ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION

INSTRUCTIONS FOR COMPLETION OF ADEM FORM 112

Item 1: Self-explanatory.

Item 2: Each degreasing unit should be identified here. This identification should be used consistently throughout this form to describe the actual degreasing unit. List all solvents utilized by each degreasing unit. Solvent consumption should be based on the amount of solvents purchased minus the amount of solvents reclaimed if any. Reclaimed solvents include only those solvents which have been recovered for reuse or have been separated for disposal. Estimates of disposed solvent amounts must be based on accurate and well kept records. Use additional sheets if necessary.

Item 3: The type of solvent metal cleaning operation is to be indicated here. This form may be completed for more than one type of operation.

Item 4: Self-explanatory.

Item 5: The description of the solvent metal cleaning device(s)should be given here. The vapor area should be equal to that area within the degreasing unit, length x width, in which the solvent remains in a gaseous form. The freeboard ratio is equal to the freeboard height divided by the width of the degreaser. For cold cleaning devices, the freeboard height is equal to the distance from the solvent liquid level in the degreaser tank to the lip of the tank. For vapor degreasers, the freeboard height is equal to the distance from the solvent vapor level in the tank to the lip of the tank. The operating time should include only that time in which the degreasing unit is being operated in terms of hours per day, days per week and weeks per year.

Item 6: Give a chronological history of the degreasing operation including the original installation date, modification dates and a detailed description of each modification made. Include in this description, the effect the modification(s) had on the capacity of the unit as well as any effects the modification(s) had on the amount or type of air contaminants emitted from the degreasing operation. Include a separate history for each unit identifying the unit with the appropriate degreaser identification. Use additional sheets if necessary.

Item 7 Self-explanatory

Item 8 Each stack, vent, etc. which may emit air contaminants is to be separately identified with a number which is also used in Item 12. Stack height is that above ground level. UTM Coordinates, which means *Universal Transverse Mercator* Coordinates, for Alabama, N-S is between 3337.000km-3875.000km and E-W is between 362.000km-709.000km; Zone 16. Standard temperature is 70°F; standard pressure is 29.92 inches of Hg. Volume of gas discharged can be calculated with the gas velocity (FPS) and stack diameter (Ft).

Item 9: Each stack, vent, etc., which may emit air contaminants, along with its appropriate degreaser identification, is to be separately identified with a number which was also used in Item 8. Pollutants should not be listed as "VOC's" in Item 9 but should include the actual chemicals which make up the solvent i.e. xylene, toluene, etc.. The basis of the estimates should include material balance, stack test, emission factors manual, etc.. Emission points not associated with a stack or vent should be labeled as "Fugitives".

Flow diagram If applications for more than one permit are being submitted for a facility, the use of a single flow diagram for the entire facility is allowed. The use of one flow diagram is suggested for integrated operations. Points of air contaminant emissions are to be numbered and degreaser identifications are to be labeled to correspond with the numbers and labels listed in Items 8 and 9.

PERMIT APPLICATION
FOR
SOLVENT METAL CLEANING

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Do not write in this space

1. **Name of firm or organization.** _____

2. **Description of solvents used:**

Degreaser Identification	Solvents	Volatility (psia @ 100ºf)	Consumption/yr* (gallons)	Density (lbs/gal)

*** consumption = amount purchased less amount reclaimed.**

3. **Number of solvent metal cleaning devices by type:**

   Cold cleaning devices _____

   Conveyorized degreasers _____

   Open top degreasers _____

4. **Are all solvent metal cleaning operations in compliance with all applicable air pollution rules and regulations?**

   ☐**yes** ☐**no**

   (If "no", a compliance schedule, ADEM Form 437, must be completed and attached.)

5. **Description of solvent metal cleaning devices:**

	EXAMPLE			
TYPE DEGREASER	Conveyorized			
DEGREASER IDENTIFICATION	Unit no. 1			
MANUFACTURER	Baron Blakeslee			
MODEL NUMBER	1624			
TYPE SOLVENT USED	trichlorethylene			
TEMP. OF SOLVENT - °F	190			
VAPOR AREA - SQ. FT.	41.3			
FREEBOARD RATIO	0.75			
EQUIPPED WITH COVER	yes			
EQUIP W/CONDENSER FLOW SW	no			
EQUIP W/THERMOSTAT	yes			
EQUIP W/REFRIGERATED CHILLER	yes			
EQUIP W/SPRAY PUMP SAFETY SW	no			
EQUIP W/LEVEL CONTROL SW	no			
NORMAL OPERATING SCHEDULE [FOR EXISTING UNITS ONLY]	8 hr/day, 5 days/week, 50 weeks/yr			

6. **Attach a chronological history of the degreasing operation including the original installation date, modification dates, and a detailed description of each modification. Include a separate history for each degreasing unit identified with its appropriate degreaser identification.**

7. **For each regulated pollutant, describe any limitations on source operation which affects emissions or any work practice standard (attach additional pages if necessary):**

8. **Air contaminant emission points: (Each point of emission should be listed separately and numbered so that it can be located on the attached flow diagram):**

Emission Point	Stack							
	UTM Coordinates		Height Above Grade (Feet)	Base Elevation (Feet)	Diameter (Feet)	Gas Exit Velocity (Feet/Sec)	Volume of Gas Discharged (ACFM)	Exit Temperature (°F)
	E-W (km)	N-S (km)						

9. **Air contaminants emitted: fugitives must be included and calculations appended.**

Emission point	Degreaser Identification	Pollutant	Potential emission rate (lbs/hr)	Potential emission rate (tons/yr)	Basis for Calculation	Regulatory emission limit (lbs/hr)	Regulatory emission limit (units of standard)

*** material balance, stack test, emission factors manual, etc.**

****For each pollution control device indicated, an ADEM Form 110 must be completed and attached.**

Name of person preparing application: _____

Signature: _____ **Date:** _____

9. **Using a flow diagram, illustrate locations of air contaminant release so that emission points under item 8 can be identified.**

FLOW DIAGRAM