NORTH CAROLINA DIVISION OF AIR QUALITY

Air Permit Review

Permit Issue Date: DRAFT

Region: Raleigh Regional Office
County: Edgecombe
NC Facility ID: 3300167
Inspector's Name: Will Wike
Date of Last Inspection: 02/24/2010
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Nomaco Inc - Tarboro

Facility Address:
Nomaco Inc - Tarboro
3006 Anaconda Road
Tarboro, NC 27886

SIC: 3086 / Plastics Foam Products
NAICS: 32615 / Urethane and Other Foam Product (except Polystyrene) Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP:
NSPS:
NESHAP:
PSD: Plant-wide Applicability Limit (PAL)
PSD Avoidance:
NC Toxics:
112(r):
Other:

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Tracy Armstrong EHS Manager (919) 804-6329 501 NMC Drive Zebulon, NC 27597	Scott Edwards President (252) 824-0015 3006 Anaconda Road Tarboro, NC 27886	Tracy Armstrong EHS Manager (919) 804-6329 501 NMC Drive Zebulon, NC 27597

Application Data

Application Number: 3300167.09B
Date Received: 11/20/2009
Application Type: Modification
Application Schedule: TV-Significant

Existing Permit Data
Existing Permit Number: 08559/T12
Existing Permit Issue Date: 11/30/2009
Existing Permit Expiration Date: 10/31/2014

Review Engineer: Kevin Godwin

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue 08559/T13
Permit Issue Date:
Permit Expiration Date:

I. Introduction and Purpose of Application

Nomaco Inc. owns and operates a foam manufacturing facility in Tarboro, Edgecombe County. On November 20, 2009, DAQ received an application from Nomaco Inc. for a Title V significant modification under 15A NCAC 02Q .0501(c)(1) to obtain an Actuals Plant-wide Applicability Limitation (PAL) permit for volatile organic compound (VOC) emissions.

II. Changes to Existing Title V Air Permit

The following table lists all modifications associated with this permit action:

Page(s)	Section	Description of Change(s)
N/A	Insignificant activities list	Included a polyethylene resin storage silo (ID No. IS-F06).
3	Table of Emission Sources	Changed Extruder ID No. from ES-3960 to ES-1412.
12	2.3	Included Actuals PAL requirements.
16	3	Updated General Conditions to latest shell version (3.1).

III. Statement of Compliance

Nomaco – Tarboro was last inspected on February 24, 2010 by Mr. Will Wike of the Raleigh Regional Office (RRO). According to Mr. Wike's inspection report, based on observations made during the inspection, Nomaco appeared to be operating in compliance with all applicable requirements. Regarding the five-year compliance history, the facility has been issued Notices of Violation (NOV) as follows:

Date	Reason
November 21, 2006	failing to perform monitoring/recordkeeping of work practices and late notification of MACT applicability
October 19, 2006	failing to submit copy of 2005 annual compliance certifications to EPA
March 9, 2006	failing to perform monitoring/recordkeeping of work practices, visible emissions, and PSD-avoidance VOC calculations and failing to submit semi-annual report for 1st half of 2005.

IV. Regulatory Review

A. The PAL provisions as implemented through 15A NCAC 02D .0530 are included in 40 CFR 51.166(w) titled "Actuals PAL". Pursuant to 51.166(w)(4), the PAL shall impose an annual emission limitation in tons per year, that is enforceable in a practical matter, for the entire major stationary source. For each month during the PAL effective period after the first 12 months of establishing a PAL, the source shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL. Each PAL shall have an effective period of 10 years.

As stated above, the company wishes to obtain an Actuals PAL permit for VOC. Presently, the seven (7) permitted polyethylene extrusion lines have to comply with PSD Best Available Control Technology (BACT) limitations. By requesting Actuals PAL, the Permittee wishes to simplify compliance assurance, obtain operational flexibility, react quickly to market demand, and provide clarity for planning the facility's future modernization.

It should be noted that the Permittee is not requesting to obtain approval for any new emission source nor is it asking to modify existing equipment.

B. 40 CFR 51.166(w)

i. Pursuant to 51.166(w)(3)(i), the application shall contain a list of all emissions units at the source designated as small, significant, or major based on their potential to emit. In addition, the application shall indicate which Federal or State applicable requirements, emission limitations, or work practices apply to each unit. The application includes the following list:

Emission Source ID No.	**Source Description**	**Applicable Regulation**
ES-1365, 1377, 1390, 1402, 1411, 1412, and 3961	Polyethylene foam extrusion lines	15A NCAC 02D .0530 15A NCAC 02D .0958
ES-BLR-1	Natural gas boiler	Boiler regs.
ES-PA	Polyvinyl chloride foam process area	15A NCAC 02D .0958
ES-GEN	Diesel generator	15A NCAC 02D .0524 15A NCAC 02D .1111
IS-BO1 – BO4	Four natural gas boilers	n/a
IS-M1 and M2	Two natural gas air makeup units	n/a
IS-ST1 – ST6	Six process area storage tanks	n/a
IS-Diesel	Diesel storage tank	n/a

ii. Pursuant to 51.166(w)(3)(ii), the application shall include calculations of the baseline actual emissions (with supporting documentation) as defined in paragraph (b)(47). Baseline actual emissions are to include emissions not only associated with operation of the unit, but also emissions associated with startup, shutdown, and malfunction. The baseline number is the sum of the actual VOC emissions for each emissions unit at the source during the 24-month period minus any units that have been permanently shutdown, plus the VOC significant emission rate.

Existing Operations
The highest 24 month isobutane usage was 2,220,970 pounds and occurred in the period from January 2007 – December 2008. Dividing by two (2) and applying the percent VOC emitted on-site (i.e. 60%[1]), actual emissions are 333 tons per year.

New Operations
Pursuant to 51.166(w)(6)(ii), for newly constructed units on which actual construction began after the 24-month period, the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

There are emission units that have been installed since January of 2007 and which do not fall within the 24 month period used to develop baseline actuals for existing units. The units are identified as (**ID Nos. ES-BLR-1, ES-PA, ES-GEN, IS-ST1 – ST6, and IS-Diesel**). Potential VOC emissions were calculated in the original application and total 30.08 tpy.

Two new extruders (**ID Nos. ES-1412 and ES-3961**) were permitted in January 2009. Potential emissions were previously calculated under the assumption that 100 percent of the isobutane used was emitted. The PSD BACT limit established under this assumption is 482 tpy. As noted above, Nomaco has determined that 60% of the isobutane is emitted on-site and 40% remains in the product shipped off-site. Approximately 1% are considered start-up emissions and emitted on site. Therefore, start-up emissions are 24 tpy. The remaining 458 tpy VOC emissions are re-calculated based on the 60%/40% assumption to be 275 tpy. The potential to emit from the two new extruders plus start-up emissions is 299 tpy.

The **PAL** is calculated as:
Existing emissions (333 tpy) + Potential emissions from new operations (329 tpy) + Significant Emission Rate (40 tpy) = 702 tpy.

iii. Pursuant to 51.166(w)(7), *Contents of the PAL permit*. The plan shall require that the PAL permit contain, at a minimum, the information in paragraphs (w)(7)(i) through (x) as summarized below.
   (a) The PAL pollutant and the applicable source-wide emission limitation in tons per year.
   (b) The PAL permit effective date and the expiration date of the PAL.
   (c) Specification in the PAL permit that if a major stationary source owner or operator applies to renew a PAL in accordance with paragraph (w)(10) before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued.
   (d) A requirement that emission calculations for compliance purposes include emissions from start-ups, shutdowns, and malfunctions.
   (e) A requirement that once a PAL expires, the source is subject to the requirements of (w)(9).
   (f) The calculation procedures that the source shall use to convert the monitoring system data to monthly emissions and annual emissions based on 12-month rolling total for each month.
   (g) A requirement that the source monitor all emissions units in accordance with the provisions under (w)(13).
   (h) A requirement to retain records required under (w)(13) on site.
   (i) A requirement to submit reports required under (w)(14) by the required deadlines.
   (j) Any other requirements the reviewing authority deems necessary to implement and enforce the PAL.

[1]During the 24-month period, Nomaco was producing a variety of products. Nomaco R&D determined that the amount of isobutane retained in the foam is 40%. Therefore, the remaining amount (60%) was assumed to be emitted on-site.

iv. Pursuant to 51.166(w)(12), *Monitoring Requirements for a PAL*. General Requirements.
   (a) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plant-wide emissions in terms of mass per unit of time. Any monitoring system authorized must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in an judicial proceeding to enforce the PAL permit.
   (b) The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in paragraphs (w)(12)(ii) (a) through (d) and must be approved by the reviewing authority.
   (c) notwithstanding paragraph (w)(12)(i)(b), you may also employ an alternative monitoring approach that meets paragraph (w)(12)(i)(a) if approved by the reviewing authority.
   (d) Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.

v. Pursuant to 51.166(w)(12)(iii) through (ix), *Minimum performance requirements for approved approaches*. The following are acceptable general monitoring approaches.
   (a) Mass balance calculations for activities using coatings or solvents.
   (b) CEMS.
   (c) CPMS or PEMS.
   (d) Emission factors.

   According to the application, Nomaco has utilized mass balance calculation approach for the extrusion/production operations (excluding isobutane that is retained in the foam).

   According to the application, Nomaco has utilized AP-42 emission factors to determine VOCs from the boilers and air makeup units.

vi. Pursuant to 51.166(w)(13), *Recordkeeping Requirements for a PAL*.
   (a) The PAL permit shall require facility to retain a copy of all records necessary to determine compliance for 5 years from the date of such record.
   (b) The PAL permit shall require the facility to retain a copy of the PAL permit application and any revisions to the PAL and each annual compliance certification for the duration of the PAL effective period plus 5 years.

vii. Pursuant to 51.166(w)(14), *Reporting Requirements for a PAL*.
   (a) Semi-annual report shall contain: identification of owner or operator and permit number, total annual emissions, all data relied upon, a list of emissions units modified or added to the source, the number, duration, and cause of any deviations or monitoring malfunctions and any corrective action taken, a notification of shutdown of any monitoring system, and a signed statement by the responsible official certifying the truth, accuracy, and completeness of the report.
   (b) The source shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available.

V. Other Regulatory Considerations

- An application fee of $867.00 is required and was received along with the application.
- DAQ received the appropriate number of application copies.
- The application included the Reduction and Recycling Form (A4).
- A Professional Engineer's Seal is not required for this application.
- A zoning consistency determination is not required for this application.
- Public notice is required.

  NCDAQ published a Public Notice in the legal classified section of …. on…
  US EPA Region 4 was provided a proposed permit for review on….

- IBEAM Emission Source Module (ESM) update was verified on June 10, 2010.
- According to the application, the facility is subject to 112(r) and has submitted an RMP to EPA.

- The application was signed by Mr. Scott Edwards, President, on November 16, 2009.

VI. Recommendations

This Actuals PAL permit application for Nomaco, Inc. – Tarboro has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility appears to be complying or is expected to achieve compliance as specified in the permit with all applicable requirements. A draft permit was provided to applicant and the RRO on June 11, 2010.