ADEQ
MINOR SOURCE
AIR PERMIT

Permit #: 1630-AR-3

IS ISSUED TO:

Thomas & Betts Corporation
5601 E. Highland Drive
Jonesboro, AR 72401
Craighead County
AFIN: 16-00275

THIS PERMIT IS THOMAS & BETTS CORPORATION's AUTHORITY TO CONSTRUCT, MODIFY, OPERATE, AND/OR MAINTAIN THE EQUIPMENT AND/OR FACILITY IN THE MANNER AS SET FORTH IN THE DEPARTMENT'S MINOR SOURCE AIR PERMIT AND THE APPLICATION. THIS PERMIT IS ISSUED PURSUANT TO THE PROVISIONS OF THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT (ARK. CODE ANN. SEC. 8-4-101 *ET SEQ.*) AND THE REGULATIONS PROMULGATED THEREUNDER, AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Michael Bonds
Chief, Air Division

January 4, 2005
Date

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Section I: FACILITY INFORMATION

PERMITTEE:	Thomas & Betts Corporation
AFIN:	16-00275
PERMIT NUMBER:	1630-AR-3
FACILITY ADDRESS:	5601 E. Highland Drive Jonesboro, AR 72401
COUNTY:	Craighead
CONTACT PERSON:	Om P. Chopra
CONTACT POSITION	Corporate Director of Environmental Affairs
TELEPHONE NUMBER:	(901) 252-5937
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UTM North-South (Y):	Zone 15 [3966.4 km]
UTM East-West (X):	Zone 15 [714.70 km]

Section II: INTRODUCTION

Summary

Thomas & Betts Corporation (T&B), located at 5601 E. Highland Drive, in Jonesboro, AR requested to update emission rate tables and Permit No. 1630-AR-2 to account for updated stack parameters and installation of new process equipment. The new equipment includes two 0.15 MMBTU/hr pipe primer pre-heat burners, a centrifuge to recover sulfuric acid used in the dip tanks, and 8.6 MMBTU/hr boiler (SN-17) to provide steam for the pipe inside and outside blow off units. The new boiler replaced Boiler #1 (formerly SN-17), Boiler #2 (SN-19), and Superheaters No. 1 and 2 (SN-18 and SN-19). T&B also requested the permit be modified to account for emissions exhausted through the vents in the Chemical Storage and Mix Rooms, from sandblasting Off-Spec pipe and fittings (SN-41 and SN-42), and from pipe and fitting primer application (SN-43 and SN-44). The pipe primer pre-heat burners, centrifuge, and vents were added to the Insignificant Activities list. Permitted emissions of SO_2, VOC, CO, NO_X, and Acetone increased by 1.1 tpy, 0.1 tpy, 5.2 tpy, 4.6 tpy, and 58.24 tpy, respectively. PM/PM_{10} decreased by 18.1 tpy.

Process Description

The PVC coated conduit process includes steps required to receive and process steel and aluminum conduit pipe and fittings to increase the conduit system's corrosion resistance. A variety of corrosion resistant treatments are employed, including galvanizing, painting and PVC coating.

There are basically two different process lines to be installed at the facility. The first line will manufacture PVC coated conduit pipe and the second makes PVC coated fittings. There are also off-line processes, including injection molding of small parts and reprocessing of off-spec materials.

Pipe Line

The pipe line is illustrated in the attached Process Flow Diagram (Appendix B). The following are the processing steps associated with the line.

1. Pipe material is received and stored on site.

2. The pipe is then cut to approximately l0-ft lengths using a water-cooled saw process.

3. The cut pipe is chamfered.

4. Both of the pipe ends are threaded using a water-soluble cutting fluid. Three threading machines are available for this step.

5. The pipe is bundled and cleaned in a series of dip tanks. The bundles are moved from tank to tank by crane. The first tank contains cold water, the second hot water. The steel pipes are then moved to two dip tanks containing a 13 to 17% sulfuric acid solution with small quantities of Rodine (HCl-based material) inhibitor added. These dip tanks are maintained at 160 to 180°F with immersion heaters. A side draft exhaust is used to remove fumes from the

area. The exhausts from these tanks are designated SN-09 and SN-10. The pipe is allowed to drain over the tank, prior to moving to the next step.

6. The sulfuric acid solution is recycled. Iron sulfate is recovered from the sulfuric acid solution by first chilling a side stream of the solution, and then centrifuging it to remove the iron sulfate material. This material is sold to outside companies. The centrifuged liquid is recycled to the sulfuric acid dip tanks.

7. The pipe bundle is dipped in hot water to remove residual acids from the surface.

8. The pipe bundle is dipped in cold water to remove additional residual acids from the surface.

9. The pipe bundle is dipped into the flux tank. This is an aqueous solution of zinc ammonium nitrate/chloride triple salt. The approximate salt concentration is 21% by weight. This tank is operated at room temperature.

10. Aluminum pipe bundles are first rinsed in the hot water tank and then cleaned in this same area by dipping in a tank containing 10% phosphoric acid. The tank is maintained at 160 to 180°F by an immersion heater. After the acid dip, aluminum pipe is dipped in hot and cold water and allowed to dry. Aluminum pipe goes straight to painting. It is not galvanized like the steel.

11. The steel pipe is fed into the galvanizing system, one at a time on a horizontal conveyor. There are two identical galvanizing trains, one operating and the other on standby. The first step of the galvanizing system is a preheat oven. This oven performs final drying and pre-heating of the pipe. The oven is a forced air oven with the flame fired directly into the air stream. The oven operates at 350 to 400°F. Two natural gas burners, each rated at 1.2 MMBtu/hr, are used to heat the oven. Exhaust from the oven is directed through the ends. A collection hood on the inlet collects the heated air and products of combustion. This hood is routed to SN-13. The discharge end of the oven is collected along with the fumes from the zinc dip galvanizing.

12. The pipe passes from the pre-heat oven down to a star wheel and into the molten zinc (galvanizing tank). The tank is maintained at a temperature of 850 to 860°F. Eight (8) gas-fired burners rated at 0.5 MMBtu/hr each are fired to heat the zinc tank. The burners are fired into the firing box and exhausted separately from the zinc fumes in SN-15 and SN-16. Zinc fumes are exhausted through a collection hood to a baghouse (SN-13) for control of particulate matter.

13. The pipe is mechanically lifted from the bath and allowed to drain into the bath as it is being removed. It is passed through a ring, which blows off the excess exterior zinc with high pressure steam. Zinc is returned to the tank. Particulate is captured by the tank hood and sent to the baghouse along with the rest of the exhaust.

14. The pipe interior is blown out with superheated steam to remove excess zinc. One end of the pipe is dropped in front of an opening in a high velocity suction\plenum. The other end is fitted with a steam blower. Steam is blown through the pipe and into the suction plenum. The other end is fitted with a steam blower. Steam is blown through the pipe and into the

suction plenum. Exhaust from the suction plenum is routed through the wet scrubber (SN-14). Steam is provided by a high pressure gas-fired boiler rated at 8.6 MMBtu/hr (SN-17). They have been eliminated.

15. Both pipe ends are then heated over an open flame natural gas burner. Each burner is rated at 150 MBtu/hr. These burners are vented through hoods to SN-21 and SN-22.

16. At the end of the burner area, a compressed air device is used to remove excess zinc material from the thread area at both ends of the pipe. This material is impractical to collect with the larger particles of zinc settling in the area. The remainder is a fugitive emission.

17. The pipe is then lowered into an unheated tank containing a 0.4% chromic acid solution for cooling, and allowed to dry on a rack after cooling. The solution is heated by the hot pipes submerged into it. The solution is re-circulated. The process generates water vapor emissions, which are not vented.

18. After drying, the pipe is inspected and bundled.

19. Prior to interior painting, the pipe may be manually cleaned and blown down with compressed air to remove dust.

20. The pipe interior is painted in one of two areas: 1) a manual paint booth or 2) an automated paint booth. If the manual paint booth is used, the pipe's interior is painted before the pipe goes through the PVC coating process. The manual booth is an 8 ft x 8 ft booth into which the bundle is placed. The interior of each pipe in the bundle is painted one at a time using an air-atomized spray gun with a lanced nozzle. The manual paint booth is exhausted through SN-23. If the automatic paint machine is used, it is after the pipe has gone through the PVC coating line. The automatic paint machine consists of a smaller booth with up to 8 spray guns on long nozzles, which are guided through the conveyorized pipe. The end of the pipe is located in the booth, which is exhausted through SN-24. Only one of the two painting systems is used at a time. A two-part polyurethane paint is used for all pipe interior painting.

21. After being painted in the manual booth, the pipe is allowed to air dry before it is stored until it is ready to be processed in the PVC coating line.

22. The pipe is staged on a rack at the entrance of the PVC coating area. An acetone-based primer is applied to the preheated exterior of the pipe by brushing. This is accomplished in a down flow paint booth, approximately 13 ft x 8 ft. This booth is exhausted through SN-25.

23. After priming, handling caps are screwed on to the end of the pipe, and the pipe is passed through a pre-heat oven where it is heated to 320° to 350°F. The oven is a forced air oven fired directly into the duct system with two natural gas burners, each rated at 1.2 million BTU/hr. The oven is vented through the inlet and outlet conveyor openings. The inlet end is vented through a hood to SN-26. The outlet is vented through a combined hood, which also controls the PVC tank and the inlet end of the PVC coating curing oven.

24. The pipe passes out of the pre-heat oven and is rolled into a dip tank containing Plastisol liquid PVC at room temperature. Some minor smoking occurs at the PVC dip tank, which is

collected in a hood along with the curing oven inlet fumes and directed to a baghouse fitted with bags lined with lime. It is then exhausted in SN-27.

25. The pipe is cured in a forced air oven. The oven has two natural gas burners, each rated at 1.2 million BTU/hr. The pipe is heated to 320° to 350°F to cure the PCV coating material. Fumes from the oven are discharged through the oven conveyor openings. The fumes from the discharge end are exhausted through another baghouse fitted with bags lined with lime to SN-28.

26. After curing, the pipe is passed through a re-circulated spray water cooler. It is allowed to dry, and the ends are uncapped. The pipe is then bundled for shipment.

27. If the automatic paint booth is to be used for painting the pipe's interior, the bundle is moved to the paint line.

28. First, the ends of the pipe are trimmed and the pipe is inspected. Rejects are removed. The pipe is then labeled, and the threads are brush painted with urethane paint and thread protectors are installed at each end. The pipe is then bundled for shipment.

29. Off-line, pipe that is off-spec after galvanizing is returned to a sandblaster. Grit blast is used to remove excess zinc from the pipe's exterior, and the pipe is then re-processed through the PVC coating train. The exhaust from the sandblaster passes through a baghouse and is then vented indoors.

Fitting Line

The fitting line is illustrated on process flow diagram P-I0l. The following process steps are used in the fitting line.

1. The fittings are processed in a similar fashion but are not galvanized. First they are received and disassembled.

2. They are sandblasted to remove finish coatings. The sand blaster is a grit/tumble machine. The unit is equipped with a baghouse that is vented indoors.

3. The fitting's interiors and exteriors are then painted in one of four paint booths. Each paint booth has a 2 ft-high by 6 ft 6 in-wide opening. Manual, air-atomized paint guns are used. Each booth is exhausted to the outside through SN-31/32/33/34. The paint used is the same two-part polyurethane used to paint the pipe's interior.

4. The fittings are heated to 410 F in an oven with a hanging conveyor. The oven is equipped with one 1.2 million BTU/hr forced air, direct fired into the duct system natural gas burner. The oven is exhausted through a canopy hood to SN-35.

5. Pipe couplings are painted in a separate mechanized paint station with exhaust to SN-38.

6. Fittings are then dipped in the same acetone based primer as is used in the pipe system. The dipping process occurs in one of the fitting paint booths.

7. After the primer has been air dried, the fittings are jigged and placed in a pre-heat oven and

heated to 320 to 350 F. The pre-heat oven with a hanging conveyor is heated by a forced air, direct fired into the duct system natural gas burner rated at 1.2 million BTU/hr. The oven is vented through a canopy hood covering the entire oven to SN-36, along with the fitting PVC coating curing oven.

8. After pre-heating, the fitting is manually dipped in Plastisol (PVC coating material). The dipping occurs in the same vicinity as the pre-heat and cure oven. Any fumes generated are collected by the hood and removed to SN-36.

9. After dipping, the fittings are cured in a natural gas-fired forced air curing oven with a hanging conveyor. The oven has one burner rated at 1.2 million BTU/hr and is exhausted to SN-36 through the combined hood covering the front of the two ovens.

10. After curing, the fittings are cooled in a water tank, removed, and allowed to dry. They are then trimmed, dejigged, inspected, reassembled, and packaged for shipping.

11. Some of the fittings are coated with a fluidized bed powder coat process. The fittings are pre-heated, dipped in the powder coat, and cured. The fitting powder coat pre-cure and curing oven are identical to the fitting PVC pre-coat and curing oven. They have a combined stack exhausting to SN-37.

12. Pipe nipples are painted off-line in two paint booths. The booths have an opening that is 2-ft high and 4-ft wide. The booths are exhausted through SN-39/40. These booths utilize the same two-part polyurethane paint that is painted on the fitting's interiors.

Off-line Processes

There are several processes that are operated off-line with no point source exhaust. These include:

1. Four injection molding machines for PVC coating of some fittings, nuts, couplings, and screws

2. Three machines for grinding the plastic scrap into recyclable pellets

3. Several small machining and pipe bending operations

4. Three band saws for cutting coated pipes

5. One thread cleaning machine

6. Two threaders for the bending machines

7. Aqua works at cleaning station: water-based cleaning process consisting of three tanks each with an 800-gallon capacity.

Existing Operations

There are three plating lines for zinc (not chromium) electroplating of steel electrical components. Parts are brought to the loading/unloading station either mounted on rack, with the rack being processed through the plating line or loaded in a barrel by moving the barrel from tank to tank. These parts are then moved through the process by soaking and electro cleaning, followed by activation in an acid dip. The zinc plating tanks contain a very small amount of muriatic acid, which has the potential to evaporate into the atmosphere. The concentration of HCl in the zinc plating tanks is estimated to be 0.5 ounces per gallon of muriatic acid. The zinc plating tanks are open top tanks.

Emissions from all of the soak cleaning, electro cleaning, acid dip, and chromate conversion tanks will be collected by a single manifold emission collection system. Each of the tanks will be outfitted with "push" air and a slotted hood pick-up. The exhaust will be provided by a single Duall blower. The rated discharge of the blower is 24,000 CFM at the stack. This stack is designated SN-01. There will be no controls on the emission point.

Two natural-gas fired boilers, the primary service (SN-03) and the back-up service (SN-04) provide heat to the plating lines. Both are rated at 6.3 MMBtu/hr.

A natural gas-fired sludge dryer (SN-05) is used to dry zinc electroplating waste water. Electroplating sludge generated from treatment of process waste water is being dried from a nominal 50% moisture filter cake, reducing the volume of waste to be shipped off-site by 75%.

The Samsco water evaporator (SN-08) is used to evaporate water from spent water soluble cutting oils. Steam at l5 psig pressure is used to supply heat indirectly to evaporate water from solutions to reduce the volume of used oil, which is sent off site for recycling. No volatile organic compounds (VOC) are present in any materials being processed. Emissions are water vapor only and a small amount of oil mist.

Regulations

This facility is subject to the following regulations: Regulation 18, *Arkansas Air Pollution Control Code* and Regulation 19, *Regulations of the Arkansas Plan of Implementation for Air Pollution Control*.

The facility is not subject to NSPS Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* - as all combustion units are below 10 MMBtu/hr.

The following table is a summary of the facility's total emissions.

Table 1 - Total Allowable Emissions

Total Allowable Emissions		
Pollutant	**Emissions Rates**	
	lb/hr	**tpy**
PM	17.0	67.8
PM_{10}	17.0	67.8
SO_2	1.4	2.6

Total Allowable Emissions		
Pollutant	**Emissions Rates**	
	lb/hr	**tpy**
VOC [1]	95.1	99.0
CO	3.4	12.9
NO_x	5.1	19.8
Total HAP [2]	31.39	24.90
Air Contaminants [3]	53.81	235.74

Notes:

1. Total VOCs are limited for the plant to 99.0 tpy. Emissions from combustion sources add up to 2.9 tpy of VOCs. Emissions from paints, PVC and VOC thinners are limited to 96.1 tpy of VOC.

2. HAPs consist primarily of DEGBE from SN-27, 28, and 36; MEK, MIBK and Xylene from SN-23, 24, 25, 31, 32, 33, 34, 35 and 38 and Toluene from SN-25 and 26. The plantwide total for all HAPs is limited to 24.90 tpy. Individual HAPs may not exceed the 9.90 plantwide limit.

3. Only Acetone will be used as a non-VOC solvent. Other solvents not classified as VOCs or HAPs, such as Methyl Acetate, may also be used upon written approval by the Department.

Section III: PERMIT HISTORY

The initial permit #1630-A was issued on September 18, 1995.

The first modification, permit # 1630-AR-1, was issued on February 17, 1998. This permit modification consisted of the following changes:

- Changing the process description for the solution evaporator to more accurately describe the process.
- Changing the required emission management equipment for specified tanks in the plating process. Delete the Acid Scrubber (SN-01) and the Caustic Scrubber (SN-02) from the original permit. Add the combined emissions from these two sources going through a single manifold emission system with no controls - the Emission Management System (SN-01).
- Increasing allowable annual emissions to permit year round operations to be conducted twenty four hours per day. Hourly emission limits remained the same.

The second modification, permit #1630-AR-2 was issued on September 6, 2002. It allowed the facility to expand and add operations, which were relocated from other plants outside of Arkansas. T&B requested enforceable emissions limits of VOCs to 99.0 tpy and of 9.9 tpy for individual HAPs and 24.9 tpy for combined HAPs. Compliance is based on purchasing or production records of paint and solvent usage, with this information entered into a spreadsheet that will automatically calculate both total VOCs and individual HAPs from the maximum contents specified in the product MSDS, so that actual usage will always be below these limits.

Section IV: EMISSION UNIT INFORMATION

Specific Conditions

1. The permittee will not exceed the emission rates set forth in the following table. [§19.501 *et seq.* of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control, effective February 15, 1999 (Regulation 19) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 2 - Criteria Pollutants

SN	Description	Pollutant	lb/hr	tpy
01	Emission Management System	PM_{10}	0.7	3.1
03	Boiler – Primary Service (6.3 MMBTU/hr)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 0.1 0.2 0.7	0.3 0.5 0.5 0.6 2.8
04	Boiler – Backup Service (6.3 MMBTU/hr)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 0.1 0.2 0.7	0.3 0.5 0.5 0.6 2.8
05	Sludge Dryer (0.48 MMBTU/hr)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 0.1 0.1 0.1	0.1 0.5 0.5 0.1 0.3
08	Coolant Solution Evaporator	PM_{10}	0.2	0.6
09	Sulfuric Acid Dip (2) Tanks	PM_{10} * VOC	0.4 0.2	1.5 **
10	Phosphoric Dip & (2) Hot Water Tanks	PM_{10} *	0.1	0.2
13	Galvanizing Dip Tanks (2) Preheat Ovens (2) (1.2 MMBTU/hr each)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 0.1 0.2 0.3	0.4 0.1 ** 0.9 1.1
14	Galvanizing Pipe Blowouts (2)	PM_{10}	1.1	4.9
15	Galvanizing Combustion Stack No. 1 (4.0 MMBTU/hr)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 0.1 0.4 0.4	0.2 0.1 ** 1.5 1.8

SN	Description	Pollutant	lb/hr	tpy
16	Galvanizing Combustion Stack No. 2 (4.0 MMBTU/hr)	PM_{10}	0.1	0.2
		SO_2	0.1	0.1
		VOC	0.1	**
		CO	0.4	1.5
		NO_X	0.4	1.8
17	Boiler No. 1 (8.6 MMBTU/hr)	PM_{10}	0.1	0.3
		SO_2	0.1	0.1
		VOC	0.1	**
		CO	0.8	3.2
		NO_X	0.9	3.8
21	End of Pipe Line Heater No. 1	PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	**
		CO	0.1	0.2
		NO_X	0.1	0.2
22	End of Pipe Line Heater No. 2	PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	**
		CO	0.1	0.2
		NO_X	0.1	0.2
23	Pipe Inside Paint Booth No. 1	PM_{10}	1.5	6.2
		VOC	5.5	**
24	Automated Pipe Paint Booth	PM_{10}	1.1	4.8
		VOC	4.2	**
25	Pipe Primer Application	VOC	21.9	**
26	Primer Curing Oven	PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	**
		CO	0.2	0.9
		NO_X	0.3	1.1
27	Pipe PVC Coating (Baghouse 90%)	PM_{10}	2.2	9.6
		VOC	20.6	**
28	PVC Curing Oven (Baghouse 90%)	PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	20.6	**
		CO	0.2	0.9
		NO_X	0.3	1.1
31	Fittings Paint Booth No.1	PM_{10}	0.9	3.6
		VOC	0.4	**
32	Fittings Paint Booth No. 2	PM_{10}	0.9	3.6
		VOC	0.4	**
33	Fittings Paint Booth No. 3	PM_{10}	0.9	3.6
		VOC	0.4	**
34	Fittings Paint Booth No. 4	PM_{10}	0.9	3.6
		VOC	0.4	**

SN	Description	Pollutant	lb/hr	tpy
35	Fittings Preheat / Paint Cure Oven (1.2 MMBTU/hr)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 3.9 0.1 0.2	0.1 0.1 ** 0.5 0.6
36	Fitting PVC Preheat, Dip, and Cure (2.4 MMBTU/hr)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 4.6 0.2 0.3	0.1 0.1 ** 0.9 1.1
37	Powder Coating Preheat and Cure (2.4 MMBTU/hr)	PM_{10} SO_2 VOC CO NO_X	0.1 0.1 0.1 0.2 0.3	0.1 0.1 ** 0.9 1.1
38	Coupling/Nipple Paint Booth	PM_{10} VOC	1.6 1.2	6.7 **
41	Off-Spec Pipe Sandblasting	PM_{10}	1.9	8.2
42	Fittings Sandblasting	PM_{10}	1.2	5.1
43	Fittings Primer Application/Dip	VOC	2.7	**
44	Pipe Primer Application (Non-stack emissions)	VOC	2.5	**

* Phosphoric or Sulfuric Acid Emissions are included.

** VOC emissions from Paint and PVC sources have been "bundled" for the entire facility.

2. The permittee will not exceed the emission rates set forth in the following table. [§18.801 of the Arkansas Air Pollution Control Code, effective February 15, 1999 (Regulation 18) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 3 - Non-Criteria Pollutants

SN	Description	Pollutant	lb/hr	tpy
01	Emission Management System	PM	0.7	3.1
03	Boiler – Primary Service (6.3 MMBTU/hr)	PM	0.1	0.3
04	Boiler – Backup Service (6.3 MMBTU/hr)	PM	0.1	0.3
05	Sludge Dryer (0.48 MMBTU/hr)	PM	0.1	0.1
08	Coolant Solution Evaporator	PM	0.2	0.6
09	Sulfuric Acid Dip (2) Tanks	PM* HAPs	0.4 0.12	1.5 **
10	Phosphoric Dip & (2) Hot Water Tanks	PM*	0.1	0.2
13	Galvanizing Dip Tanks (2) Preheat Ovens (2)	PM	0.1	0.4

SN	Description	Pollutant	lb/hr	tpy
	(1.2 MMBTU/hr each)			
14	Galvanizing Pipe Blowouts (2)	PM	1.1	4.9
15	Galvanizing Combustion Stack No. 1 (4.0 MMBTU/hr)	PM	0.1	0.2
16	Galvanizing Combustion Stack No. 2 (4.0 MMBTU/hr)	PM	0.1	0.2
17	Boiler No. 1 (8.6 MMBTU/hr)	PM	0.1	0.3
21	End of Pipe Line Heater No. 1	PM	0.1	0.1
22	End of Pipe Line Heater No. 2	PM	0.1	0.1
23	Pipe Inside Paint Booth No. 1	PM HAPs Acetone	1.5 3.92 0.65	6.2 ** 2.85
24	Automated Pipe Paint Booth	PM HAPs Acetone	1.1 3.00 0.50	4.8 ** 2.19
25	Pipe Primer Application	HAPs Acetone	14.66 42.00	** 184.00
26	Primer Curing Oven	PM	0.1	0.1
27	Pipe PVC Coating (Baghouse 90%)	PM HAP	2.2 0.71	9.6 **
28	PVC Curing Oven (Baghouse 90%)	PM HAP	0.1 0.71	0.1 **
31	Fittings Paint Booth No.1	PM HAP Acetone	0.9 0.23 0.04	3.6 ** 0.17
32	Fittings Paint Booth No. 2	PM HAP Acetone	0.9 0.23 0.04	3.6 ** 0.17
33	Fittings Paint Booth No. 3	PM HAP Acetone	0.9 0.23 0.04	3.6 ** 0.17
34	Fittings Paint Booth No. 4	PM HAP Acetone	0.9 0.23 0.04	3.6 ** 0.17
35	Fittings Preheat / Paint Cure Oven (1.2 MMBTU/hr)	PM HAP Acetone	0.1 2.74 0.46	0.1 ** 2.01
36	Fitting PVC Preheat, Dip, and Cure (2.4 MMBTU/hr)	PM HAP	0.1 0.16	0.1 **
37	Powder Coating Preheat and Cure (2.4 MMBTU/hr)	PM	0.1	0.1

SN	Description	Pollutant	lb/hr	tpy
38	Coupling Paint Booth	PM HAP Acetone	1.6 0.84 0.14	6.7 ** 0.61
41	Off-Spec Pipe Sandblasting	PM	1.9	8.2
42	Fittings Sandblasting	PM	1.2	5.1
43	Fittings Primer Application/Dip	HAP Acetone	1.81 5.20	** 5.28
44	Pipe Primer Application (Non-stack emissions)	HAP Acetone	2.43 4.70	** 20.6

* Phosphoric or Sulfuric Acid emissions are included.
** HAPs are limited Plantwide.

3. Visible emissions will not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 4 - Visible Emissions

SN	Limit	Regulatory Citation
01, 09, 10, 14, 23, 24	20%	§18.501
All Other Sources	5%	§18.501

4. The permittee will not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303. [§18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-31]

5. The permittee will not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants to become airborne. [§18.901 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

6. The permittee shall not emit no more than 96.1 tpy of VOCs from coatings and treatment operations at the facility per consecutive 12-month period. This figure does not include VOCs generated by combustion processes. [Regulation No. 19 §19.501 *et seq.* effective February 15, 1999, and 40 CFR Part 52, Subpart E]

7. The permittee shall maintain monthly records in a spreadsheet or other well organized format, which demonstrate compliance with Specific Condition #6. Records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. [Regulation No. 19 §19.705, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

8. The permittee shall not exceed HAP emission rates greater than 9.9 tpy for any individual HAP or 24.9 for total HAPs. Compliance with this condition shall be demonstrated through compliance with Specific Condition #11. [Regulation No. 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

9. The permittee shall not exceed the formulation of HAPs for the given minimum TLV in the following table in any HAP containing compound used at the facility. Compliance with this table shall be demonstrated through compliance with Specific Conditions #10 and #11. [Regulation No. 18 §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Table 5 – TLV Table

Minimum Allowable TLV (mg/m^3)	Maximum Allowable Single HAP Content (lb/gal)[a]
>290	8.33
290	8.33
278.5	8.00
208.9	6.00
139.3	4.00
69.6	2.00
34.8	1.00
31.3	0.90
27.9	0.80
24.4	0.70
20.9	0.60
17.4	0.50
13.9	0.40
10.4	0.30
7.0	0.20
3.5	0.10

[a] Chemicals such as HDI (CAS 822-06-0), MDI (CAS 101-68-8), and other low vapor pressure chemicals are not expected to rapidly volatilize and are emitted at a rate of less than 1.0 tpy shall be exempt from this table.

10. The permittee shall maintain records of the ACGIH TLV values as listed on current MSDS forms, or in the most recently published ACGIH handbook of Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) for each HAP-containing material used. The concentration of each HAP in lb/gal and the corresponding TLV should be noted on these records. These records shall be maintained in a spreadsheet, database, or other well organized format. These records shall be kept on-site and made available to Department personnel upon request. [Regulation No. 18 §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

11. The permittee shall maintain records of the amount of HAP emissions each month. These records shall indicate the amount of each HAP-containing material used during that month as well as the corresponding maximum HAP content for each HAP in that material. The monthly emissions shall be calculated for each material by multiplying the usage by the corresponding HAP content(s). The total HAP emissions from all products shall also be indicated on these records. A copy of the MSDS sheet for each product used shall accompany these records. These records shall be updated by the fifteenth day of the month following the month to which the records pertain. A twelve (12) month rolling total of HAP emissions and each individual month's data shall be kept on-site and shall be made available to Department personnel upon request. [Regulation No. 18 §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

12. The permittee shall limit the maximum HAP concentration of all coatings as applied to 8.33 lb/gal. Compliance with this table shall be demonstrated through compliance with Specific Condition #10. [Regulation No. 18 §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311].

13. If actual emissions exceed 95% of major source thresholds, i.e., 95 tpy of all VOCs, 9.5 tpy of any single HAP, or 23.75 tpy of combined HAPs, the facility shall demonstrate, through the accuracy of their recordkeeping, that major source thresholds have not been exceeded. [Regulation No. 19 §19.501 *et seq.,* Regulation No. 18 §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

14. The permittee shall only use pipeline quality natural gas for fuel in any combustion unit. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

Section V: INSIGNIFICANT ACTIVITIES

The Department deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and 19 Appendix A. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated July 30, 2004.

Table 7 - Insignificant Activities

Description	Category
Injection Molding	A-13
Warming Ovens	A-13
Chemical Recovery Room Centrifuge Exhaust	A-13
Chemical Mix Process Exhaust	A-13
Pipe Primer Pre-Heat	A-13
Inside Pipe Blow-Out Booth No. 1 and No. 2	A-13

Section VI: GENERAL CONDITIONS

1. Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq*.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq*.). Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq*.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.
2. This permit does not relieve the owner or operator of the equipment and/or the facility from compliance with all applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated under the Act. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

3. The permittee will notify the Department in writing within thirty (30) days after commencement of construction, completion of construction, first operation of equipment and/or facility, and first attainment of the equipment and/or facility target production rate. [§19.704 of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation 19) and/or A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

4. Construction or modification must commence within eighteen (18) months from the date of permit issuance. [§19.410(B) of Regulation 19 and/or §18.309(B) of the Arkansas Air Pollution Control Code (Regulation 18) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

5. The permittee must keep records for five years to enable the Department to determine compliance with the terms of this permit; such as hours of operation, throughput, upset conditions, and continuous monitoring data. The Department may use the records, at the discretion of the Department, to determine compliance with the conditions of the permit. [§19.705 of Regulation 19 and/or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

6. A responsible official must certify any reports required by any condition contained in this permit and submit any reports to the Department at the address below. [§19.705 of Regulation 19 and/or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Arkansas Department of Environmental Quality
Air Division
ATTN: Compliance Inspector Supervisor
Post Office Box 8913
Little Rock, AR 72219

7. The permittee will test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) newly constructed or modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start-up of the permitted source or (2) existing equipment already operating according to the time frames set forth by the Department. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee must submit compliance test results to the Department within thirty (30) days after the completion of testing. [§19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

8. The permittee will provide: [§19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

   a. Sampling ports adequate for applicable test methods;

   b. Safe sampling platforms;

   c. Safe access to sampling platforms;

   d. Utilities for sampling and testing equipment.

9. The permittee will operate equipment, control apparatus and emission monitoring equipment within their design limitations. The permittee will maintain in good condition at all times equipment, control apparatus and emission monitoring equipment. [§19.303 of Regulation 19 and/or §18.1104 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

10. If the permittee exceeds an emission limit established by this permit, the permittee will be deemed in violation of said permit and will be subject to enforcement action. The Department may forego enforcement action for emissions exceeding any limits established by this permit provided the following requirements are met: [§19.601 of Regulation 19 and/or §18.1101 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
    a. The permittee demonstrates to the satisfaction of the Department that the emissions resulted from an equipment malfunction or upset and are not the result of negligence or improper maintenance, and the permittee took all reasonable measures to immediately minimize or eliminate the excess emissions.

    b. The permittee reports the occurrence or upset or breakdown of equipment (by telephone, facsimile, or overnight delivery) to the Department by the end of the next business day after the occurrence or the discovery of the occurrence.

c. The permittee must submit to the Department, within five business days after the occurrence or the discovery of the occurrence, a full, written report of such occurrence, including a statement of all known causes and of the scheduling and nature of the actions to be taken to minimize or eliminate future occurrences, including, but not limited to, action to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded. If the information is included in the initial report, the information need not be submitted again.

11. The permittee will allow representatives of the Department upon the presentation of credentials: [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

    a. To enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of this permit;

    b. To have access to and copy any records required to be kept under the terms and conditions of this permit, or the Act;

    c. To inspect any monitoring equipment or monitoring method required in this permit;

    d. To sample any emission of pollutants; and

    e. To perform an operation and maintenance inspection of the permitted source.

12. The Department issued this permit in reliance upon the statements and presentations made in the permit application. The Department has no responsibility for the adequacy or proper functioning of the equipment or control apparatus. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

13. The Department may revoke or modify this permit when, in the judgment of the Department, such revocation or modification is necessary to comply with the applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated the Arkansas Water and Air Pollution Control Act. [§19.410(A) of Regulation 19 and/or §18.309(A) of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

14. This permit may be transferred. An applicant for a transfer must submit a written request for transfer of the permit on a form provided by the Department and submit the disclosure statement required by Arkansas Code Annotated §8-1-106 at least thirty (30) days in advance of the proposed transfer date. The permit will be automatically transferred to the new permittee unless the Department denies the request to transfer within thirty (30) days of the receipt of the disclosure statement. The Department may deny a transfer on the basis of the information revealed in the disclosure statement or other investigation or, deliberate falsification or omission of relevant information. [§19.407(B) of Regulation 19 and/or §18.307(B) of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

15. This permit shall be available for inspection on the premises where the control apparatus is

located. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

16. This permit authorizes only those pollutant emitting activities addressed herein. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

17. This permit supersedes and voids all previously issued air permits for this facility. [Regulation 18 and 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

18. The permittee must pay all permit fees in accordance with the procedures established in Regulation No. 9. [A.C.A §8-1-105(c)]