



**PERMIT APPLICATION FOR SOLVENT METAL CLEANING
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION**

**INSTRUCTIONS FOR COMPLETION OF
PERMIT APPLICATION FOR SOLVENT METAL CLEANING
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.
- Items 7-8: Self-explanatory
- Item 9: Each stack, vent, etc. which may emit air contaminants is to be separately identified with a number which is also used in Item 9. Stack type may be a stack with an unobstructed opening discharging in a vertical, or nearly vertical direction (V), A vertical stack with a weather cap or similar obstruction in the exhaust stream (W), A building roof vent or bin vent (R), A stack discharging in a horizontal, or nearly horizontal direction (H), A stack discharging downward, or nearly downward (D), An area or volume source not considered a fugitive (A), A process vent, not otherwise classified (P) or Fugitive emissions where no stack exists (F). Stack height is that above ground level. Stack height is that above ground level. GEP Stack Height, which means Good Engineering Practice (GEP) stack height as defined in ADEM Administrative Code r. 335 3 14 .03(2)(a)5, 335 3 15 .02(9)(a)5, or 335 3 16 .02(10)(a)5, as applicable, should only be used if a GEP analysis has been performed or if the stack is a grandfathered stack, thus yielding a GEP stack height equivalent to "Height above grade." 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 68°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 10: 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.



ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION ADEM FORM 112

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Do not write in this space

1. Name of facility or organization. _____

2. Description of solvents used:

Degreaser Identification	Solvents	Volatility (psia @ 100°F)	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 or any work practice standards which affect emissions:

8. Are you requesting a limitation for permitting? Yes No if "yes", specify the limit and affected unit(s) :

9. 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	Emission Point Type	Merged Stack**	Stack											
			UTM Coordinates		Geographic Coordinates		Height Above Grade (Feet)	GEP Stack Height (Feet)	Base Elevation (Feet)	Inside Diameter for Round Opening (Feet)	Inside Area if NOT Round Opening (sq. feet)	Gas Exit Velocity (Feet/Sec)	Volume of Gas Discharged (ACFM)	Exit Gas Temp. (°F)
			E-W (km)	N-S (km)	LAT	LONG								
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10. Provide a flow diagram to illustrate locations of air contaminant release so that emission points under item 8 can be identified.

11. Air contaminants emitted: Attach calculation worksheets. Fugitive emissions must be included (enter on separate line and check box for Fugitive). Particulate emissions should be speciated to include PM10-filterable, PM2.5-filterable, and PM-condensable. Speciated HAP emissions should also be provided. Attach additional page(s) as necessary.

EMISSION POINT	DEGREASER IDENTIFICATION	FUGITIVE	POLLUTANT	UNCONTROLLED POTENTIAL EMISSIONS		CONTROLLED POTENTIAL EMISSIONS		BASIS OF CALCULATION	REGULATORY EMISSION LIMIT Provide in lb/hr or specify alternative UOM
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* 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:

Company of preparer

Signature: Date: