



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
WASHINGTON COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 06-06935**

**DATE:** 8/29/2002

NOVA Chemicals  
Mark Cunningham  
Township Rd 97  
Belpre, OH 45714

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Michael W. Ahern, Supervisor  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: USEPA

SEDO



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**Permit To Install  
Terms and Conditions**

**Issue Date: 8/29/2002  
Effective Date: 8/29/2002**

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**FINAL PERMIT TO INSTALL 06-06935**

Application Number: 06-06935  
APS Premise Number: 0684010003  
Permit Fee: **\$400**  
Name of Facility: NOVA Chemicals  
Person to Contact: Mark Cunningham  
Address: Township Rd 97  
Belpre, OH 45714

Location of proposed air contaminant source(s) [emissions unit(s)]:

**Township Rd 97  
Belpre, Ohio**

Description of proposed emissions unit(s):

**Thermal fluid heater number 1.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements Related to Monitoring and Record keeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

**10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**11. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

NOVA Chemicals  
 PTI Application: 06-06935  
 Issued: 8/29/2002

Facility ID: 0684010003

#### 14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

#### 15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

### B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)**  
**TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	0.62
NO <sub>x</sub>	5.96
SO <sub>2</sub>	2.11
CO	3.51
VOC	0.84

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
B001 - Thermal Fluid Heater Number 1	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(C)(1)
		OAC rule 3745-17-07(A)
		OAC rule 3745-21-08
		OAC rule 3745-23-06

NOVA

PTI A

Issued: 8/29/2002

Emissions Unit ID: B001

Applicable Emissions Limitations/Control Measures	3745-31-05(A)(3).
Emissions of sulfur dioxide shall not exceed 0.48 lb/hr and 2.11 TPY.	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
Emissions of nitrogen dioxide shall not exceed 1.36 lbs/hr and 5.96 TPY.	None See A.2.a
Emissions of carbon monoxide shall not exceed 0.80 lb/hr and 3.51 TPY.	None See A.2.a
Emissions of volatile organic compounds shall not exceed 0.19 lb/hr and 0.84 TPY.	
Particulate emissions shall not exceed 0.14 lb/hr and 0.62 TPY.	
There shall be no visible particulate emissions from the stack of this emissions unit.	
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), OAC rule 3745-17-10, OAC rule 3745-23-06 and OAC rule 3745-17-07.	
See Section A.I.2.a below	
The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule	

**2. Additional Terms and Conditions**

- 2.a** The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively, by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3)

**B. Operational Restrictions**

The permittee shall burn only natural gas, number two fuel oil and/or co-product in this emissions unit.

**C. Monitoring and/or Record keeping Requirements**

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. The color of the emissions;
- b. The total duration of any visible emission incident; and
- c. Any corrective actions taken to eliminate the visible emissions.

**2.** For each day during which the permittee burns a fuel other than natural gas number two fuel oil and/or co-product, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**D. Reporting Requirements**

**1.** The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, number two fuel oil and/or co-product was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

## E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation

Emissions of sulfur dioxide shall not exceed 0.48 lb/hr

Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = 7.1 \text{ lbs}/10^3 \text{ gal} * 68 \text{ gals/hr} = 0.48 \text{ lb/hr}$$

where

7.1 lbs/10<sup>3</sup> gal is the emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, table 1.3-1 (9/98).

b. Emission Limitation

Emissions of sulfur dioxide shall not exceed 2.11 TPY

Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate (0.48 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation

Emissions of nitrogen oxides shall not exceed 1.36 lbs/hr

Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = 20 \text{ lbs}/10^3 \text{ gal} * 68 \text{ gals/hr} = 1.36 \text{ lbs/hr}$$

where

20 lbs/10<sup>3</sup> gal is the emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, (9/98).

d. Emission Limitation

Emissions of nitrogen oxides shall not exceed 5.96 TPY

Applicable Compliance Method

Compliance shall be determined by the following equation:

This emission limitation was developed by multiplying the allowable hourly emission rate (1.36 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

e. Emissions Limitation

Emissions of carbon monoxide shall not exceed 0.80 lb/hr

Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = 84 \text{ lbs}/10^6 \text{ ft}^3 * 9,500 \text{ ft}^3/\text{hr} = 0.80 \text{ lb/hr}$$

where

84 lbs/10<sup>6</sup> ft<sup>3</sup> is the emission factor for combustion of natural gas from AP-42 chapter 1.4, table 1.3-1 (7/98).

f. Emission Limitation

Emissions of carbon monoxide shall not exceed 3.5 TPY

Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate

(0.8 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

g. Emission Limitation

Particulate emissions shall not exceed 0.14 lb/hr

Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = (0.92 \text{ lb}/10^3 \text{ gal} + 1.08 \text{ lbs}/10^3 \text{ gal}) * 68 \text{ gals/hr} = 0.14 \text{ lb/hr}$$

where

0.92 lb/10<sup>3</sup> gal is the PM > 10 micrometers emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, (9/98), and

1.08 lbs/10<sup>3</sup> gal is the PM < 10 micrometers emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, (9/98).

h. Emission Limitation

Particulate emissions shall not exceed 0.62 TPY

Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate (0.14 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation

Emissions of volatile organic compounds shall not exceed 0.19 lb/hr

Applicable Compliance Method

Compliance shall be demonstrated based on the following calculation of potential to emit  
 $E = 78 \text{ gals/hr} * 7.48 \text{ lbs/gal} * (1-0.0003) = 0.18 \text{ lb/hr}$

j. Emission Limitation

Emissions of volatile organic compounds shall not exceed 0.84 TPY

Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate (0.19 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

k. Emission Limitation

Visible particulate emissions from any stack shall not exceed twenty per cent opacity, as a six-minute average, except by rule.

Applicable Compliance Method

Compliance shall be demonstrated based upon the monitoring and record keeping in section C.1. above.

## F. Miscellaneous Requirements

Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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**NOVA Chemicals**

**PTI Application: 06 06035**

**Issued**

**Facility ID: 0684010003**

**Emissions Unit ID: B001**

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
B002 - Thermal Fluid Heater Number 2	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-10(C)(1)
		OAC rule 3745-17-07(A)
		OAC rule 3745-21-08
		OAC rule 3745-23-06

Applicable Emissions  
Limitations/Control Measures

Emissions of sulfur dioxide shall not exceed 0.48 lb/hr and 2.11 TPY.

3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

Emissions of nitrogen dioxide shall not exceed 1.36 lbs/hr and 5.96 TPY.

None

See A.2.a

Emissions of carbon monoxide shall not exceed 0.80 lb/hr and 3.51 TPY.

None

See A.2.a

Emissions of volatile organic compounds shall not exceed 0.19 lb/hr and 0.84 TPY.

Particulate emissions shall not exceed 0.14 lb/hr and 0.62 TPY.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08, OAC rule 3745-23-06, OAC rule 3745-17-10 and OAC rule 3745-17-07.

There shall be no visible particulate emissions from the stack of this emissions unit.

See Section A.I.2.a below

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule

**2. Additional Terms and Conditions**

- 2.a** The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively, by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3)

**B. Operational Restrictions**

None

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. The color of the emissions;
  - b. The total duration of any visible emission incident; and
  - c. Any corrective actions taken to eliminate the visible emissions.
2. For each day during which the permittee burns a fuel other than natural gas number two fuel oil and/or co-product, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, number two fuel oil and/or co-product was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

## E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation

Emissions of sulfur dioxide shall not exceed 0.48 lb/hr  
Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = 7.1 \text{ lbs}/10^3 \text{ gal} * 68 \text{ gals/hr} = 0.48 \text{ lb/hr}$$

where

7.1 lbs/10<sup>3</sup> gal is the emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, table 1.3-1 (9/98).

- b. Emission Limitation

Emissions of sulfur dioxide shall not exceed 2.11 TPY

Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate (0.48 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

- c. Emission Limitation

Emissions of nitrogen oxides shall not exceed 1.36 lbs/hr

Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = 20 \text{ lbs}/10^3 \text{ gal} * 68 \text{ gals/hr} = 1.36 \text{ lbs/hr}$$

where

20 lbs/10<sup>3</sup> gal is the emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, (9/98).

d. Emission Limitation

Emissions of nitrogen oxides shall not exceed 5.96 TPY

Applicable Compliance Method

Compliance shall be determined by the following equation:

This emission limitation was developed by multiplying the allowable hourly emission rate (1.36 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

e. Emissions Limitation

Emissions of carbon monoxide shall not exceed 0.80 lb/hr

Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = 84 \text{ lbs}/10^6 \text{ ft}^3 * 9,500 \text{ ft}^3/\text{hr} = 0.80 \text{ lb/hr}$$

where

84 lbs/10<sup>6</sup> ft<sup>3</sup> is the emission factor for combustion of natural gas from AP-42 chapter 1.4, table 1.3-1 (7/98).

f. Emission Limitation

Emissions of carbon monoxide shall not exceed 3.5 TPY

Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate (0.8 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

g. Emission Limitation

Particulate emissions shall not exceed 0.14 lb/hr

Applicable Compliance Method

Compliance shall be demonstrated using the following equation for potential to emit:

$$E = (0.92 \text{ lb}/10^3 \text{ gal} + 1.08 \text{ lbs}/10^3 \text{ gal}) * 68 \text{ gals/hr} = 0.14 \text{ lb/hr}$$

where

0.92 lb/10<sup>3</sup> gal is the PM > 10 micrometers emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, (9/98), and

1.08 lbs/10<sup>3</sup> gal is the PM < 10 micrometers emission factor for combustion of #2 fuel oil from AP-42 chapter 1.3, (9/98).

h. Emission Limitation

Particulate emissions shall not exceed 0.62 TPY

Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate (0.14 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation

Emissions of volatile organic compounds shall not exceed 0.19 lb/hr

#### Applicable Compliance Method

Compliance shall be demonstrated based on the following calculation of potential to emit  
 $E = 78 \text{ gals/hr} * 7.48 \text{ lbs/gal} * (1-0.0003) = 0.18 \text{ lb/hr}$

#### j. Emission Limitation

Emissions of volatile organic compounds shall not exceed 0.84 TPY

#### Applicable Compliance Method

This emission limitation was developed by multiplying the allowable hourly emission rate (0.19 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

#### k. Emission Limitation

Visible particulate emissions from any stack shall not exceed twenty per cent opacity, as a six-minute average, except by rule.

#### Applicable Compliance Method

Compliance shall be demonstrated based upon the monitoring and record keeping in section C.1. above.

### F. Miscellaneous Requirements

Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06935 Facility ID: 0684010003

FACILITY NAME NOVA Chemicals

FACILITY DESCRIPTION Thermal fluid heater number 1. CITY/TWP Belbre

Emissions Unit ID: **B002**

SIC CODE 2121 SCC CODE 10300503, 10300603, 10301301 EMISSIONS UNIT ID B001

EMISSIONS UNIT DESCRIPTION Thermal Fluid Heater Number 1

DATE INSTALLED 1999

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	0.062 lb/hr	0.27	0.07 lb/hr	0.3
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	0.48 lb/hr	2.11	0.48 lb/hr	2.11
Organic Compounds	Attainment	0.19 lb/hr	0.84	0.19 lb/hr	0.84
Nitrogen Oxides	Attainment	1.36 lb/hr	5.96	1.36 lb/hr	5.96
Carbon Monoxide	Attainment	0.80lb/hr	3.51	0.80lb/hr	3.51
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NO NESHAP? NO PSD? NO OFFSET POLICY? NO

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Good combustion techniques

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ N/A

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? YES NO

IDENTIFY THE AIR CONTAMINANTS:

**NEW SOURCE REVIEW FORM B**

PTI Number: 06-06935 Facility ID: 0684010003

FACILITY NAME NOVA Chemicals

FACILITY DESCRIPTION Thermal fluid heater number 1. CITY/TWP Belbre

Emissions Unit ID: **B002**

SIC CODE 2121 SCC CODE 10300503, 10300603, 10301301 EMISSIONS UNIT ID B002

EMISSIONS UNIT DESCRIPTION Thermal Fluid Heater Number 2

DATE INSTALLED 1999

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	0.062 lb/hr	0.27	0.07 lb/hr	0.3
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	0.48 lb/hr	2.11	0.48 lb/hr	2.11
Organic Compounds	Attainment	0.19 lb/hr	0.84	0.19 lb/hr	0.84
Nitrogen Oxides	Attainment	1.36 lb/hr	5.96	1.36 lb/hr	5.96
Carbon Monoxide	Attainment	0.80lb/hr	3.51	0.80lb/hr	3.51
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NO NESHAP? NO PSD? NO OFFSET POLICY? NO

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Good combustion techniques

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$N/A

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? YES NO

IDENTIFY THE AIR CONTAMINANTS: