ADEQ
MINOR SOURCE
AIR PERMIT

Permit #: 1630-AR-2

IS ISSUED TO:

Thomas & Betts Corporation
5601 E. Highland Drive
Jonesboro, AR 72401
Craighead County
CSN: 16-0275

THIS PERMIT IS YOUR 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 YOUR 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:

Keith A. Michaels

Date

SECTION I: FACILITY INFORMATION

PERMITTEE:	Thomas & Betts Corporation
CSN:	16-0275
PERMIT NUMBER:	1630-AR-2
FACILITY ADDRESS:	5601 E. Highland Drive Jonesboro, AR 72401
COUNTY:	Craighead
CONTACT POSITION:	Om P. Chopra Corporate Director of Environmental Affairs
TELEPHONE NUMBER:	901-252-5937
FAX NUMBER:	901-252-1340
REVIEWING ENGINEER:	M. Lloyd Davis, P. E.
UTM North-South (Y):	Zone 15 [3966.400 km]
UTM East-West (X):	Zone 15 [714.700 km]

SECTION II: INTRODUCTION

Summary

Thomas & Betts Corporation operates a manufacturing facility (SIC Code 3644) located at 5601 East Highland in Jonesboro which manufactures electrical conduit and fittings. The Jonesboro facility will expand and add operations that will be relocated from other plants outside of Arkansas. T&B has requested enforceable emissions limits of VOCs to 99.0 tpy and HAP emission limits of 9.9 tpy for individual HAPs and 24.9 tpy for combined HAPs. Compliance will be 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.

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 180EF 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, 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 180EF by an immersion heater. After the acid dip, aluminum pipe is dipped in hot and cold water, then 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 400EF. 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-11 and SN-12. 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 860EF. 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 6.1 MMBtu/hr (SN-17 and SN-19) and a gas-fired superheater rated at 1.25 MMBtu/hr (SN-18 and SN-20).

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, then 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 320E to 350EF. 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 320E to 350EF 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 exhausted to SN-29.

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 exhausted through a baghouse to SN-30.
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. 4 injection molding machines for PVC coating of some fittings, nuts, couplings, and screws
2. 3 machines for grinding the plastic scrap into recyclable pellets
3. Several small machining and pipe bending operations
4. 3 band saws for cutting coated pipes
5. 1 thread cleaning machine
6. 2 threaders for the bending machines
7. Aqua works at cleaning station: water-based cleaning process consisting of three tanks each having an 800-gallon capacity.

Thomas & Betts Corporation
Permit #: 1630-AR-2
CSN: 16-0275

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 Sdubpart Dc - *Standards of Performace 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.

TOTAL ALLOWABLE EMISSIONS		
Pollutant	**Emission Rates**	
	lb/hr	**tpy**
PM	20.6	85.9
PM_{10}	20.6	85.9
SO_2	0.3	1.5
VOC [1]	79.1	99.0
CO	2.9	9.5
NO_x	4.6	17.3
HAPs [2]	41.52	24.9
Air Contaminants [3]	138.2	177.5

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 VOCs.

2. HAPs consist primarily of DEGBE from SN-27, 28 and 36, and Toluene from SN-25 and 26. The plantwide total for all HAPs is limited to 24.9 tpy. Individual HAPs may not exceed the 9.9 tpy 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.

SECTION IV: EMISSION UNIT INFORMATION

Specific Conditions

1. Pursuant to §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, the permittee shall not exceed the emission rates set forth in the following table.

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 (0.5 MMBtu/hr)	PM_{10}	0.2	0.6
09 and 10	Sulfuric Acid+Phosphoric Acid+ Ammonium Chloride Dips	PM_{10} VOC	1.9 0.2	8.3 0.8
11 and 12	Preheat Ovens (1.2 MMBtu/hr)	PM_{10} VOC CO NO_x	0.1 0.1 0.2 0.3	0.1 0.1 0.9 1.1

Thomas & Betts Corporation
Permit #: 1630-AR-2
CSN: 16-0275

SN	Description	Pollutant	lb/hr	tpy
13	Galvanizing Dip Tanks (2) - Baghouse	PM_{10}	0.1	0.5
14	Galvanizing Pipe Blow Outs (2) - Scrubber	PM_{10}	1.1	4.9
15 and 16	Galvanizing Combustion Stack (4.0 MMBtu/hr)	PM_{10} VOC CO NO_x	0.1 0.1 0.4 0.4	0.2 0.1 0.2 1.8
17 and 19	Boiler No. 1and Boiler No. 2 (6.1 MMBtu/hr)	PM_{10} VOC CO NO_x	0.1 0.1 0.6 0.7	0.2 0.1 2.3 2.7
18 and 20	Superheater No. 1 and Superheater No. 2 (1.25 MMBtu/hr)	PM_{10} VOC CO NO_x	0.1 0.1 0.2 0.2	0.1 0.1 0.5 0.6
21 and 22	End of Pipe Line Heaters (0.30 MMBtu/hr)	PM_{10} VOC CO NO_x	0.1 0.1 0.1 0.1	0.1 0.1 0.2 0.2
23	Pipe Inside Paint booth	PM_{10} VOC	2.4 9.2	10.4 ***
24	Automated Pipe Paint Booth	PM_{10} VOC	2.4 9.2	10.4 ***
25	Pipe Primer Application	VOC	16.4	***
26	Primer Dip+Curing Oven	PM_{10} VOC CO NO_x	0.1 1.9 0.2 0.3	0.1 *** 0.9 1.1
27	Pipe PVC Coating (Baghouse)	PM_{10} VOC	2.2 15.7	9.6 ***

Thomas & Betts Corporation
Permit #: 1630-AR-2
CSN: 16-0275

SN	Description	Pollutant	lb/hr	tpy
28	PVC Curing Oven (Baghouse)	PM_{10} VOC CO NO_x	0.1 15.7 0.2 0.3	0.1 *** 0.9 1.1
29	Sandblast, Off Spec Pipe (Baghouse)	PM_{10}	1.9	8.2
30	Sandblast, Fittings(Baghouse)	PM_{10}	1.2	5.1
31	Fittings Paint Booth No.1	PM_{10} VOC	0.7 0.3	3.1 ***
32	Fittings Paint Booth No. 2	PM_{10} VOC	0.7 0.3	3.1 ***
33	Fittings Paint Booth No. (2.4 MMBtu/hr)	PM_{10} VOC	0.7 0.3	3.1 ***
34	Fittings Paint Booth No. 4 (2.4 MMBtu/hr)	PM_{10} VOC	0.7 0.3	3.1 ***
35	Fittings Preheat+Paint Cure Oven	PM_{10} VOC CO NO_x	0.1 3.2 0.1 0.2	0.1 *** 0.5 0.6
36	Fitting PVC Preheat, Dip and Cure	PM_{10} VOC CO NO_x	0.1 3.5 0.2 0.3	0.1 *** 0.9 1.1
37	Powder Coating Preheat and Cure	PM_{10} VOC CO NO_x	0.1 0.1 0.2 0.3	0.1 *** 0.9 1.1
38	Coupling Paint Booth	PM_{10} VOC	1.2 1.0	5.3 ***
39	Nipple Paint Booth No. 1	PM_{10} VOC	0.6 0.5	2.6 ***

SN	Description	Pollutant	lb/hr	tpy
40	Nipple Paint Booth No. 2	PM_{10} VOC	0.6 0.5	2.6 ***

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

2. Pursuant to §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, the permittee shall not exceed the emission rates set forth in the following table.

SN	Description	Pollutant	lb/hr	tpy
01	Emission Management System	PM	0.7	3.1
03	Boiler - Primary Service	PM	0.1	0.3
04	Boiler - Backup Service	PM	0.1	0.3
05	Sludge Dryer (0.48 MMBtu/hr)	PM	0.1	0.1
08	Coolant Solution Evaporator (0.5 MMBtu/hr)	PM	0.2	0.6
09 and 10	Sufuric Acid+Phosphoric Acid+ Ammonium Chloride Dips	PM HAPs	1.9 0.17	8.3 ****
11 and 12	Preheat Ovens (1.2 MMBtu/hr)	PM	0.1	0.1
13	Galvanizing Dip Tanks (2) - Baghouse	PM	0.1	0.5
14	Galvanizing Pipe Blow Outs (2) - Scrubber	PM	1.1	4.9
15 and 16	Galvanizing Combustion Stack	PM	0.1	0.2
17 and 19	Boiler No. 1 and Boiler No. 2	PM	0.1	0.2
18 and 20	Superheater No. 1and Superheater No. 2	PM	0.1	0.2

Thomas & Betts Corporation
Permit #: 1630-AR-2
CSN: 16-0275

SN	Description	Pollutant	lb/hr	tpy
21 and 22	End of Pipe Line Heaters	PM	0.1	0.1
23	Pipe Inside Paint booth	PM HAPs Acetone	2.4 7.80 1.11	10.4 **** ****
24	Automated Pipe Paint Booth	PM HAPs Acetone	2.4 7.80 1.11	10.4 **** ****
25	Pipe Primer Application	HAPs Acetone	13.64 103.6	**** ****
26	Primer Dip+Curing Oven	PM HAPs Acetone	0.1 1.54 11.5	0.1 **** ****
27	Pipe PVC Coating (Baghouse)	PM HAPs	2.2 2.43	9.6 ****
28	PVC Curing Oven (Baghouse)	PM HAPs	0.1 2.43	0.1 ****
29	Sandblast, Off Spec Pipe and Acetone Dip (Baghouse)	PM Acetone	1.9 20.0	8.2 ****
30	Sandblast, Fittings(Baghouse)	PM	1.2	5.1
31	Fittings Paint Booth No.1	PM HAPs Acetone	0.7 0.22 0.03	3.1 **** ****
32	Fittings Paint Booth No. 2	PM HAPs Acetone	0.7 0.22 0.03	3.1 **** ****
33	Fittings Paint Booth No.	PM HAPs Acetone	0.7 0.22 0.03	3.1 ****

SN	Description	Pollutant	lb/hr	tpy
34	Fittings Paint Booth No. 4	PM HAPs Acetone	0.7 0.22 0.03	3.1 **** ****
35	Fittings Preheat+Paint Cure Oven	PM HAPs Acetone	0.1 2.73 0.39	0.1 **** ****
36	Fitting PVC Preheat, Dip and Cure	PM HAPs	0.1 0.54	0.1 ****
37	Powder Coating Preheat and Cure	PM	0.1	0.1
38	Coupling Paint Booth	PM HAPs Acetone	1.2 0.78 0.11	5.3 **** ****
39	Nipple Paint Booth No. 1	PM HAPs Acetone	0.6 0.39 0.06	2.6 **** ****
40	Nipple Paint Booth No. 2	PM HAPs Acetone	0.6 0.39 0.06	2.6 **** ****

**** HAPs and Acetone are limited plantwide.

3. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, visible emissions shall not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

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

4. Pursuant to §18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall 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.

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

Plantwide Conditions

6. Pursuant to §19.501 et seq of the Regulation 19 and 40 CFR Part 52, Subpart E, 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.

7. Pursuant to §19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain monthly records similar to the Table in Appendix A 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.

8. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed HAP emission rates greater than 9.9 tpy for any individual HAP or 24.9 for total HAPs. Use of a product or solvent containing different components in amounts equal to or less than the HAP contents listed in Specific Condition #9 may be substituted provided that the ACGIH Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) of the new components are equal to or higher than that given in Specific Condition #9. These substitution values shall be documented, maintained on site, and provided to Department personnel upon request and may be used by the Department for enforcement purposes.

9. Pursuant to §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, the permittee shall not exceed the limits set forth in the following table for HAP content. Use of a product or solvent containing different components in amounts equal to or less than the HAP contents listed may be substituted provided that the ACGIH Threshold Limit Values, as listed on the current MSDS forms, or in the ACGIH handbook of Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs), of the new components are equal to or higher than that given in the following table. These substitution values shall be documented, maintained on site, and provided to Department personnel upon request and may be used by the Department for enforcement purposes. The permittee shall maintain records which demonstrate compliance with these limits. These records shall be updated for each new product.

Product	Maximum HAP Content Weight %	TLV ppm
R&H ACRYLOID A-21 (30% solution)	Toluene - 64%	50
R&H ACRYLOID A-21 (Solid resin)	Toluene - 1.6%	50
Spraylat EXUAB105A Conduit Coating	MIBK - 15% MEK -5%	50 200
Spraylat EXUAB105B Catalyst	MIBK - 30%	50
DuPont 7666-U Green DuPont 99-U Black DuPont 555-U White	Toluene - 3% Xylene - 3%	50 100
DuPont 77257-A Blue	Toluene - 16% Xylene - 23% MEK - 4% Ethyl Benzene - 6%	50 100 200 100
Witco Mark 4712 Phosphite Blend	DEGBE* - 15%	20

*DEGBE = Diethylene glycol butyl ether (also Butyl Cellsolve)

TLVs reported in parts per million (ppm) may be converted to mg/m^3 with the following formula:

$$\text{TLV in mg/m}^3 = \frac{(\text{TLV in ppm})(\text{gram molecular weight of substance})}{24.45}$$

The molecular weight of the HAP is also given in the ACGIH handbook.

10. Pursuant to §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall maintain monthly records similar to the Table in Appendix A which demonstrate compliance with Specific Conditions #8 and # 9. 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.

11. Pursuant to §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, the permittee shall not exceed the throughput limits set forth in the following table for the following products at the facility per consecutive 12 month period, so that individual HAP emissions from these products do not exceed 1 tpy. The permittee shall maintain records which demonstrate compliance with these limits. These records shall be updated for each new product. These records shall be kept on site, and shall be made available to Department personnel upon request.

Product	VENDOR	Maximum Usage gallons/12 months
RODINE 95	Henkel Surface Technologies	985
Phenolic Resin BKS-2640	Georgia-Pacific	4,250

12. Pursuant to §19.501 et seq of Regulation 19, §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, 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 recordkeeeping, that major source thresholds have not been exceeded.

13. Pursuant to §19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall only use pipeline quality natural gas for fuel in any combustion unit.

SECTION V: INSIGNIFICANT ACTIVITIES

The following types of activities or emissions are deemed 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 February 19, 2002.

Description	Category
Injection Molding	A-13
Warming Ovens	A-13

SECTION VI: GENERAL CONDITIONS

1. Any terms or conditions included in this permit which 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 which 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. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit shall 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 thereunder.

3. Pursuant to §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, the Department shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.

4. Pursuant to §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, construction or modification must commence within eighteen (18) months from the date of permit issuance.

5. Pursuant to §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, records must be kept for five years which will 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 records may be used, at the discretion of the Department, to determine compliance with the conditions of the permit.

6. Pursuant to §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, any reports required by any condition contained in this permit shall be certified by a responsible official and submitted to the Department at the address below.

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

7. Pursuant to §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, any equipment that is to be tested, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, shall be tested with the following time frames: (1) Equipment to be constructed or modified shall be tested within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source or (2) equipment already operating shall be tested according to the time frames set forth by the Department. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing.

8. Pursuant to §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, the permittee shall provide:

   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. Pursuant to §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, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.

10. Pursuant to §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, if the permittee exceeds an emission limit established by this permit, they shall be deemed in violation of said permit and shall 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:

    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 that all reasonable measures have been taken 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 shall 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, it need not be submitted again.

11. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall allow representatives of the Department upon the presentation of credentials:

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

12. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit is issued 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.

13. Pursuant to §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, this permit shall be subject to revocation or modification when, in the judgment of the Department, such revocation or modification shall become necessary to comply with the applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated thereunder.

14. Pursuant to §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, this permit may be transferred. An applicant for a transfer shall 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. A transfer may be denied on the basis of the information revealed in the disclosure statement or other investigation or, if there is deliberate falsification or omission of relevant information.

15. Pursuant to A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, this permit shall be available for inspection on the premises where the control apparatus is located.

16. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.

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

APPENDIX A

VOC and HAP Calculation Table

Plantwide Emissions

The Table is in D:\Lotus C\HAPs\Thomas&Betts.wbs

APPENDIX B

Revised Source Locations

RESPONSE TO COMMENTS

Thomas & Betts Corporation
CSN: 16-0275
Permit: 1630-AR-2

On April 26, 2002, the Director of the Arkansas Department of Environmental Quality gave notice of a draft permitting decision for the above referenced facility. During the comment period, Thomas & Betts Corporation offered the following comments. A response to these issues follows:

Issue #1:

VOC and HAP Calculation Table in Appendix A. T&B requested that the densities listed in Column F for the Acryloid A-21 30% Resin solution should be 7.76 lb/gallon, and the 100% solids resin should be 5.50 lb/gallon based on the supplier MSDS.

Response #1:

The figure for the resin solution has been incorporated into the Table. The figure for the flaked solid resin is a bulk density that includes air, and can not possibly be a true solid density, since there are almost no organic compounds below 6.0 lb/gallon. From the MSDS information on the 30% A-21 solution, we calculated a theoretical density of 9.1 lbs/gallon.

Issue #2:

A revised equipment layout drawing has been submitted which corrects the errors in the original location of the facility sources.

Response #2:

The revised equipment layout drawing has replaced the original submittal, and is included in Appendix B.

Request for PDS Invoice	
Invoice Number *(assigned when invoice printed)*	PDS-

AFIN r	16-0275			
Name *(for confirmation only)*	Thomas & Betts Corporation			
Invoice Type (pick one) r	Initial	**Mod** X	Variance	
	Annual	Renewal	Interim Authority	
Permit Number r	1630-AR-2			
Media Code r	A			
Fee Code or Pmt Type r	MS			
Fee Description *(for confirmation only)*	Minor Source			
Amount Due r *(whole dollar amount only)*	$1919			
Printed Comment *(600 characters maximum)*	$19.64/ton x (99.0 tpy VOC - 1.3 tpy VOC) = $1918.83			

Note: The information below is for use by the requesting division if desired; it will not print on the invoice.	
Engineer	Lloyd Davis
Paid? (yes/no)	no
Check number	
Comments	

r **Required data** *(See "g:\Misc\PDS_FeeCodes.wpd" for descriptions and discussions of fee codes)*

Request submitted by:		Date:	

Public Notice

Pursuant to A.C.A. §8-4-203, and the regulations promulgated thereunder, the Air Division of the Arkansas Department of Environmental Quality gives the following notice:

Thomas & Betts Corporation (CSN: 16-0275) operates a manufacturing facility (SIC Code 3644), located at 5601 East Highland in Jonesboro, which manufactures electrical conduit and fittings. The Jonesboro facility will expand and add operations that will be relocated from other plants outside of Arkansas. T&B has requested enforceable emissions limits of VOCs to 99.0 tpy and HAP emission limits of 9.9 tpy for individual HAPs and 24.9 tpy for combined HAPs. The existing operatioin produces insignificant quantities of HAPs and VOCs.

The application has been reviewed by the staff of the Department and has received the Department's tentative approval subject to the terms of this notice.

Citizens wishing to examine the permit application and staff findings and recommendations may do so by contacting Doug Szenher, Public Affairs Supervisor. Citizens desiring technical information concerning the application or permit should contact Lloyd Davis, Engineer. Both Doug Szenher and Lloyd Davis can be reached at the Department's central office, 8001 National Drive, Little Rock, Arkansas 72209, telephone: (501) 682-0744.

The draft permit and permit application are available for copying at the above address. A copy of the draft permit has also been placed at the ***Crowley Ridge Regional library, 315 West Oak, Jonesboro, AR 72401***. This information may be reviewed during normal business hours.

Interested or affected persons may also submit written comments or request a hearing on the proposal, or the proposed modification, to the Department at the above address - Attention: Doug Szenher. In order to be considered, the comments must be submitted within thirty (30) days of publication of this notice. Although the Department is not proposing to conduct a public hearing, one will be scheduled if significant comments on the permit provisions are received. If a hearing is scheduled, adequate public notice will be given in the newspaper of largest circulation in the county in which the facility in question is, or will be, located.

The Director shall make a final decision to issue or deny this application or to impose special conditions in accordance with Section 2.1 of the Arkansas Pollution Control and Ecology Commission's Administrative Procedures (Regulation #8).

Dated this

Richard A. Weiss
Interim Director