

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I. Emission Limits.

Emission Point R0400
 Clark TLA-8 Reciprocating Engine

Emission Limits during Gas Firing:

NOx: 5.1 grams NOx per Brake horsepower hour

co: 27.1 pounds per hour - inote; based on old PSD fimits!

VOC: 12.9 pounds per hour - Inote: based on old PSD limits)

- 2. These limits apply at all loads of operation, except during periods of start-up, malfunctions (as stated in the paragraphs of subdivision 6NYCRR Part 201.5 (d)) and shutdown (not to exceed three hours per occurrence).
- 3. All emission limits are based on the higher heating value (HHV) of the fuel being burned.

II. Operating Limits

- 1. The Reciprocating Engine shall fire only natural gas.
- 2. This emission point R0400 shall continue to be subject to the facility wide NOx cap of 293 tpy as calculated in ATTACHMENT I.

III Testing Requirements

1. Stack testing for emissions of NOx, CO, and VOC's is required from the Reciprocating Engine.

**** CONTINUED****

OEC PERMIT NUMBER 3・3928-	00001/00013
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PROGRAM NUMBER

For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0400 DATE: March 16, 1996

- 2. All required stack testing must be performed and a report submitted to NYSDEC and USEPA within 180 days of initial start-up of the compressor engines, or within 60 days of commercial operation of the facility, whichever comes first. No extensions of this deadline will be granted by NYSDEC.
- 3. All testing must be done in accordance with protocols approved by NYSDEC in advance of testing. Protocols must be submitted for approval at least 60 days in advance of testing. NYSDEC must be provided with at least 30 days advanced notice of testing. Failure to notify or use approved protocols is grounds for rejection of such tests.

IV. Compliance Certification.

- 1. Continuous Fuel Monitoring
- a. The facility shall maintain a daily log of hours of operation of each Reciprocating Engine. A separate written log for the rolling daily annual total fuel gas limitation shall also be maintained at the facility. Both logs shall be made available to the DEC and EPA inspectors upon request.
- b. The total fuel gas consumption shall be limited to the requirements of V.7 This limitation shall be based on a 365 rolling daily annual total (ie., totalizing the total fuel consumption over 365 days, where each day starts the summing period for the new 365 day period).
- 2. NYSDEC reserves the right to inspect this facility as deemed necessary to determine compliance with this permit. Such inspections may be performed without prior notification by NYSDEC. Routine inspections will be made during reasonable business hours, however, NYSDEC reserves the right to enter the facility at any time if there is cause to believe that the facility is in non-compliance.
- 3. The following alternate emission limit (5.1 grams NOx per Bråkehorse power hour) has been established. The source owner must continue to investigate compliance strategies and submit an annual report documenting the evaluation of abatement technology and/or process modification. The written report must include the results and specific dates of the testing or evaluation. The name(s) of vendors which can independently verify the testing or engineering evaluation must

DEC PERMIT NUMBER 3-3928-0000/ 000/3	***** continued *****	
FACILITY ID NUMBER	PROGRAM NUMBER	Page 3 of 6



For Article (19)
DIVISION OF AIR

FACILITY: ALGONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: R0400 DATE: March 18, 1996

29

4. The Department reserves the right to require the source owner to evaluate and implement innovative technology within a time frame established by the Commissioner's representative as per 621.14(a)(4).

V. Record Keeping and Reporting

- 1. Algonquin Gas must comply with the notification and record keeping requirements of 40 CFR 60.7 for each gas compressor. The major milestones of 40 CFR 60.7 are to notify USEPA and NYSDEC of construction and facility start-up.
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NYSDEC

Bureau of Enforcement and Regional Support

50 Wolf Road

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- 4. All records required by this permit must be kept at the facility for the five most recent years, and must be made available upon request of a NYSDEC authorized agent .
- 5. A summary of the emission limits and operating restrictions of this permit must be posted in the control room of the facility and must be plainly visible (without obstruction) to the operator of the facility. A copy of this summary shall be submitted to NYSDEC prior to facility start-up and is subject to NYSDEC approval.
- 6. A high energy ignition system with air/fuel ratio controls must be installed

DEC PERMIT NUMBER 3-3928-0006//000/3		
FACILITY ID NUMBER	PROCRAM NUMBER	Page 4 of 6



For Article (19) DIVISION OF AIR

FACILITY: ALGONOUIN CAS TRANSMISSION CORPORATION

EMISSION POINT: R0400 DATE: March 36, 1996

by May 31, 1995.

7. During the Ozone Season(May 1st through September 15th) the facility shall limit the four reciprocating engines (Clarks) EPs R0100, R0200, R0300, R0400 to a maximum of one hundred and eleven (111 tons NOx).

T (CLARKS) = T RO100 + T RO200 + T RO300 + T RO400 < 111 Tons NOX / Ozone Season

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 $u_{\text{nit}} = (1) \text{ Mars} \qquad (00GT7)$

= 0.06 Pounds/mmBTU (maximum)

(2) Centaurs (GT020 & 00006)

= 0.12 Pounds/mmBTU (maximum)

(4) Clarks (R0100,R0200,R0300,R0400) = 1.40 Pounds/mmBTU (maximum)

Note: Unit numbers are based on the highest results generated during stack testing and the March 12,1996 letter for the Clark Engines.

F = mmBTU/day

Fuel heat value = 1031 BTU / SCF

8. During the Ozone season the facility must "environmentally dispatch" (use the three turbine engines prior to utilizing the reciprocating engines) whenever possible. If environmental dispatch is not utilized, then Algonquin must demonstrate and document to the satisfaction of the Department the reason(s) why.

VI. Compliance

Any violation of the conditions of this permit is subject to penalty under Article 71 of the New York State Environmental Conservation Law.

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FACILITY ID NUMBER	PROGRAM NUMBER	Page 5 of 6



For Article (19)
DIVISION OF AIR

FACILITY: ALCONOUIN GAS TRANSMISSION CORPORATION

EMISSION POINT: RO400 DATE: March 18, 1996

ATTACHMENT 1

Annual NOx Emissions Cap Formula

The following general formula will be used to develop Algonquin's monthly monitoring report to the NYSDEC. NOx emissions for the month preceding the report submittal month will be calculated for each engine. The total of emissions from all engines will be the weekly NOx emissions for the preceding 52 weeks will be shown on the report. Fuel heat value and fuel consumed by each engine will be reported as well.

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T station = T clarks + T centaurs + T mars < 293 Tons NOx / Year

 $T_{vear} = \sum (T_{week} \text{ for the most recent 52 weeks}) < 293 \text{ Tons NOx/YR}$

 $T_{\text{year}} = \sum (P_{\text{unit}} * F) / (2000 \text{ pounds/Ton}) = Tons / Week$

Where:

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P unit = NOx Pounds/mmBTU for the natural gas used as fuel

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⁴ - 1,40 will be adjusted after the technology has been proven

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Fuel heat value = 1031 BTU / SCF

GEC PERMIT NUMBER

3-3928-00001/00013

FACILITY ID NUMBER

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