



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: May 1, 2009

RE: Crane Div. Naval Surface Warfare Center / 101-278111-00005

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot12/03/07



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May 1, 2009

Mr. James M. Hunsicker, Environmental Protection Mgr.
Crane Division, Naval Surface Warfare Center (NSWC Crane)
Code 0592, Building 3260, 300 Highway 361
Crane, Indiana 47522-5001

RE: Interim Minor Source Modification No.:
101-278111-00005 to
Part 70 Operating Permit Renewal No.:
T101-21308-00005

Dear Mr. Hunsicker:

On April 20, 2009, the Office of Air Quality (OAQ) received an interim minor source modification petition from Crane Division, Naval Surface Warfare Center (NSWC Crane), located at 300 Highway 361, Crane, Indiana 47522-5001. Based on the data and information submitted in the petition and the provisions in 326 IAC 2-13-1, this interim minor source modification petition is hereby approved for the following:

Insignificant Activities:

- (a) Two (2) steam kettles for the refinement of trinitrotoluene (TNT), approved for construction in 2009, identified as CRN-0160-01-A and CRN-0160-02-B, each with a maximum batch throughput of 120 lb TNT per hour and a combined throughput of 4,800 lb TNT per day, each controlled by a wet scrubber, identified as Scrubber 1, exhausting to stacks S-1 and Scrubber 2, exhausting to stack S-2.

Detailed conditions will be specified in the final minor source modification no. 101-27811-00005.

This interim minor source modification expires on the effective date of the final minor source modification.

This interim minor source modification may be revoked after its effective date upon a written finding by the OAQ that any of the reasons for denial in 326 IAC 2-13-1(h) exist or if the final minor source modification is denied.

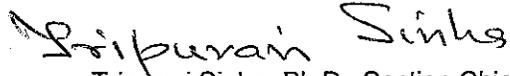
The facilities subject to this approval may not operate until the final minor source modification is issued by OAQ.

The interim minor source modification petition is federally enforceable.

Mr. James M. Hunsicker
Interim MSM 101-27811-00005
Page 2.

If you have any question regarding this interim minor source modification petition, please contact David J. Matousek of my staff at (317) 232-8253, or at 1-800-451-6027 (ask for extension 2-8253).

Sincerely,



Tripurari Sinha, Ph.D., Section Chief
Permits Branch
Office of Air Quality

DJM/djm
Enclosure: Interim Evaluation

cc: File - Martin County
Martin County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

PETITION FOR INTERIM SOURCE MODIFICATION

Source Name: Crane Division, Naval Surface Warfare Center (NSWC Crane)
Source Address: 300 Highway 361, Crane, Indiana 47522-5009
Mailing Address: Code 0592, Building 3260, 300 Highway 361, Crane, IN 47522
SIC Code: 9711

Description of the Operation or Equipment:

Two (2) steam kettles located in Building 160 used for the refinement of trinitrotoluene (TNT) with a combined capacity of ~~480~~ lbs/hr, using two (2) wet scrubbers to control particulate matter emissions. *240*

Potential to Emit:

"Potential to emit" means the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency. The term does not alter or affect the use of potential to emit for any other purpose under the CAA, (or "capacity factor" as used in Title IV of the CAA) or the regulations promulgated thereunder.

Potential to Emit for the paint booth <i>KETTLES</i>	
Pollutant	tons per year
PM	6.92 <i>6.53</i>
PM10	6.92 <i>6.53</i>
SO2	0.00
NOx	0.00
VOC	0.00
CO	0.00
Lead	0.00
HAPs	0.00

PM/PM10 Potential to Emit

Process weight rate 2,400 pounds per 10-hour shift, with 2-shifts per day. *(Both KETTLES)*

$E = 4.10 P^{0.67}$

where E = rate of emission in pounds per hour
and

$P = \frac{2400}{10 \times 2} = 0.240$ tons/hour *(EACH KETTLE)*
0.06

$E = 1.58 \text{ lbs/hr} = 6.92 \text{ tons PM/yr}$
0.623 lb/hr

PSD Requirements:

The potential to emit is less than PSD Significant threshold levels, therefore, PSD rules and requirements do not apply.

NSPS Requirements:

There are no applicable NSPS rules applicable to this operation or equipment.

NESHAP Requirements:

There are no applicable NESHAP rules applicable to this operation or equipment.

State Rules and Requirements:

Emissions Limitations and Standards [326 IAC 2-7-5(1)]

Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the ~~paint booth~~ ^{STEAM KETTLE} shall not exceed ~~1.58~~ pounds per hour when operating at a process weight rate of ~~0.240~~ tons per hour. ^{0.623} ^{0.06}

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour
and

P = process weight rate in tons per hour

Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control devices.

Compliance Determination Requirements

Particulate Matter (PM)

In order to comply with the PM emission limit, the wet scrubbers for PM control shall be in operation at all times the explosives mixing kettles are in use and the Permittee shall operate the control devices in accordance with manufacturer's specifications.

Compliance Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

Visible Emissions

- (a) Visible emission notations of the wet scrubber stack exhausts from the explosives mixing kettle operations shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Parametric Monitoring

The Permittee shall record the pressure drop across the scrubbers used in conjunction with the explosives mixing kettles in Building 160, at least once per day when the kettles are in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Scrubber Failure

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

Record Keeping Requirements

- (a) To document compliance with the Visible Emissions requirement, the Permittee shall maintain a daily record of visible emission notations of the scrubber stack exhausts from the explosives mixing kettles. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with the Parametric Monitoring requirement, the Permittee shall maintain a daily record of the pressure drop across the scrubbers. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Federal Enforceability:

NSWC Crane consents to the federal enforceability of this interim petition.

Signature: James M. Hunsicker Date: 4/13/09

Printed Name: James M. Hunsicker

Title/Position: Environmental Protection Mgr
By direction of the Commander

Phone: (812) 854-1132

**Indiana Department of Environmental Management
Office of Air Quality**

Interim Petition Checklist		
Instructions: (a) Please answer yes or no. (b) Enclose this checklist with the completed interim petition package.		
Company Name: Crane Division, Naval Surface Warfare Center (NSWC Crane)		
Location: 300 Highway 361, Crane, Indiana 47522-5009		
yes	1.	Is the written interim petition prepared?
yes	2.	Is the written petition signed and dated?
N/A	3.	Is the public notice drafted?
yes	4.	Is the \$500 filing and review fee enclosed? <i>NOTE: Sent separately</i>
yes	5.	Is the account number written on the check or money order?
yes	6.	Is the Affidavit of Construction signed, dated, and notarized?
yes	7.	Is the proposed construction described in detail?
yes	8.	Is the proposed construction a modification or addition to an existing source?
yes	9.	Is the proposed construction located in an attainment area for all criteria pollutants?
no	10.	Is the proposed construction located in a nonattainment area? If yes, answer No.11.
N/A	11.	Is the pollutant, which the nonattainment designation is based on, going to be emitted in this proposed construction?
yes	12.	Is potential to emit calculated?
yes	13.	Is federal enforceability consent specifically indicated?
yes	14.	Are specific conditions, limitations, and/or restrictions included that preclude applicability of PSD?
N/A	15.	Are specific conditions, limitations, and/or restrictions included that preclude applicability of NSPS?
yes	16.	Are specific conditions, limitations, and/or restrictions included that preclude applicability of NESHAP?
yes	17.	Are specific conditions, limitations, and/or restrictions included that assure compliance with all applicable state air pollution rules?
yes	18.	Has a regular construction application been submitted to OAQ?
N/A	19.	Is a regular construction application going to be submitted to OAQ? If yes, indicate approximate date of submission:
no	20.	Has the proposed construction commenced prior to the submission of the interim petition?
N/A	21.	If a significant modification or significant revision, has the public notice been submitted to the newspaper?
Additional Comments:		

AFFIDAVIT

James M. Hunsicker, being first duly sworn upon oath, deposes and says:

1. I live in Dubois County, State of Indiana, and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of Environmental Protection Manager for NSWC Crane.
3. By virtue of my position with NSWC Crane, I have personal knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of NSWC Crane.
4. I, the undersigned, have submitted an interim significant source modification petition to the Office of Air Management for the construction of explosives mixing kettles and dedicated scrubbers in Building 160.
5. NSWC Crane recognizes the following risks:
 - (i) own financial risk;
 - (ii) that IDEM may require additional or different control technology for the final approval;
 - (iii) that IDEM may deny issuance of the final approval; and
 - (iv) any additional air permitting requirements.

Further Affiant Saith Not.

I affirm under the penalty for perjury that the representations contained in this affidavit are true, to the best of my information and belief.

4/13/09
Date

James M. Hunsicker
signature of affiant
JAMES HUNSICKER
printed name
812-954-32
phone number

STATE OF Indiana)
COUNTY OF Greene)

Subscribed and sworn to me, a notary public in and for Greene County and State of Indiana on this 13th day of April 2009.

Signature: Debra L Smith
Printed Name: Debra L Smith
My Commission Expires: 2-6-2016

Appendix A: Emissions Summary Sheet

Company Name: Crane Division, Naval Surface Warfare Center (NSWC)

Address City IN Zip: 300 Highway 361, Crane, Indiana 47522-5006

Permit Number: 101-27811i-00005

Plt ID: 101-00005

Reviewer: David J. Matousek

Date: April 30, 2009

1. PM/PM10 Emissions

Process Step	Maximum Daily Hours of Operation	PM Emission Factor (lb/hr)	PTE of PM (ton/yr)	PM10 Emission Factor (lb/hr)	PTE of PM10 (ton/yr)	Overall Control Efficiency (%)	PM after Control (ton/yr)	PM10 after Control (ton/yr)	Uncontrolled PM10 (lb/hr)	326 IAC 6-3-2 Limit (lb/hr)	Comply with 326 IAC 6-3-2 without control
Explosives Mixing Steam Kettle - CRN-0160-01-A	24.00	0.75	3.29	0.75	3.29	98%	0.07	0.07	0.75	0.623	No
Explosives Mixing Steam Kettle - CRN-0160-02-B	24.00	0.75	3.29	0.75	3.29	98%	0.07	0.07	0.75	0.623	No
Total for Modification			6.58		6.58		0.14	0.14			

Methodology

- 1) Both kettles are equipped with a scrubber to control PM emissions. They have a 100% capture efficiency and 98% control efficiency.
- 2) All particulate matter is assumed to be PM10.
- 3) This is a batch operation. The source operates two ten-hour shifts per day. Each kettle can process a 1,200 lb batch during this ten hour shift. The source estimates a total of four batches per day is possible, using both kettles.
- 4) PTE of PM/PM10, ton/yr = (Daily Hours of Operation, hr/day) x (365 day/yr) x (Emission Factor, lb PM or PM10/hr) x (1 ton/200lb)
- 5) PM/PM10 after control, ton/yr = (PTE of PM/PM10, ton/yr) x (1 - control efficiency)
- 6) Uncontrolled PM/PM10, lb/hr was provided by the applicant based on emissions testing of a similar process.
- 7) 326 IAC 6-3-2 limit, lb/hr = 4.10 x (0.06 ton/hr) ^0.67
- 8) Emission factors are based on emissions testing of a similar process.
- 9) Emissions are based on a twenty-four hour day to reflect worst possible case emissions.