

AIR PERMIT REVIEW

APPLICANT: Broyhill Furniture Industries Virginia Street Complex	SITE LOCATION: Lenoir	COUNTY: Caldwell	
TECHNICAL CONTACT: David Stout	PHONE: (828) 758-3374	RESPONSIBLE OFFICIAL: Bill Sale	TITLE: Vice President
REVIEW ENGINEER: Mark Cuilla	SIGNATURE:	DATE: XXXXXX, 2003	
REGIONAL CONTACT: Laura Herbert	REGIONAL OFFICE: ARO	SIC CODE: 2511	
APPLICATION NUMBER: 1400017.03C	EXISTING PERMIT NUMBER: 02820T26	NEW PERMIT NUMBER: 02820T27	

I. Purpose of Application

This permitting action is a renewal of an existing Title V permit pursuant to 2Q .0513. The existing Title V permit (02820T26) was issued on April 25, 2003, and is currently scheduled to expire on April 30, 2004. The renewal application was received on May 1, 2003, or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

II. Facility Description

Broyhill Furniture – Virginia Street Complex is a furniture manufacturer located in Lenoir, Caldwell County, North Carolina. This title V facility has currently permitted sources consisting of boilers, woodworking operations, and MACT applicable painting and gluing operations as well as miscellaneous lumber drying operations and above ground storage tanks. The facility manufactures wood household furniture.

III. History/Background/Application Chronology

May 5, 1999 – Permit 02820T21 issued as an initial title V permit.

May 24, 1999 – Permit 02820T22 issued as an administrative amendment to correct errors in the initial title V permit.

November 17, 1999 – Permit 02820T23 issued as an administrative amendment to correct 2D .0503 and 2D .0504 language as a result of change in DAQ policy and to add a missing storage tank.

November 2, 2000 – Permit 02820T24 issued as a 502(b)(10) modification to add control equipment.

January 23, 2001 – Permit 02820T25 issued as an administrative amendment to remove a PSD stipulation.

April 23, 2003 – Permit 02820T26 issued as an administrative amendment to remove testing requirement per DAQ guidance.

May 1, 2003 – Permit application 1400017.03C received and deemed complete for processing.

May 20, 2003 – I received updated permit equipment list via fax from ARO.

June 23, 2003 – I received notification via fax from ARO concerning start-up of new transfer cyclone (ID No. CD-57).

July 22, 2003 – ARO permit application review received.

August 18, 2003 – I received notification via fax from ARO concerning relocation of printing machines within facility.

September 15, 2003 – I received CAM calculations (See Section VI of this document for a discussion).

October 15, 2003 – DRAFT permit sent to title V coordinator, facility, and regional office for comments.

October 16, 2003 – DRAFT permit received back from title V coordinator with no comments.

October 20, 2003 – DRAFT permit received back from facility and comments were incorporated.

November 7, 2003 – DRAFT permit received back from regional office and comments were incorporated.

IV. Permit Modification/Changes

The following table describes the modifications to the current permit as part of the renewal process.

Page(s)	Section	Description of Change(s)
Cover	-	-revised permit revision numbers and all dates
TOC	-	-removed reference to Part II
3-8	Equipment Table	-clarified boiler descriptions -added MACT Subpart reference -amended equipment listing per detailed list provided by facility -corrected plant names per facility
8-9	2.1 A (description)	-corrected boiler descriptions -corrected plant names
9-10	2.1 A (table)	-added reference to MACT Subpart
10	2.1 A.1	-amended language to most recent shell conditions (tvcond53.wpd)
10-11	2.1 A.2.a-j	-amended language to most recent shell conditions (tvcond53.wpd)
12	2.1 A.3.a-c	-amended language to most recent shell conditions (tvcond53.wpd)
12	2.1 A.4.a-c	-amended language to most recent shell conditions (tvcond53.wpd)
12-13	2.1 A.5.a-g	-amended language to most recent shell conditions (tvcond53.wpd)
13-14	2.1 B (description)	-amended description per facility
14	2.1 B.1.a-e	-amended language to most recent shell conditions (tvcond53.wpd)
15	2.1 B.2.a-f	-amended language to most recent shell conditions (tvcond53.wpd)
15-16	2.1 C (description)	-amended description per facility
16-17	2.1 C (table)	-corrected equipment descriptions
17	2.1 C.1.a-e	-amended language to most recent shell conditions (tvcond53.wpd)
17-18	2.1 C.2.a-d	-amended language to most recent shell conditions (tvcond53.wpd)

Page(s)	Section	Description of Change(s)
18	2.2 A (description)	-amended description per facility
18-19	2.2 B	-amended language to most recent shell conditions (tvcond53.wpd)
19-20	2.2 C (description)	-corrected description per facility
20-22	2.2 C.1-8	-amended language to most recent shell conditions (tvcond53.wpd)
22-30	Section 3- General Conditions	-amended language to most recent shell conditions (newshe38.wpd)
31	Attachment	-added QIP reference
All	Header	-updated permit revision number

V. Regulatory Review

The facility is subject to the following regulations:

- 15A NCAC 2D .0503, Particulates from Fuel Burning Indirect Heat Exchangers
- 15A NCAC 2D .0504, Particulates from Woodburning Indirect Heat Exchangers
- 15A NCAC 2D .0512, Particulates from Miscellaneous Wood Products Finishing
- 15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
- 15A NCAC 2D .0521, Control of Visible Emissions
- 15A NCAC 2D .1111, Maximum Achievable Control Technology (Subpart JJ)
- 15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions

No new or additional requirements have been added to this renewed permit. Therefore, a regulatory review will not be included in this document.

VI. NSPS, NESHAPS, PSD, Attainment Status, 112(r), CAM

NSPS

The facility is not currently subject to any NSPS requirements. The renewal of this permit does not require NSPS analysis.

NESHAP/MACT

Subpart JJ - The facility is currently required to comply with 40 CFR 63, Subpart JJ “Wood Furniture MACT”. Applicable equipment includes spray booths, wash-off/dip tanks, gluing operations, printers, and drying/curing ovens. Per ARO review, the facility is in compliance with the MACT and continued compliance is expected.

The permit condition for the MACT requirement has been updated per the most recent shell language (tvcond53.wpd).

PSD

The facility is not currently operating under a PSD avoidance condition. The renewal of this permit does not require PSD analysis.

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule.

CAM

40 CFR 64 requires that a continuous assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. The woodworking operations at the facility are controlled by bagfilters and cyclones. Per DAQ guidance, CAM is required on those control devices that see pre-controlled PM10 emissions of 100 tons per year or more. As stated above, CAM is required on control devices that are installed on an emission source in order to meet an applicable standard. The woodworking operations are all subject to 15A NCAC 2D .0512, which requires “adequate ductwork and properly designed collectors.” 2D .0512 is an applicable standard; therefore a CAM analysis is required.

The Permittee has provided a CAM analysis based on DAQ guidance. The following table represents the results.

Control Device Description	Process Description	% PM10*	PM10 tpy (uncontrolled emissions)
Lenoir Furniture Plant			
CD-4 (bagfilter)	Sanding Molding	23.8	60.26
CD-5 (bagfilter)	Sanding	0	0
CD-6 (transfer cyclone)	-	-	-
CD-7 (transfer cyclone)	-	-	-
CD-8 (transfer cyclone)	-	-	-
CD-9 (transfer cyclone)	-	-	-
CD-10 (transfer cyclone)	-	-	-
CD-11 (transfer cyclone)	-	-	-
CD-12 (bagfilter)	Relay	2	5.879
CD-13 (bagfilter)	Hog Rough sawing	1.89	42.53
CD-14 (bagfilter)	Rough sawing Hog Chipcore	3.89	10.56
CD-15 (bagfilter)	Rough sawing Shaving/chipping Molding Fine sawing	2.26	7.63
CD-16 (bagfilter)	Rough sawing Shaving/chipping Fine sawing	2.26	50.94
CD-17 (bagfilter)	Relay	2	53.53
CD-18 (transfer cyclone)	-	-	-
CD-19 (transfer cyclone)	-	-	-
CD-20 (bagfilter)	Rough sawing Fine sawing Planning	2.26	16.13
CD-21 (bagfilter)	Milling Planning	0	0
CD-22 (closed loop cyclone)	-	-	-
CD-57 (transfer cyclone)	-	-	-
Broyhill Veneer Plant – Poplar and Face Divisions			
CD-23 (cyclone)	Chipping	0	0
CD-25 (cyclone)	Chipping	0	0
CD-26 (cyclone)	Hog	0	0
CD-27 (cyclone)	Fine sawing Hog Course sawing Sanding	17.9	78.39
CD-56 (bagfilter)	Relay	2	11.89
Occasional Plant			

Control Device Description	Process Description	% PM10*	PM10 tpy (uncontrolled emissions)
CD-30 (transfer cyclone)	-	-	-
CD-31 (transfer cyclone)	-	-	-
CD-32 (closed loop cyclone)	-	-	-
CD-33 (closed loop cyclone)	-	-	-
CD-34 (closed loop cyclone)	-	-	-
CD-35 (bagfilter)	Fine sawing Molding Sanding Rough sawing	26.06	93.74
CD-36 (bagfilter)	Sanding Molding	23.8	92.35
CD-37 (bagfilter)	Sanding Fine sawing Molding Shaving	24.17	94.41
CD-38 (bagfilter)	Shaving/chipping	0	0
CD-39 (bagfilter)	Shaving/chipping	0	0
CD-40 (cyclone)	Shaving/chipping Molding	0	0
CD-41 (bagfilter)	Rough sawing Relay	1.89	89.33
CD-42 (bagfilter)	Sanding Rough sawing	25.69	44.63
CD-43 (bagfilter)	Rough sawing Hog	1.89	75.37
CD-44 (bagfilter)	Fine sawing	0.37	3.99
CD-45 (bagfilter)	Hog Trailer unloading	2	61.18
CD-46 (bagfilter)	Course sawing Chipping Milling	1.89	44.42
CD-47 (transfer cyclone)	-	-	-
CD-48 (bagfilter)	Planning Chipcore	2	40.41
CD-49 (bagfilter)	Course sawing	1.89	61.11
CD-50 (bagfilter)	Course sawing	1.89	16.30
CD-51 (inactive cyclone)	-	-	-
CD-52 (closed loop cyclone)	-	-	-
CD-53 (closed loop cyclone)	-	-	-
CD-54 (closed loop cyclone)	-	-	-
CD-55 (closed loop cyclone)	-	-	-

* Percent PM10 based on NC wood working emissions spreadsheet (planning 0%, shaving/chipping 0%, rough sawing 1.89%, fine sawing 0.37%, milling/molding 0%, sanding 23.8%)

Based on the uncontrolled emissions supplied by the Permittee, CAM will not apply to any control device because all are less than the major source thresholds in the rule.

VII. Facility Wide Air Toxics

The facility is not subject to the toxics regulations. There is no change required for this renewal.

VIII. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. Based on the latest inspection (July 8, 2003), the facility was in compliance with all applicable requirements

IX. Facility Emissions Review

There is no change in emissions for this renewal.

X. Stipulation Review/Regional Concerns, Comment, and Recommendations

ARO requested the following permit condition changes/corrections:

1. Rename plant as requested in the application. *Agree; change made.*
2. Add transfer cyclone (ID No. 57) to Lenoir Plant. *Agree; change made.*
3. Add reference to 10 bulk solvent tanks (ID Nos. AST-1 through AST-10). *Agree; change made.*
4. Describe spray booths (Nos. S-10 and S-18) as controlled sources. *Agree; change made.*
5. Add curing ovens (Nos. O-13 and O-14) to finishing room equipment. *Agree; change made.*
6. Consolidate wash-off and dip tanks under one description at Lenoir Plant. *Agree; change made.*
7. Correct cyclone linkage (ID No. CD-30 and CD-31) to CD-41 instead of CD-44 at Occasional Plant. *Agree; change made.*
8. Add insignificant fuel oil storage tank at Occasional Plant. *Agree; change made.*
9. Reduce inspection frequency requirement for gluing operations from weekly to monthly. *Agree; change made.*

ARO responded to the facility's requests for modification of the permit in the following manner:

1. The facility requested that the visible emissions observations from the finishing/curing ovens be changed to monthly from daily. ARO agrees with this request based on historical reasons. RCO concurs, change made.
2. The facility requested that the visible emissions observations from the boilers be changed from daily to weekly. ARO agrees that the natural gas/No. 2 fuel oil fired boilers should have no monitoring/recordkeeping/reporting requirements. All other boilers should retain the daily requirement because of historical reasons. RCO concurs, change made.
3. The facility requested that the visible emissions observations from the woodworking operations be changed from daily to weekly. ARO agrees with this request based on historical reasons. RCO concurs, change made.
4. The facility requested that compliance with the odor condition be removed from the permit. ARO disagrees with this request. RCO concurs, no change.
5. The facility requested that the inspection frequency for the spray booths be reduced from weekly to monthly. ARO agrees with this request. RCO concurs, change made.
6. Via email, the facility requested that visible emissions observations be eliminated for the spray booths because emissions are not expected to approach the opacity limit. ARO agrees with this request to remove monitoring/recordkeeping/reporting. RCO concurs, change made.

XI. Public Notice / EPA and Affected State Review

Pursuant to 2Q. 0521, a notice of the draft Title V Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the draft Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. There are no affected States for this facility.

XII. Conclusions, Comments, and Recommendations

A professional engineer's seal was not required for this renewal.

A consistency determination was not required for this renewal.

ARO recommends issuance of the permit and **does** request a DRAFT permit prior to issuance.

RCO concurs with ARO's recommendation to issue air permit.