

**PERMIT FOR FUEL BURNING EQUIPMENT**

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

1. Legal Firm Name: United Aluminum Corporation
2. Address: 100 United Drive, North Haven, CT 06473
3. Equipment Location: 100 United Drive, North Haven, CT 06473
4. Equipment Description (Model, I.D. #): Furnace 2 UA Modified  
W.S. Rockwell Furnace

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:

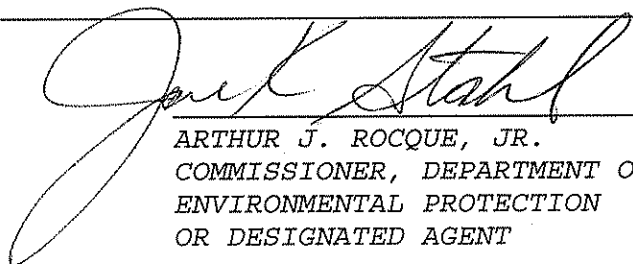
Emergency use only

Non-emergency use, including self generation

Date Issued	Exp. Date
12/8/98	
Town No.	Premise No.
135	117
Permit No.	Stack No.
0114	2
Permit Fee	
\$ 250.00	

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

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

  
 ARTHUR J. ROCQUE, JR.  
 COMMISSIONER, DEPARTMENT OF  
 ENVIRONMENTAL PROTECTION  
 OR DESIGNATED AGENT

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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: Natural Gas
2. Maximum Fuel Consumption over any Consecutive Twelve (12) Month Period \*: 71.4 mmcf
3. Maximum Hours of Operation: Daily 24; Over any Consecutive Twelve(12) Month Period: 8760

\* See also Part VIII Special Requirements number 1

*Design Specifications*

1. Maximum Fuel Firing Rate(s): 10,400 ft<sup>3</sup>/hr
2. Maximum Gross Heat Input (MM BTU/hr): 10.4
3. Minimum Stack Height (ft): 39.5
4. Minimum Exhaust Gas Flow Rate (acfm): 3398
5. Stack Exit Temperature (°F): 330
6. Minimum Distance from Stack to Property Line (ft): 214

**PART II. CONTROL EQUIPMENT** (Applicable if  - 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 (%): \_\_\_\_\_
2. Removal Efficiency (%): \_\_\_\_\_
3. Overall Efficiency (%): \_\_\_\_\_

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**PART III. CONTINUOUS EMISSION MONITORING REQUIREMENTS AND  
ASSOCIATED EMISSION LIMITS (Applicable if -✓- 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"/> SOx	3 hour rolling		
<input type="checkbox"/> NOx	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 fuel consumption for this furnace that shall be based on any consecutive twelve (12) month time period and shall be determined by adding the current month's fuel usage to that of the previous eleven (11) months. The Permittee shall make these calculations monthly.

The permittee shall keep records of total annual fuel consumption for furnaces 1,2,3, and 11 that shall be based on any consecutive twelve (12) month time period and shall be determined by adding the current month's fuel usage 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).

2. The Permittee shall use a fuel metering device to continuously monitor fuel feed to this permitted source.
3. 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>#/MMBtu</u>	<u>MASC * (ug/m<sup>3</sup>)</u>	<u>TPY</u>
TSP	0.142	0.014		0.489
PM-10	0.142	0.014		0.489
SOx	0.006	0.001		0.021
NOx	1.456	0.140		4.998
VOC	0.029	0.003		0.099
CO	0.364	0.035		1.250

<u>Non-Criteria Pollutants</u>	<u>#/hr</u>	<u>#/MM BTU</u>	<u>MASC * (ug/m<sup>3</sup>)</u>	<u>TPY</u>
Formaldehyde			4458.88	

\*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 fifth edition

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  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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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 not exceed a total of 71.4 mmcf of natural gas per 12-month period for furnaces 1,2,3 and 11. This statement refers to permits 135-0113, 135-0114, 135-0115, and 135-0116.
2. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.
3. *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 of Connecticut State Agencies.

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

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## PART IX. ADDITIONAL TERMS AND CONDITIONS, continued

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.

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; Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 6th Floor; Hartford, Connecticut 06106-5127.

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