

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: XXXX

Region: Asheville Regional Office
County: Caldwell
NC Facility ID: 1400008
Inspector's Name: Patrick Ballard
Date of Last Inspection: 03/22/2006
Compliance Code: C/In Compliance With
 Procedural Reqr

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|---|--|--|---|--|--|
| Facility Data | | | Permit Applicability (this application only) | | |
| <p>Applicant (Facility's Name): Bernhardt Furniture Company - Plants 2 & 5</p> <p>Facility Address: Bernhardt Furniture Company - Plants 2 & 5 1828 Morganton Boulevard Lenoir, NC 28645</p> <p>SIC: 2511 / Wood Household Furniture NAICS: 337122 / Nonupholstered Wood Household Furniture Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p> | | | <p>SIP: N/A NSPS: N/A NESHAP: N/A PSD: N/A PSD Avoidance: YES NC Toxics: N/A 112(r): N/A Other: N/A</p> | | |
| Contact Data | | | Application Data | | |
| Facility Contact | Authorized Contact | Technical Contact | <p>Application Number: 1400008.06A Date Received: 03/28/2006 Application Type: Modification Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 01755/T18 Existing Permit Issue Date: 06/16/2005 Existing Permit Expiration Date: 05/31/2010</p> | | |
| Joe Riddle Environmental Manager (828) 759-6359 P O Box 740 Lenoir NC, 28645 | Bill Beane Director of Manufacturing Services P O Box 740 Lenoir NC, 28645 | Joe Riddle Environmental Manager (828) 759-6359 P O Box 740 Lenoir NC, 28645 | | | |
| <p>Review Engineer: Betty Gatano</p> <p>Review Engineer's Signature: _____ Date: _____</p> | | | <p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 01755/T19 Permit Issue Date: XXXX Permit Expiration Date: May 31, 2010</p> | | |

I. Purpose of Application:

Bernhardt Furniture Company - Plants 2 & 5 (Bernhardt) operates a furniture manufacturing facility (SIC Code 2511) in Lenoir, Caldwell County, North Carolina. The facility is operating under Title V Air Quality Permit No. 01755T18, issued on June 16, 2005. Production at the facility has decreased in the last few years, and as a result, the facility submitted a permit application (1400028.06A) to remove existing equipment and conditions from the Title V permit. A completed permit application was received on May 9, 2006 for the following modifications:

- Remove spray booths ES-229 through ES-239 and spray booths ES-242 through ES-244.
- Remove drying ovens ES-261 through ES-266
- Remove Dip tanks ES-276 and ES-277
- Remove finish material pump room and eight bulk tanks (no ID Nos.)
- Remove dust filters CD-201 and CD-211 through CD-214

- Modify the PSD avoidance condition for spray booths ES-240 and ES-241 to remove all recordkeeping and reporting requirements. The facility's operations have changed, and they are no longer a production plant. They are inherently compliant with the VOC limit due to their decreased production.

In an e-mail dated June 29, 2006, Mr. Joe Riddle indicated that the baffle-type spray booths ES-227 and ES-228 no longer exist at Plant 2, but he requested that they remain on the permit. This issue was discussed internally. Although we have allowed spray booths to be rearranged as required to meet the needs of the finishing departments, booths ES-227 and ES-228 no longer exist on-site. Any new spray booths installed at a later date would have to be reviewed as possible NSR/PSD modifications. Thus, spray booths ES-227 and ES-228 will be removed from the permit with this permit modification.

Because the facility is requesting to reduce the recordkeeping and reporting requirements for a PSD avoidance condition, the permit application represents a significant modification. The draft permit will need to go to public notice and EPA review.

II. Facility Description:

Bernhardt Furniture Company manufactures wooden furniture at this Lenoir site. This facility is divided into two plants, Nos. 2 and 5. Plant 5 manufactures chair legs and upholstery frames and Plant 2 previously manufactured case goods (bedroom and dining room furniture). Processes at Plant 5 include woodworking, finishing, and steam generation. Woodworking operations consist of lumber drying, sawing, machining, and sanding. Fabricated furniture is finished with a variety of stains, sealers, and lacquers. Plant 2 has shut down production operations. This plant now serves as a furniture warehouse, with five spray booths remaining for touch up work and research and development.

III. Regulatory Review (This application only)

A. Removal of dust filters CD-201 and CD-211 through CD-214

15A NCAC 2D .0512 – Particulates from Miscellaneous Wood Finishing Plants

The regulation 2D .0512 requires that the collection system, duct work, and control devices on the wood waste collection system be properly designed. The permitted controls on the wood waste collection system include several bagfilters (ID Nos. CD-201, CD-211 through CD-214 and ID No. CD-219) and a cyclone (ID No. CD-203). Due to the decrease production at Plant 2, the facility has requested to remove bagfilters ID Nos. CD-201 and CD-211 through CD-214. One bagfilter (ID No. CD-219) and a cyclone (ID No. CD-203) will remain as controls on the wood material collection system.

It is expected that compliance with 2D .0512 can be met with the removal of the bagfilters. During the most recent inspection at the facility, bagfilter (ID No. CD-219) and the cyclone (ID No. CD-203) were observed operating in compliance with 2D .0512.

15A NCAC 2D .0521 – Control of Visible Emissions

The wood waste collection system (ID No. ES-WDSP-2) was constructed after July 1, 1971, and is subject to the visible emissions limitations provided in 15A NCAC 2D .0521(d). Pursuant to this requirement, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

It is expected that compliance with 2D .0521 can be met with the removal of the bagfilters. During the most recent inspection at the facility, no visible emissions were observed from bagfilter (ID No. CD-219).

Other Concerns

The equipment listing for permit condition 2.1.B contains the statement “as per CAM demonstration.” This statement does not mean that CAM is applicable to this equipment. As indicated in the permit review for the facility’s Title V permit renewal, the wood collection system (ID No ES-WDSP-2) is not subject to CAM because potential uncontrolled PM₁₀ emissions are less than 100 tons per year. Therefore, CAM is not an issue in the removal of the bagfilters. However, the statement must remain in the permit per EPA’s directive.¹

B. Removal of finishing operations equipment

The facility has requested the removal of spray booths (ID Nos. ES-229 through ES-239, and ES-242 through ES-244), drying ovens (ID Nos. ES-261 through ES-266), dip tanks (ID Nos. ES-276 and ES-277), and eight bulk tanks (no ID Nos.). As discussed previously, baffle-type spray booths ES-227 and ES-228 will also be removed from the permit because they no longer exist at the Plant 2. Remaining on the permit are one baffle-type spray booth (ID No. ES-226), two dry filter-type spray booths (ID Nos. ES-240 and ES-241), and two washoff tanks (ID Nos. ES-271 and ES-272). The remaining equipment will continue to be subject to the following:

- 15A NCAC 2D .0512
- 15A NCAC 2D .0521
- 15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .0530 [PSD avoidance] - spray booths ID Nos. ES-240 and ES-241 only
- 15A NCAC 2D .1111 MACT Subpart JJ.

With the exception of the PSD avoidance condition (described below), no changes to the monitoring frequency, recordkeeping, or reporting requirements for these regulations as specified in Air Permit No. 01755T18 will occur with this permit modification

C. Modifying the PSD avoidance condition for spray booths ES-240 and ES-241

The facility is currently limited to less than 40 tons of VOC per consecutive 12-month period from spray booths ID Nos. ES-240 and ES-241 to avoid PSD applicability. The facility has requested that the reporting and recordkeeping requirements under the PSD avoidance condition be removed. Plant 2 now serves as a warehouse and uses the few remaining spray booths for sampling and repair. Three and a half years of emission data were available for spray booths ES-240 and ES-241 to demonstrate that the VOC emissions from these spray booths are less than 40 tons (See Attachment 1). From September 2002 until March 2006, the highest 12-month total from spray booths ES-240 and ES-241 was 2668.5 lbs (1.33 tons) of VOCs, occurring in December 2002.

Interestingly, in a permit application in 2002, Bernhardt asked to have the PSD avoidance condition removed from these spray booths because VOC emissions were much less than 40 tpy. The condition was not removed but at some point the reporting requirements were reduced from quarterly to semi-annually.

¹ Permit Condition 2.1.E also contains the statement “as per CAM demonstration.” As with permit condition 2.1.B, the woodworking equipment is not subject to CAM, but the language must remain in the permit per EPA’s directive.

The reporting and recordkeeping requirements will be removed from the permit because the facility no longer has the potential to emit more than 40 tons per year from spray booths ID Nos. ES-240 and ES-241, as demonstrated by the emission data and the change in function of these spray booths. However, the permit will specify that the facility maintain records sufficient to demonstrate VOC emissions.

IV. Permit Modifications/Changes

The following changes incorporated in the permit revision (No. 01755T19) are summarized below:

| Pages | Section | Description of Changes |
|-------|-----------------|---|
| 3 | Equipment Table | Removed the following equipment from the equipment table: <ul style="list-style-type: none"> • Spray booths ES-227 and ES-228, ES-229 through ES-239, and spray booths ES-242 through ES-244. • Drying ovens ES-261 through ES-266 • Dip tanks ES-276 and ES-277 • Finish material pump room and eight bulk tanks (no ID Nos.) • Dust filters CD-201 and CD-211 through CD-214 |
| 9 | 2.1.B | Removed dust filters CD-201 and CD-211 through CD-214 from this condition: |
| 10 | 2.1.C | Removed the following equipment from this condition: <ul style="list-style-type: none"> • Spray booths ES-227 and ES-228, ES-229 through ES-239, and spray booths ES-242 through ES-244. • Drying ovens ES-261 through ES-266 • Dip tanks ES-276 and ES-277 • Finish material pump room and eight bulk tanks (no ID Nos.) |
| 12 | 2.1.C.3 | Eliminated the recordkeeping and reporting requirements for VOC emissions from the PSD avoidance condition. The facility no longer has the potential to emit more than 40 tons per year from spray booths ES-240 and ES-241. |
| 12 | 2.1.C.3 | Removed the PSD avoidance condition for spray booths ES-242 through ES-244. These spray booths have been removed from Plant #2. |
| 20 | 2.1.G.2 | Modified 2Q .0705 language to make it consistent with current shell. |
| 21 | 2.2.A | Removed the following equipment from Plant #2 for this condition: <ul style="list-style-type: none"> • Spray booths ES-227 and ES-228, ES-229 through ES-239 and spray booths ES-242 through ES-244. • Drying ovens ES-261 through ES-266 • Dip tanks ES-276 and ES-277 • Finish material pump room and eight bulk tanks (no ID Nos.) |
| 32 | 3.I.B. | Updated permit condition to reflect federally approved rule, 2D .0535. |
| 34 | 3.P. | Changed Title V Annual Compliance Certification due date from January 30 to March 1 |

V. Title V Permit Chronology

The previous revision to this permit was a Title V permit renewal. Therefore, no changes to the permit have occurred since the last public notice and EPA review.

VI. Application Chronology

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| March 28, 2006 | Received incomplete permit application. |
| April 19, 2006 | Sent additional information request letter to Bernhardt. The permit-processing clock was stopped with this letter. |
| May 9, 2006 | Received completed permit and application fee. The permit-processing clock was restarted with the receipt of their response. |
| June 14, 2006 | Sent draft permit to Patrick Ballard of the ARO for review. |
| June 21, 2006 | Received comments from ARO. |
| June 21, 2006 | Sent draft permit to Joe Riddle of Bernhardt for review. |
| June 29, 2006 | Received comments from Bernhardt |
| July 18, 2006 | Draft permit sent to public notice and to EPA for comments. |

VII. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. Patrick Ballard of the Asheville Regional Office conducted the most recent inspection on March 22, 2006. The facility was in compliance with all conditions of the permit and all applicable requirements, with the exception of missing weekly inspection records for spray booths ES-226, ES-240, and ES-241. A Notice of Violation was issued for these violations on April 10, 2006. The facility has returned to compliance.

VIII. Other Considerations (This application only)

- An application fee of \$834.00 is required and was received by the DAQ on May 9, 2006.
- A zoning consistency determination is NOT required for this application.
- A Professional Engineers Seal is NOT required for this application.
- A thirty-day public notice period is required for this application.

IX. Recommendations

This permit modification for the Bernhardt Furniture Company - Plants 2 & 5 in Lenoir, Caldwell County, North Carolina has been reviewed by the DAQ to determine compliance with all procedures and requirements.

It is recommended that we issue Air Permit No. No. 01755T19.

Attachment 1. Historical Actual Maximum Emissions from Spray Booths ES-240 and ES-241

| CY2006 | Rolling Average (lbs) | CY2005 | Rolling Average (lbs) | CY2004 | Rolling Average (lbs) | CY2003 | Rolling Average (lbs) | CY2002 | Rolling Average (lbs) |
|---------------|------------------------------|---------------|------------------------------|---------------|------------------------------|---------------|------------------------------|---------------|------------------------------|
| January | 1,070.86 | January | 1,115.23 | January | 473.10 | January | 2,608.14 | January | |
| February | 1,084.53 | February | 1,095.56 | February | 609.10 | February | 2,547.82 | February | |
| March | 1,098.20 | March | 1,075.89 | March | 745.10 | March | 2,487.50 | March | |
| April | | April | 1,008.09 | April | 828.10 | April | 2,501.40 | April | |
| May | | May | 940.29 | May | 911.10 | May | 2,165.40 | May | |
| June | | June | 843.39 | June | 994.10 | June | 1,893.60 | June | |
| July | | July | 746.49 | July | 1,091.00 | July | 1,471.90 | July | 1,700.76 |
| August | | August | 779.59 | August | 1,187.90 | August | 1,258.90 | August | 1,821.26 |
| September | | September | 812.69 | September | 1,192.20 | September | 1,068.90 | September | 2,011.36 |
| October | | October | 894.19 | October | 1,173.10 | October | 826.60 | October | 2,228.76 |
| November | | November | 975.69 | November | 1,154.00 | November | 589.10 | November | 2,441.36 |
| December | | December | 1,057.19 | December | 1,134.90 | December | 337.10 | December | 2,668.46 |
| MAX | 1,098.20 | MAX | 1,115.23 | MAX | 1,192.20 | MAX | 2,608.14 | MAX | 2,668.46 |