

**PERMIT FOR FUEL BURNING EQUIPMENT**

**STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF AIR MANAGEMENT**

1. Legal Firm Name: CTG Resources Corporation
2. Address: 100 Columbus Boulevard, Hartford, CT 06144-1500
3. Equipment Location: Rocky Hill LNG Facility, 1376 Cromwell Avenue, Rocky Hill, CT
4. Equipment Description (Model, I.D. #): Tran Thermal Model Sub-X-36-48 LNG Vaporizer with three (3) Tran Thermal Model HV-12049 Burners

PERMIT TO:

- Construct     Operate     Modify

FEDERAL REQUIREMENTS:

- NSPS (40 CFR Part 60) Subpart:  
 NESHAPS (40 CFR Part 61) Subpart:  
 MACT (40 CFR Part 63) Subpart:

OZONE NON-ATTAINMENT STATUS:

- severe (Major source if VOC or NOx > 25 TPY)  
 serious (Major source if VOC or NOx > 50 TPY)

INTERNAL COMBUSTION ENGINES ONLY:

- Emergency use only  
 Non-emergency use, including self generation

Date Issued	Exp. Date
Town No.	Premise No.
155	015
Permit No.	Stack No.
077	017
Permit Fee	
\$4,000.00	

TYPE OF POLLUTANT FOR WHICH THIS PREMISE IS A "MAJOR SOURCE":

EPA SOURCE CLASS:	TSP	SOx	NOx	CO	VOC	PM-10	LEAD	OTHER
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
New Source	<input checked="" type="checkbox"/>							
Major Mod	<input type="checkbox"/>							
Minor Mod	<input type="checkbox"/>							

/s/Arthur J. Rocque  
 ARTHUR J. ROCQUE, JR.  
 COMMISSIONER, DEPARTMENT OF  
 ENVIRONMENTAL PROTECTION  
 OR DESIGNATED AGENT

## PERMIT FOR FUEL BURNING EQUIPMENT

### STATE OF CONNECTICUT, DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR MANAGEMENT

The conditions on all pages of this permit and attached appendices shall be verified at all times except those noted as design specifications. Design specifications need not be verified on a continuous basis; however, if requested by the Commissioner, demonstration of compliance shall be shown.

#### PART I. OPERATIONAL CONDITIONS

1. Fuel Type(s): Natural Gas
2. Maximum Fuel Consumption over any Consecutive Twelve (12) Month Period: 59.1 MMft<sup>3</sup>
3. Fuel Sulfur Content (% by weight, dry basis): 0.00
4. Maximum Hours of Operation: Daily 24; Over any Consecutive Twelve (12) Month Period: 1,848\* @ Maximum Rated Capacity

\* The allowable hours of operation can be exceeded provided the maximum annual fuel consumption does not exceed 59.1 MMft<sup>3</sup> per year.

#### Design Specifications

1. Maximum Fuel Firing Rate(s): 32,000 ft<sup>3</sup>/hour
2. Maximum Gross Heat Input (MMBTU/hr): 34
3. Minimum Stack Height (ft): 15.75
4. Minimum Exhaust Gas Flow Rate (acfm): 9,800
5. Stack Exit Temperature (°F): 100 - 115
6. Minimum Distance from Stack to Property Line (ft): 152

#### PART II. CONTROL EQUIPMENT (Applicable if -X- Checked) (See Appendix E for Specifications)

##### A. Type

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> None            | <input type="checkbox"/> Selective Non-Catalytic Reduction |
| <input type="checkbox"/> Scrubber                   | <input type="checkbox"/> Selective Catalytic Reduction     |
| <input type="checkbox"/> Electrostatic Precipitator | <input type="checkbox"/> Low NOx Burner                    |
| <input type="checkbox"/> Cyclone                    | <input type="checkbox"/> Fabric Filter                     |
| <input type="checkbox"/> Multi-Cyclone              | <input type="checkbox"/> Particulate Trap                  |
| <input type="checkbox"/> Thermal DeNOx              | <input type="checkbox"/> Other                             |

##### B. Minimum Efficiency

1. Capture Efficiency (%): NA\*
2. Removal Efficiency (%): NA\*
3. Overall Efficiency (%): NA\*

\* NA = Not Applicable

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**PART III. CONTINUOUS EMISSION MONITORING REQUIREMENTS AND  
ASSOCIATED EMISSION LIMITS** (Applicable if -X- Checked)

CEM shall be required for the following pollutant/operational parameters and enforced on the following basis:

<u>Pollutant/Operational Parameter</u>	<u>Averaging Times</u>	<u>Emission Limit</u>	<u>Units</u>
<input checked="" type="checkbox"/> None			
<input type="checkbox"/> Opacity	six minute block		
<input type="checkbox"/> SO <sub>x</sub>	3 hour rolling		
<input type="checkbox"/> NO <sub>x</sub>	24 hour rolling		
<input type="checkbox"/> CO	1 hour block		
<input type="checkbox"/> CO <sub>2</sub>	1 hour block		
<input type="checkbox"/> O <sub>2</sub>	1 hour block		
<input type="checkbox"/> Temperature	continuous		

(See Appendix A for General Requirements)

**PART IV. MONITORING, REPORTING AND RECORD KEEPING REQUIREMENTS**

1. The Permittee shall keep records of annual operating hours and fuel consumption. Annual operating hours and fuel consumption shall be based on any consecutive twelve (12) month time period and shall be determined by adding (for each fuel) the current month's fuel usage and operating hours to that of the previous eleven (11) months. The Permittee shall make these calculations monthly.

During the initial year of operation, the monthly emission limit shall not exceed the annual limitation divided by four (4). Emergency diesel generators are exempt from this requirement and are subject to Part V of this permit.

2. When more than one fuel supply tank is to service this source or when multiple sources are supplied by one fuel tank, the Permittee shall use a fuel metering device to continuously monitor fuel feed to this permitted source.
3. Each fuel shipment for this equipment shall include a shipping receipt from the fuel supplier and a certification from the fuel supplier certifying the type of fuel. The Permittee shall maintain records of each shipping receipt and certification.
4. The Permittee shall keep records on premise indicating continual compliance with all above conditions at all times and shall make them available upon request by the Commissioner for the duration of this permit, or for the previous three (3) years, whichever is less.

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**PART V. ALLOWABLE EMISSION LIMITS**

The Permittee shall not exceed the emission limits stated herein at any time.

<u>Criteria Pollutants</u>	<u>#/hr</u>	<u>#/MM BTU</u>	<u>TPY</u>
TSP	0.25	0.007	0.23
PM-10	0.21	0.006	0.19
SOx	0.02	0.001	0.02
NOx	5.43	0.159	4.99
VOC	0.20	0.006	0.18
CO	2.40	0.0707	2.22
Pb	0.01	0.0003	0.01

<u>Non-Criteria Pollutants</u>	<u>MASC * (ug/m<sup>3</sup>)</u>
Formaldehyde	1,000

\* Maximum allowable stack concentration

Demonstration of compliance with the above emission limits shall be met by calculating the emission rates using emission factors from the following sources:

1. AP-42 5<sup>th</sup> Edition
2. Manufacturer's Guarantee

The above statement shall not preclude the Commissioner from requiring other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

**PART VI. STACK EMISSION TEST REQUIREMENTS** (Applicable if -X- Checked)

Stack emission testing shall be required for the following pollutant(s):

None at this time

TSP       SOx       NOx       CO

VOC       PM-10       Pb

Other (HAPS): \_\_\_\_\_, \_\_\_\_\_,

(See Appendix B for General Requirements)

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Vaporizer with three (3) Tran Thermal Model HV-12049 Burners

Town No: 155

Premise No: 015

Permit No: 0077

Stack No: 017

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**PART VII. APPLICABLE REGULATORY REFERENCES** (The Regulations of Connecticut State Agencies, hereinafter referred to as the Regulations)

22a-174-3(a), (b), (f); 22a-174-18; 22a-174-19; 22a-174-29(b); 22a-174-22

These references are not intended to be all inclusive - other sections of the Regulations may apply.

**PART VIII. SPECIAL REQUIREMENTS**

1. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.

2. *Noise (for non-emergency use)*

The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in Sections 22a-69-1 through 22a-69-7.4 of the Regulations.

3. The Permittee shall comply with all applicable sections of the following New Source Performance Standard(s) at all times. (Applicable if -X-checked)

40 CFR Part 60, Subpart:  Db  Dc  GG  A

None

**PART IX. ADDITIONAL TERMS AND CONDITIONS**

1. This permit does not relieve the permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.

2. Any representative of the DEP may enter the permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.

3. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.

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**PART IX. ADDITIONAL TERMS AND CONDITIONS, CONTINUED:**

4. This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons or municipalities who are not parties to this permit.
5. Any document, including any notice, which is required to be submitted to the Commissioner under this permit shall be signed by a duly authorized representative of the permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in the documents and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense." Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense in accordance with Connecticut General Statutes §22a-6, under §53a-157 of the Connecticut General Statutes.
6. Nothing in this permit shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the permittee by the Commissioner.
7. Within fifteen days of the date the permittee becomes aware of a change in any information submitted to the Commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the permittee shall submit the correct or omitted information to the Commissioner.
8. The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

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**PART IX. ADDITIONAL TERMS AND CONDITIONS, CONTINUED:**

9. Any document required to be submitted to the Commissioner under this permit shall, unless otherwise specified in writing by the Commissioner, be directed to: Office of Assistant Director; Compliance & Field Operations Division; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

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Appendices attached (Applicable if -X- checked):

- A Continuous Emission Monitoring Requirements
- B Stack Emission Test Requirements
- C New Source Performance Standards
- E Control Equipment Specifications

**APPENDIX E**  
**Control Equipment**

Air Pollution Control Equipment (applicable if -X- checked).

The following specifications need not be verified on a continuous basis, however, if requested by the Bureau, demonstration shall be shown.

None

Scrubber

Make and Model:  
Reagent:  
Reagent Flow Rate:  
Pressure Drop (in H<sub>2</sub>O):  
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm):  
PH:  
Design Outlet Grain Loading (gr/dscf):  
Design Removal Efficiency (%):

Electrostatic Precipitator (ESP)

Make and Model:  
Number of Fields:  
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm):  
Design Outlet Grain Loading (gr/dscf):  
Design Removal Efficiency (%):

Cyclone     Multicyclone

Make and Model:  
Pressure Drop (in H<sub>2</sub>O):  
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm):

Selective Non-catalytic Reduction (SNCR)

Urea     Ammonia

Make and Model:  
Injection Rate at Maximum Rated Capacity (lb/hr):  
Operating Temperature Range (°F):  
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm):  
Design Removal Efficiency (%):

Selective Catalytic Reduction (SCR)

Make and Model:  
Catalyst Type:  
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm):  
Pressure Drop (in H<sub>2</sub>O):  
Ammonia Injection Rate at Maximum Rated Capacity (lb/hr):  
Design Removal Efficiency (%):

**APPENDIX E  
Control Equipment**

Low NOx Burner

Make and Model:  
Guaranteed NOx Emission Rate (lb/MM BTU):  
Design Removal Efficiency (%):

Particulate Trap

Make and Model:  
Design Removal Efficiency (%):

Fabric Filter

Make and Model:  
Number of Bags in Use:  
Air/Cloth Ratio:  
Bag Material:  
Cleaning Method:  
Pressure Drop (in H<sub>2</sub>O):  
Minimum Gas Flow Rate at Maximum Rated Capacity (acfm):  
Design Outlet Grain Loading (gr/dscf):  
Design Removal Efficiency (%):

Other:

*Control Equipment Malfunction*

1. Equipment or methods which control "air pollutant" "emissions" from a "stationary source" and which are necessary to the operation of such "stationary source" in compliance with applicable "emission standards" and regulations shall be maintained in operation at all times that the "stationary source" is in operation or emitting "air pollutants". This includes instruments required by permit, order, or regulation which measure those source operating parameters which affect air pollutant emissions, air pollution control equipment, or other instruments which measure meteorological data required by permit, order or regulation.
2. No "person" shall deliberately shut down any such control equipment, method or other instruments specified in subsection 22a-174-7(a) while the "source" is in operation except for such necessary maintenance as cannot be accomplished when the "stationary source" itself is not in operation and is not emitting "air pollutants".
3. In the event of breakdown, failure, or deliberate shut down of any control equipment, method, or other instrument specified in subsection 22a-174-7(a) during which time the "stationary source" will be in operation, all reasonable measures shall be taken to assure resumption of the control equipment as soon as possible. Due diligence shall be exercised to minimize "emissions" while the control equipment or method is inoperative. In the event such shutdown of control equipment or methods is expected or may reasonably be expected to continue for longer than 72 hours, and if the "source" is to be operated at any time during that period, the "Commissioner" shall be notified promptly except that

**APPENDIX E**  
**Control Equipment**

*Control Equipment Malfunction, continued*

for a resource recovery facility such time period shall be 24 hours. Such notice shall include, but is not limited to, the following:

- a. Identification of the specific equipment or instrument taken out, or to be taken out, of service as well as its location, and, where applicable, registration or permit number;
  - b. The expected length of time that the "air pollution" control equipment or instrument will be out of service;
  - c. The nature and quantity of "emissions" of "air pollutants" likely to be emitted during the shutdown period;
  - d. Measures such as the use of offshift labor and equipment that will be taken to minimize the length of the shutdown period;
  - e. The reasons that it would be impossible or impractical to shut down the "stationary source" operation during the maintenance period;
4. The "Commissioner" may attach conditions to the operation of the "source" during the period of shutdown or breakdown.