YAKIMA REGIONAL CLEAN AIR AGENCY

Order of Approval No. NSRP-10-AMI-13

Modification of theNew Source Review (NSR) Order of Approval (NSRP-21-AMI-10) for Alexandria Moulding, Inc. (Facility-wide) After the Fact.

IN THE MATTER OF approving a project which establishes a new air contaminant source at Alexandria Moulding, Inc. in Moxee, WA, THIS ORDER OF APPROVAL IS HEREBY ISSUED TO:

Applicant/Permittee: Alexandria Moulding, Inc.
Wood Molding Manufacturing

Located at: 101 Grant Way
Moxee, WA 98936

Contact: Alexandria Moulding, Inc.
Mike Hall, Maintenance Supervisor
P.O. Box 169
Moxee, WA 98936
(509) 248-2120

ISSUE DATE: Oct. 1, 2013

IN COMPLIANCE WITH THE PROVISIONS OF THE STATE OF WASHINGTON CLEAN AIR ACT (Revised Code of Washington (RCW)) CHAPTER 70.94.152, WASHINGTON ADMINISTRATIVE CODE (WAC) 173-400-110, 173-460-040:

1.0 Findings of Fact

1.1 Alexandria Moulding, Inc., hereafter referred to as the Permittee, the Facility or the Source, located at 101 Grant Way, in Moxee, Washington is the owner and operator of a manufacturing facility producing raw and primed wood moldings.

1.2 This Facility was issued a Notice of Construction Permit number NOC-14-AM-00 in 2000 for a proposed expansion which resulted in an increase in small particulate (PM_{10}) and Volatile Organic Compounds (VOC) with an emission and material throughput limit. In 2010, the Facility exceeded the material throughput of the limit and as a result, another permit NSRP-21-AMI-10 was issued. In 2012, the Facility exceeded the throughput again. The Facility was issued a notice of violation and another NSR was submitted to modify the throughput again which is the subject if this Order.

1.3 This New Source Review (NSR) Order of Approval number NSRP-10-AMI-13 shall supersede Order of Approvals numbers NOC-14-AM-00 and NSRP-21-AMI-10.

1.4 The Notice of Construction permit (NOC-14-AM-00) issued in 2000 allowed the Facility a maximum annual average use of 12,000 gallons of primer and 35,000 gallons of adhesive. However, permit #NSRP-21-AMI-10 allowed only 3,000 gallons adhesives. After review of the two permits, and adding the calculations of air emissions, this Order allows the Facility for a maximum total of 35, 000 gallons of adhesive Product # 42-2107 and 42-2306. It also authorized the use of the following equipment:

1.4.1 Fabric Filter B, Hubert, 121,000 cfm fabric filter

1.4.2 Fabric Filter T, Cascade Filtration, Inc., 20,000 cfm fabric filter

1.4.3 Primer Line 1 Paint Booth

1.4.4 Primer Line 1 AM&D model 612T Vacuum Coater

1.4.5 Primer Line 2 Cefla model SAS 400 Vacuum Coater

1.5 The moldings are manufactured on two separate lines (Line No. 1 and No. 2) and then primed with a high-hide water-based primer (Primer 1) applied using an Advanced Manufacturing & Development (AM&D) Vacuum Coater in the Primer Line 1 paint booth. The moldings are machined to the desired shapes and an edge sealer is applied to the cut ends of some of the moldings using a hand-held airless spray gun. The moldings are then re-sanded and sent through Primer Line 2 where another water-based primer (Primer 2) is applied with a Cefla vacuum coater. The moldings are then dried in a natural gas infrared dryer. Finally, a top coat is applied in either Primer Line 1 or 2.

1.6 The Facility is equipped with one fabric filter baghouse (Fabric Filter B) with a capacity of 121,000 cubic feet per minute (cfm) and one 20,000 cfm fabric filter (Fabric Filter T) to control particulate matter (PM) emissions from the woodcutting and polishing operations.

1.7 The Permittee is proposing the use of two Grizzly 10 Horse Power (HP) Dust Collectors, sixteen Grizzly 1 HP Dust Collectors, 19 natural gas infrared dryers, 31 natural gas infrared building heaters, a Generac 12 kilowatt (kW) Natural Gas Generator, a Caterpillar 141 HP 3208 Diesel Fire Pump, and a 55kW Natural Gas Generator. The Permittee is also proposing an increase in the allowable annual average use of Primers 1 and 2 as well as the adhesive Product # 42-2107 and 42-2306.

1.8 Two Grizzly 10 HP Dust Collectors (6700 cubic feet per minute (cfm), each) control emissions from the wood molding manufacturing Line No. 1 and the MDF molding manufacturing Line No. 2. These dust collectors are used as portable units to be placed on a piece of equipment that is in use when the rest of the equipment in either Line No. 1 or Line No. 2 does not need to operate and hence the operation of Fabric Filters B and T are not in use.

1.9 The sixteen Grizzly 1HP Dust Collectors (500 cfm per unit) control PM from the 12 inch miter saws used in the wood cutting operation. All of the dust collectors vent inside the building.

1.10 The diesel fire pump is for fire suppression in the Facility. The 12 KW and 55 KW natural gas generators are used as emergency generators in the event of a power outage or in case of accidental fire.

1.11 The infrared dryers are used to dry the paint on the moldings. The Facility's heat is supplied by the 31 infrared building heaters.

1.12 The layout and specifications of the aforementioned equipment and operations are part of this New Source Review (NSR) provided by the Permittee. Yakima Regional Clean Air Agency (YRCAA) has been determined to be the lead agency for the State Environmental Policy Act (SEPA) review process as a result of this NSR. YRCAA issued a Determination of Non-Significance (DNS) for this installation during the previous permit period.

1.13 Air emissions from this operation are in the form of small Particulate Matter ($PM_{2.5}$ and PM_{10}) and Volatile Organic Compound (VOC) some of which are Toxic Air Pollutants (TAPs) and or Hazardous Air Pollutants (HAPs).

1.14 The required source test specified in NSRP-21-AMI-10 for fine particulate matter ($PM_{2.5}$) for Fabric Filter B and T was conducted in September 2012 as specified in the permit.

2.0 Determinations

In relation to the above, YRCAA determines that the source must comply with the federal, state, and local laws and regulations including but not limited to the following determination:

2.1 The Facility is located in an area that is in attainment with all criteria pollutants;

2.2 The Facility is not a major stationary source nor is this modification is subject to the Prevention of Significant Deterioration permitting requirements of WAC 173-400-700 through 173-400-750;

2.3 This modification is subject to the New Source Review requirements of WAC 173-400-110 and WAC 173-460-040. This Order of Approval (Order) will supersede the previous Notice of Construction permit number NOC-14-AM-00 and NSRP-21-AMI-10;

2.4 The Facility is subject to the Registration Program of WAC 173-400-099 and YRCAA Regulation 1, Subsection 4.02;

2.5 The infrared dryers and building heaters have a combined aggregate heat input of 5.38 MMBtu/hr and do not meet the exemption criteria of less than 4 MMBtu/hr for natural gas combustion units under WAC 173-400-110(4)(c)(v) for emission unit and activity exemptions;

2.6 The Caterpillar 141 HP 3208 Diesel Fire Pump is considered exempt as stated in WAC 173-400-110(4)(h)(xxii) for the fire suppression equipment;

2.7 The 12kW and 55kW Natural Gas Generators are exempt as per WAC 173-400-110(4)(h)(xxxix) for emergency generators with an aggregate brake horsepower less than 500 brake horsepower;

2.8 The sixteen Grizzly 1HP Dust Collectors are exempt as per WAC 173-400-110(5)(d) for source emissions less than 0.75 tons per year PM_{10} and 0.5 tons per year $PM_{2.5}$; and

2.9 Increase/modification in Primer 1 and Primer 2 which emit greater than two tons of volatile organic compounds (VOCs) per year and do not meet the exemption requirements of WAC 173-400-110(5)(d) – Exemptions based on emissions. Therefore, Primer 1 and Primer 2 are subject to New Source Review.

THEREFORE, it is hereby ordered that the project as described above, in the NSR application, and in detailed plans, specifications and other information submitted in reference thereto, is **APPROVED** for operation, **PROVIDED** the specification submitted with the application and the following conditions are met:

3.0 Operating Conditions

3.1 This Order authorizes the installation and operation of the following equipment:

Table 1: Authorized Equipment List

Unit Type	Description
Dust Collectors	2 Grizzly Model 60508 10 HP, 6700 cfm per unit; installed 2007 17 Grizzly 1HP, 500 cfm per unit; installed 2000 (exempt)
Infrared Dryers	19 – 120,000 Btu/hr Natural Gas Infrared Dryers; installed between 1988-2000
Infrared Building Heaters	31 – 100,000 Btu/hr Natural Gas Infrared Building Heaters; installed between 1988-2000
Fire Suppression Equipment (exempt)	Caterpillar 141 HP 3208 Diesel Fire Pump (installed 1989)
Emergency Generator (exempt)	1 - 12kW Natural Gas Generator (installed 2000) 1 - 55kW Natural Gas Generator (installed 2011)
Fabric Filters (NOC-14-AM-00)	Filter B, Hubert - 121,000 cfm (installed 1989) Filter T, Cascade Filtration, Inc – 20,000 cfm (installed 2000)
Vacuum Coaters (NOC-14-AM-00)	AM&D model 612T Vacuum Coater (installed 2000) Cefla model SAS 400 Vacuum Coater (installed 2000)
Paint Booth (NOC-14-AM-00)	Line No. 1 Paint Booth, Custom Built (installed 1993)

3.2 Best Available Control Technology (BACT) and BACT for Toxic (T-BACT) shall be satisfied for any proposed new facility or modified air emission source to control air emissions in accordance with RCW 70.94.152, WAC 173-400-113 and WAC 173-460-060. The following actions and conditions satisfy BACT and T-BACT requirements:

3.2.1 Developing, maintaining and implementing an Operation and Maintenance (O&M) plan for the dust collectors and fabric filters including appropriate training for all operators;

3.2.2 Natural gas will be the only fuel used in the infrared dryers and building heaters;

3.2.3 Fabric filters B & T particulate emissions of less than or equal to 0.005 grains per dry standard cubic foot (gr/dscf) and opacity limit of five percent (5%), based on EPA 40 CFR Part 60 (Appendices) -Standards of Performance for New Stationary Sources- Appendix A-Methods 5 and 9;

3.2.4 Grizzly 10 HP Dust Collector particulate emissions of less than or equal to 0.01 gr/dscf and shall be operated in accordance with the O&M plan. The bags shall be maintained all the times and have at least a monthly regular maintenance;

3.2.5 The Permittee shall use water-based primers, topcoat and edge sealer as specified in conditions 3.3 below; and

3.2.6 The TAPs air emissions from this Facility shall always be below the ASIL at the boundary of the facility at all the times

3.3 The Permittee shall only use primer paints and edge sealer that have less than one percent by weight of any VOCs or HAPs according to the MSDS or Regulatory Constant Report. The Permittee shall only use topcoat that are water-based, low VOC coating that meet the HAPs limits set in 40 CFR Part 63, Subpart QQQQ.

3.4 If and whenever the Permittee wants to change the water-based paints with VOCs or HAPs that exceed the limits set in this Order of Approval, the Permittee shall apply for a NSR first and a written Order of Approval must be issued by YRCAA prior to any use or change.

3.5 The O&M plan must be updated within 60 days after the issuance of this Order. Within 75 days from the date of issuance of this Order, the Permittee shall, submit written notification to YRCAA, indicating that the O&M plan is completed and in place.

3.6 Install and maintain gauges to measure the appropriate pressure drop across the exhaust filters of the Fabric Filter B and T according to the manufacturer or industry specifications or good engineering practice standards.

3.7 The required source test in for fine particulate matter ($PM_{2.5}$) for Fabric Filter B and T was conducted in September 2012, in accordance with 40 CFR Part 60, Appendix A, Method 5 with Method 202 or 201A with 202 front and back half to which demonstrate compliance with BACT determination above. A result of the source test was submitted to the YRCAA within 30 days after the source test date was completed.

3.8 The Permittee must conduct visible emission inspections of the facility at least once per calendar quarter. Inspections are to be performed while the facility is in operation during daylight hours. If during a quarterly visible emissions inspection visible emissions other than uncombined water are observed from a single unit or activity, the Permittee must as soon as practicable but within 24 hours of the initial observation:

3.8.1 Take corrective action, which may include shutting down the unit or activity until it can be repaired, and until there are no visible emissions (or until the unit or

activity is demonstrated to be in compliance with all applicable opacity limitations in the permit using the reference test method); or

3.8.2 Alternatively, determine the opacity using the reference test method. If visible emissions are observed from a fabric filters, check to make sure that the fabric filter is operated and maintained properly and either shut it down within 3 hours or observe visible emissions using 40 CFR Part 60 Appendix A, Method 9 within 72 hours. All observations using the opacity reference test method must be kept on-site and made available to YRCAA staff during inspection or upon request.

3.9 There must be no fallout or any fugitive emissions from the dust collectors or fabric filters beyond the property boundary in a quantity that interferes unreasonably with the use and enjoyment of the property owner upon which the material is deposited or is detrimental to the health, safety or welfare of any person or causes damage to any property or business.

4.0 General Conditions

4.1 Installation and operation of this equipment must comply with all applicable federal, state and local laws and regulations, including, but not limited to, RCW 70.94, WAC 173-400 (General Regulations for Air Pollution Sources), WAC 173-460 (Controls for New Sources of Toxic Air Pollutants), and YRCAA Regulation 1.

4.2 All plans, specifications, other information and any further authorizations, approvals or denials in relation to this project, shall be incorporated herein and made a part of YRCAA records.

4.3 The YRCAA staff shall be allowed to enter this Facility at reasonable times to inspect equipment and records specific to the control, recovery, or release of contaminants into the atmosphere, in accordance with RCW 70.94.200 and YRCAA Regulation 1, 2.01.

4.4 Nothing in this approval shall be construed as preventing compliance with any requirement(s) of law, including those imposed pursuant to the Washington Clean Air Act, and rules and regulations thereunder.

4.5 This Order may be modified, suspended or revoked in whole or part for cause including, but not limited to, the following:

4.5.1 Violation of any terms or conditions of this authorization; or

4.5.2 If this authorization has been obtained by misrepresentation or failure to disclose fully all relevant facts.

4.6 The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

4.7 Failure to comply with any of these conditions is a violation subject to penalties in accordance with RCW 70.94.430 and 431, and YRCAA Regulation 1, Article 5, Section 5.02.

4.8 The requirements of this Order apply to the Facility owner, operator(s), and any contractor or subcontractor performing any activity authorized under this permit. Any person(s), including contractor(s) and subcontractor(s), not in compliance with any of the applicable Order requirements are in violation and may be subject to appropriate civil or criminal penalties. The Facility owner, operator, and all contractor(s) or subcontractor(s) are liable for the actions and violations of their employee(s). Any violation committed by a contractor or subcontractor shall be considered a violation by the Facility owner or operator, and the contractor or any subcontractor(s).

4.9 Applicable laws and regulations may be superseded or revised without notice. It is the Permittee's responsibility to stay current with the changes governing their business and therefore the Permittee must comply with all new laws and regulations immediately upon their effective date. Laws and regulation updates will be incorporated into existing Orders or upon renewal of said Orders of Approval.

4.10 Prior to modifying the operation, installing new equipment or changing the quantity set forth in Appendix A of this Order, another NSR application must be filed with YRCAA and an Order must be issued.

5.0 Emission Limits

5.1 The maximum allowable coating usage is listed below in Table 2. The actual gallon usage must be calculated on a 12-month rolling average from any date, and reported to YRCAA on an annual basis.

Table 2: Maximum Allowable Paint (water base) Usage (in gallons).

Paint Type	Maximum allowable gallon usage (12-month rolling average)
Primer Line No. 1 and Line No. 2*	223,000*
*Provided the VOC's are below 1% in the primer and no HAPs or TAPs are present based on MSDS. The two primers names: Akzo Nobel 654W020549 and Akzo Nobel 654W020446.	
Top Coat - LKW1032	10,000
Edge Sealer - LKW0640	1,000
Adhesives Product # 42-2107 and 42-2306	35,000

5.2 The Primer maximum allowable in the above table is set to 223,000 gallons based on a 12 months rolling average. The Permittee shall only use primer paints and edge sealer that have less than one percent by weight of any VOCs or HAPs according to the MSDS or Regulatory Constant Report. The Permittee shall only use topcoat that are water-based, low VOC coating that meet the HAPs limits set in 40 CFR Part 63, Subpart QQQQ.

5.3 The particulate emissions from the dust collectors are listed in Appendix A. These emission limits has been change in accordance with the source test results.

5.4 The maximum allowable emissions of these pollutants are listed in Appendix B and are based on submitted Material Safety Data Sheets (MSDS) for all materials used in this operation and the corresponding VOC, TAPs and HAPs.

5.5 Greenhouse gas, criteria pollutant, VOC and HAP Emissions from the natural gas infrared dryers and building heaters shall not exceed the amounts listed in Appendix C.

5.6 The Permittee, in addition to the above limits, must comply with all applicable requirements of the general standards for maximum emissions in accordance with WAC 173-400-040.

6.0 Monitoring, Recordkeeping and Reporting Requirements

6.1 The Permittee shall keep all records including this Order on site. Records shall include, at a minimum, the material throughput, the monthly number of hours of operation for the fabric filters, the O&M items performed, the date and time of maintenance performed, and the operator's name. Forms for record keeping must be designed by the Permittee.

6.2 All records including this Order, logs and a copy of the O&M plan must be kept on site

and be readily available, organized and accessible when requested by YRCAA or during an inspection. The O&M plan must be updated to reflect any changes in operating procedures and such changes must be routinely implemented.

6.3 Records required by this Order must be maintained and kept at the site for any of the previous three years from any current date at minimum.

6.4 Maintain on-site documentation of incoming raw materials, paints, solvents or any materials that contribute to HAP, TAP and VOC emissions, including the delivery date, name, batch or lot number and quantity. Material Safety Data Sheets (MSDS) of all such materials must be maintained on-site and readily accessible when requested by YRCAA.

6.5 Total emissions for criteria pollutants, HAPs, TAPs and VOCs must be calculated and reported to YRCAA on an annual basis as specified in the annual registration provided by YRCAA to the Facility.

6.6 This Order and its conditions shall remain in effect in the event of any change in control or ownership of the Facility. In the event of any such change in control or ownership, the Permittee must notify the succeeding owner of the Order and conditions and shall notify the YRCAA of the change in control or ownership by filing an "Ownership or Name Change" form within fifteen (15) days of that change. The form can be obtained or requested from YRCAA's office.

Any person feeling aggrieved by this NSR Order may obtain review thereof by application, within thirty (30) days of receipt of this NSR Order to the Pollution Control Hearings Board, P.O. Box 40903, Olympia, WA, 98504-0903. Concurrently, a copy of the application must be sent to the YRCAA, 329 North 1st Street, Yakima, WA 98901. These procedures are consistent with the provisions of RCW Chapter 43.21B and the rules and regulations adopted thereunder.

DATED at Yakima, Washington this 1st day of October, 2013.

PREPARED & APPROVED BY:

Hasan M. Tahat, Ph.D.
Engineering and Planning Division Supervisor
Yakima Regional Clean Air Agency
for
Gary W. Pruitt
Air Pollution Control Officer
Yakima Regional Clean Air Agency

REVIEWED BY:

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JOSEPH ANDREOTTI
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9/30/13

Fabric Filter Emission Rates

Baghouse Particulate Emissions - each unit

Emission Unit	Airflow (acfm)	Emission Conc. (gr/dscf)	Pollutant	% of PM	Emission Rate (lb/hr)	(lb/day)	(lb/year)	(ton/year)	Building % control	Emission Rate (lb/hr)	(lb/day)	(lb/year)	(ton/year)
Fabric Filter B	121,000	0.005	PM	100.0%	5.2	124	45427	22.71	70%	1.56	37.3	13628	6.8
		0.0025	PM10	50.0%	2.6	62	22713	11.36	70%	0.78	18.7	6814	3.4
		0.0013	PM2.5	25.0%	1.3	31	11357	5.68	70%	0.39	9.3	3407	1.7
Fabric Filter T	20,000	0.005	PM	100.0%	0.9	21	7509	3.75	Does not vent inside				
		0.0025	PM10	50.0%	0.4	10	3754	1.88					
		0.0013	PM2.5	25.0%	0.2	5	1877	0.94					
Grizzly 10 HP DC	6700	0.01	PM	100.0%	0.6	14	5031	2.52	70%	0.17	4.1	1509	0.8
			PM10	50.0%	0.3	7	2515	1.26	70%	0.09	2.1	755	0.4
			PM2.5	25.0%	0.14	3	1258	0.63	70%	0.04	1.0	377	0.2
Grizzly 1 HP DC	500	0.01	PM	100.0%	0.04	1.0	375	0.19	70%	0.01	0.3	113	0.1
			PM10	50.0%	0.02	0.5	188	0.09	70%	0.01	0.2	56	0.0
			PM2.5	25.0%	0.011	0.3	94	0.05	70%	0.00	0.1	28	0.0
								51.0					**13.3**

Note:
% of PM - The percent of the total PM that is PM10 or PM2.5 is based on a source test of September 2012.

Baghouse Particulate Emissions - Total Units

Emission Unit	Pollutant	Emission Rate Each Unit (lb/hr)	(lb/day)	(lb/year)	(ton/year)	Number of Units	Total Emission Rate (lb/hr)	(lb/day)	(lb/year)	(ton/year)
Fabric Filter B	PM	5.19	124.46	45426.86	22.71	1	5.19	124.46	45427	22.71
	PM10	2.59	62.23	22713.43	11.36		2.59	62.23	22713	11.36
	PM2.5	1.30	31.11	11356.71	5.68		1.30	31.11	11357	5.68
Fabric Filter T	PM	0.86	20.57	7508.57	3.75	1	0.86	20.57	7509	3.75
	PM10	0.43	10.29	3754.29	1.88		0.43	10.29	3754	1.88
	PM2.5	0.21	5.14	1877.14	0.94		0.21	5.14	1877	0.94
Grizzly 10 HP DC	PM	0.57	13.78	5030.74	2.52	2	1.15	27.57	10061	5.03
	PM10	0.29	6.89	2515.37	1.26		0.57	13.78	5031	2.52
	PM2.5	0.14	3.45	1257.69	0.63		0.29	6.89	2515	1.26
Grizzly 1 HP DC	PM	0.04	1.03	375.43	0.19	17	0.73	17.49	6382	3.19
	PM10	0.02	0.51	187.71	0.09		0.36	8.74	3191	1.60
	PM2.5	0.01	0.26	93.86	0.05		0.18	4.37	1596	0.80
Total	PM						7.92	190.08	69379	**34.69**
	PM10						3.96	95.04	34690	**17.34**
	PM2.5						1.98	47.52	17345	**8.67**

Total PM Emissions: **60.71 tons/yr**

Top Coat and Edge Sealer Emission Rates

Top Coat LKW1032

Maximum Daily Application Rate 465 gallons per day Lines No. 1 and No. 2
2009 Usage 1550 gallons per year
Maximum Allowable Usage 10,000 gallons per year
Product Density 10.580 lb/gal

								Emission Rates				
Pollutant	CAS	Weight Percent	HAP	TAP	Averaging Period	De Minimius (lb/period)	SQER (lb/period)	Max (lb/day)	2009 (Actual) (lb/year)	(tons/year)	Requested Limit (lb/year)	(tons/year)
VOC		1.730						85	284	0.14	1830	0.92
Ethylene Glycol Monobutyl Ether	111-76-2	0.473	Delisted	Yes	24-hr	85	1,710	23	78	0.04	500	0.25
Diethylene Glydol Monoethyl Ether	111-90-0	0.122	Yes	No				6	20	0.010	129	0.06
Diethylene Glycol Butyl Ether	112-34-5	0.037	Yes	No				2	6	0.003	39	0.02
Dipropylene Glycol Methyl Ether	34590-94-8	0.744	No	No				37	122	0.06	787	0.39
Ethanol	64-17-5	0.001	No	No				0.04	0.1	0.0001	1	0.0005
Methyl Methacrylate	80-62-2	0.0013	Yes	No				0.06	0.2	0.0001	1	0.0007

Edge Sealer LKW0640

Adhesive Product # 42-2107 and 42-2306
Maximum Daily Application Rate 90 gallons per day 95.89 gallons per day
2009 Usage 155 gallons per year 2100 gallons per year
Maximum Allowable Usage 1,000 gallons per year 35000 gallons per year
Product Density 10.570 lb/gal 9.9 lb/gal

								Emission Rates				
Pollutant	CAS	Weight Percent	HAP	TAP	Averaging Period	De Minimius (lb/period)	SQER (lb/period)	Max (lb/day)	2009 (Actual) (lb/year)	(tons/year)	Requested Limit (lb/year)	(tons/year)
VOC		2.14						20	35	0.02	226	0.11
Ethylbenzene	100-41-4	0.0001	Yes	Yes	Annual	3.84	76.8	0.001	0.002	8.19E-07	0.01	5.29E-06
Ethylene Glycol	107-21-1	0.0001	Yes	Yes	24-hr	2.63	52.60	0.001	0.002	8.19E-07	0.01	5.29E-06
Dimethylaminoethanol	108-01-0	0.1417	No	No				1.35	2	1.16E-03	15	7.49E-03
1,3,5-Trimethylbenzene	108-67-8	0.0026	No	No				0.02	0.04	2.13E-05	0.3	1.37E-04
Ethylene Glycol Monobutyl Ether	111-76-2	0.0002	Delisted	Yes	24-hr	85	1,710.00	0.002	0.00	1.64E-06	0.02	1.06E-05
Diethylene Glydol Monomethyl Ether	111-77-3	0.0004	Yes	No				0.004	0.01	3.28E-06	0.04	2.11E-05
Diethylene Glycol Butyl Ether	112-34-5	0.5668	Yes	No				5.39	9	4.64E-03	60	3.00E-02
Dipropylene glycol	25265-71-8	0.0127	No	No				0.12	0.2	1.04E-04	1	6.71E-04
Dipropylene Glycol Methyl Ether	34590-94-8	1.3225	No	No				12.6	22	0.01	140	0.07
Aromatic Naphtha, light	64742-95-6	0.0118	No	No				0.11	0.2	9.67E-05	1	6.24E-04

Adhesive Product # 42-2107 and 42-2306

								Emission Rates				
Pollutant	CAS	Weight Percent	HAP	TAP	Averaging Period	De Minimius (lb/period)	SQER (lb/period)	Max (lb/day)	2010 (Actual) (lb/year)	(tons/year)	Requested Limit (lb/year)	(tons/year)
Ethylene glycol momobutyle ether	111-76-2	1.7180	Delisted	Yes	24-hr	85.4	1,710	16.31	357.2	1.79E-01	5953	2.98E+00

Primer Lines No. 1 and No. 2 Emission Rates 223,000 gallons per year 40 gallons per day 14,600.0 130000
13.97 lb/gallon 13.86 lb/gallon

								Emission Rates				
Pollutant	CAS	Weight Percent	HAP	TAP	Averaging Period	De Minimius (lb/period)	SQER (lb/period)	Max (lb/day)	2010 (Actual) (lb/year)	(tons/year)	Requested Limit (lb/year)	(tons/year)
Ethylene glycol momobutyle ether	111-76-2	0.5380	Delisted	Yes	24-hr	85.4	1,710	45.92	9,770.6	4.89E+00	16760	8.38E+00
Ammonia	7664-41-7	0.0700	No	Yes	24-hr	0.465	9.31	5.93	1,261.3	6.31E-01	2164	1.08E+00
								85.50				
								0.10				

Primer Lines No. 1 and No. 2 VOC Emission Rates

Primer Line No. 1

Maximum Allowable Use 84,000 gal/yr
Product Density 13.94 lb/gal
VOC 0.829 %
4.85 tons VOCs/yr

Primer Line No. 2 13.895 0.861
Maximum Allowable Use 139,000 gal/yr
Product Density 13.85 lb/gal
VOC 0.893 %
8.60 tons VOCs/yr
13.45
223,000
Total

Maximum Allowable Use for both lines 197,250 gal/yr
Product Density 13.94 lb/gal
VOC 1 % assume at 1%
13.75 tons VOCs/yr

		Line No. 1		Line No. 2		Line No. 1 and No. 2	
Year	Month	Monthly Total (gal)	12 Month Total (gal)	Monthly Total (gal)	12 Month Total (gal)	12 Month Total VOC (lbs)	12 Month Total VOC (tons)
2008	May	2,400	33,401	4,950	63,911	11,764	5.9
	Jun	3,104	33,759	5,775	63,924	11,807	5.9
	Jul	2,380	35,004	4,400	64,202	11,986	6.0
	Aug	4,721	36,665	3,300	63,652	12,110	6.1
	Sep	3,675	37,285	3,850	60,957	11,848	5.9
	Oct	5,447	39,447	1,925	57,402	11,658	5.8
	Nov	5,430	42,172	0	53,680	11,513	5.8
	Dec	4,694	43,141	1,925	46,475	10,734	5.4
2009	Jan	2,680	42,061	1,073	41,498	9,993	5.0
	Feb	3,968	43,089	2,780	38,503	9,742	4.9
	Mar	1,448	42,102	4,911	39,014	9,691	4.8
	Apr	2,020	41,967	5,425	40,314	9,836	4.9
	May	2,163	41,730	3,140	38,504	9,585	4.8
	Jun	1,968	40,594	4,096	36,825	9,246	4.6
	Jul	2,696	40,910	5,064	37,489	9,364	4.7
	Aug	2,738	38,927	5,482	39,671	9,405	4.7
	Sep	2,672	37,924	5,692	41,513	9,517	4.8
	Oct	1,571	34,048	4,206	43,794	9,351	4.7
	Nov	2,040	30,658	2,950	46,744	9,324	4.7
	Dec	878	26,842	2,358	47,177	8,937	4.5
2010	Jan	2,607	26,769	5,438	51,542	9,468	4.7
	Feb	1,945	24,746	3,745	52,507	9,354	4.7
	Mar	2,245	25,543	4,623	52,219	9,410	4.7
	Apr	3,690	27,213	7,225	54,019	9,826	4.9

Average	10,228	5.1
Max	12,110	6.1

Natural Gas Combustion
AP-42 Tab. 1.4-1,2: 7/98

Units: 19 Infrared Dryers & 31 Infrared Building Heaters - Combined Aggregate Heat Input: 5.38 MMBTU/Hr

Annual PTE if only natural gas used for fuel
Emissions [TPY] = (Emission factor [lb/1.0 $MMft^3$]) x (Heat Input [MMBTU/hr] x (max hours of operation [8760hr/yr])
x (fuel heating value [1ft3/1050Btu]) x (ton conversion [1 ton/2000 lb])

Uncontrolled Emissions from Natural Gas Combustion

Pollutants	Emission fact #/$MMft^3$	Heat Input MMBtu/Hr	Emissions Tons/Yr	lbs/year
PM	7.6	5.38	0.171	341.12
PM10	7.6	5.38	0.171	341.12
SO_2	0.6	5.38	0.029	58.91
NOx	100	5.38	2.24	4488.5
N_2O	2.2	5.38	0.049	98.75
TOC	11	5.38	0.247	493.73
CO	84	5.38	1.89	3770.30
CO_2	120,000	5.38	2693.074	5386148.6
Methane	2.3	5.38	0.052	103.23
VOC	5.5	5.38	0.123	246.87
Lead	0.0005	5.38	0.000011	0.022
Formaldehyde	7.50E-002	5.38	0.001767	3.53
Benzo(a)anthracene	1.80E-006	5.38	0.000000	0.000
Benzo(a)pyrene	1.20E-006	5.38	0.000000	0.000
Benzo(b)fluoranthene	1.80E-006	5.38	0.000000	0.000
Benzo(k)fluoranthene	1.80E-006	5.38	0.000000	0.000
Dibenzo(a,h)anthracene	1.20E-006	5.38	0.000000	0.000
2-Methylnaphthalene	2.40E-005	5.38	0.000001	0.001
Benzene	2.10E-003	5.38	0.000047	0.094
Butane	2.10E+000	5.38	0.047129	94.26
Dischlorobenzenne	1.20E-003	5.38	0.000027	0.054
Ethane	3.10E+000	5.38	0.069571	139.14
Fluoranthene	3.00E-006	5.38	0.000000	0.000
Fluorene	2.80E-006	5.38	0.000000	0.000
Hexane	1.80E+000	5.38	0.040396	80.79
Naphthalene	6.10E-004	5.38	0.000014	0.027
Pentane	2.60E+000	5.38	0.058350	116.70
Phenanathrene	1.70E-005	5.38	0.000000	0.001
Propane	1.60E+000	5.38	0.035908	71.82
Pyrene	5.00E-006	5.38	0.000000	0.000
Toluene	3.40E-003	5.38	0.000076	0.153
Arsenic	2.00E-004	5.38	0.000004	0.009
Barium	4.40E-003	5.38	0.000099	0.197
Beryllium	1.20E-005	5.38	0.000000	0.001
Cadmium	1.10E-003	5.38	0.000025	0.049
Chromium	1.40E-003	5.38	0.000031	0.063
Cobalt	8.40E-005	5.38	0.000002	0.004
Copper	8.50E-004	5.38	0.000019	0.038
Manganese	3.80E-004	5.38	0.000009	0.017
Mercury	2.60E-004	5.38	0.000006	0.012
Molybdenum	1.10E-003	5.38	0.000025	0.049
Nickel	2.10E-003	5.38	0.000047	0.094
Selenium	2.40E-005	5.38	0.000001	0.001
Vanadium	2.30E-003	5.38	0.000052	0.103
Zinc	2.90E-002	5.38	0.000651	1.302
	Sum HAPs		0.2525	Not including Lead and Formaldehyde

USING NATURAL GAS and LOW NOx BURNER

Pollutants	Emission(E) #/$MMft^3$	Heat Input MMBtu/Hr	Emissions Tons/Yr	lbs/year		Diff [TPY]:
PM	7.6	5.38	0.171	341.1227		0
PM10	7.6	5.38	0.171	341.1227		0
SO2	0.6	5.38	0.029	58.9110		0
NOx equiv. to 40 ppm?	50	5.38	1.122	2244.229		**1.122**
N_2O	0.64	5.38	0.014	28.7261		**0.03501**
TOC	11	5.38	0.247	493.7303		0
CO	84	5.38	1.885	3770.30		0
CO_2	120,000	5.38	2693.074	5386148.6		0
Methane	2.3	5.38	0.052	103.23		0
VOC	5.5	5.38	0.123	246.87		0
Lead	0.0005	5.38	0.000011	0.022		0
Formaldehyde	7.50E-002	5.38	0.001767	3.53		0
Benzo(a)anthracene	1.80E-006	5.38	0.000000	0.000		0
Benzo(a)pyrene	1.20E-006	5.38	0.000000	0.000		0
Benzo(b)fluoranthene	1.80E-006	5.38	0.000000	0.000		0
Benzo(k)fluoranthene	1.80E-006	5.38	0.000000	0.000		0
Dibenzo(a,h)anthracene	1.20E-006	5.38	0.000000	0.000		0
2-Methylnaphthalene	2.40E-005	5.38	0.000001	0.001		0
Benzene	2.10E-003	5.38	0.000047	0.094		0
Butane	2.10E+000	5.38	0.047129	94.26		0
Dischlorobenzenne	1.20E-003	5.38	0.000027	0.054		0
Ethane	3.10E+000	5.38	0.069571	139.14		0
Fluoranthene	3.00E-006	5.38	0.000000	0.000		0
Fluorene	2.80E-006	5.38	0.000000	0.000		0
Hexane	1.80E+000	5.38	0.040396	80.79		0
Naphthalene	6.10E-004	5.38	0.000014	0.027		0
Pentane	2.60E+000	5.38	0.058350	116.70		0
Phenanathrene	1.70E-005	5.38	0.000000	0.001		0
Propane	1.60E+000	5.38	0.035908	71.82		0
Pyrene	5.00E-006	5.38	0.000000	0.000		0
Toluene	3.40E-003	5.38	0.000076	0.153		0
Arsenic	2.00E-004	5.38	0.000004	0.009		0
Barium	4.40E-003	5.38	0.000099	0.197		0
Beryllium	1.20E-005	5.38	0.000000	0.001		0
Cadmium	1.10E-003	5.38	0.000025	0.049		0
Chromium	1.40E-003	5.38	0.000031	0.063		0
Cobalt	8.40E-005	5.38	0.000002	0.004		0
Copper	8.50E-004	5.38	0.000019	0.038		0
Manganese	3.80E-004	5.38	0.000009	0.017		0
Mercury	2.60E-004	5.38	0.000006	0.012		0
Molybdenum	1.10E-003	5.38	0.000025	0.049		0
Nickel	2.10E-003	5.38	0.000047	0.094		0
Selenium	2.40E-005	5.38	0.000001	0.001		0
Vanadium	2.30E-003	5.38	0.000052	0.103		0
Zinc	2.90E-002	5.38	0.000651	5.38	0.000015	0
	Sum HAPs		0.2525	Not including Lead and Formaldehyde		