

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY - PERMITTING SECTION**

601 57th Street, SE, Charleston WV 25304  
Ph. (304) 926-0475 • [www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

## **INSTRUCTIONS FOR PERMIT DETERMINATION FORM (PDF)**

These instructions are numbered corresponding to the items found on the PDF. The Permit Determination Form and the Instructions can be found on DAQ's web site at:

[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

When using these directions in conjunction with the PDF application, use the check boxes found at the left of each numbered direction to ensure that the PDF application is completed in full. Please send the PDF along with its attachments to the address shown above.

- 1. **Name of applicant.** The name of the applicant should be listed as the exact name registered with the WV Secretary of State's Office, Corporate Registration Division. If the applicant is not registered with the WV Secretary of State's Office, such as a sole proprietorship, etc., please use the full name of the business as used on tax forms.
- 2. **Name of facility.** If this is the same as in item 1, mark as Not Applicable (N/A). In many cases, the official name and the facility name are different (for example, WV Logging, Inc. vs. Route 20 Sawmill or Joe's Coal Co., Inc. vs. Mine 2A). Also, many businesses have more than one location, so different names are used to denote them.
- 3. **North American Industry Classification System (NAICS) Code.** The NAICS Code is a six (6) digit code that describes different businesses and specific processes. NAICS Codes can be found at:  
  
[www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2007](http://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2007)
- 4A. **Mailing Address.** This should be the address where the applicant receives mail.
- 4B. **Physical Address.** This may be the same as the mailing address. However, if the applicant uses a post office box to receive its mail, the physical location of the site needs to be provided (a house number used in a street address, a clearly marked mailbox on a rural route, etc). Please provide a detailed explanation in item 5A if needed.

- 5A. **Directions to Facility.** Please provide detailed directions on how to reach the facility outlined in the application. These directions should include all road or street designations and allow DAQ personnel to be able to drive to the facility. Also provide a clear copy of a map as **Attachment A** (a copy of a general county highway map will do).
- 5B. **Nearest Road.** Please provide the name and/or number of the nearest interstate, state or county route to the proposed or existing facility. If possible, these should be obtained from a WV highway map.
- 5C. **Nearest Town.** Please provide the name of the nearest town (incorporated or unincorporated) to the proposed or existing facility. If not available, list the nearest post office.
- 5D. **County.** Please provide the name of the county in which the proposed or existing facility is located. If located in more than one county, list the county where the entrance to the facility is located first, followed by the other county or counties.
- 5E, 5F, 5G. The **Universal Transverse Mercator (UTM) Coordinates** can be determined from 7.5 minute United States Geological Survey topographical maps. A program to convert longitude and latitude to UTM Coordinates can be found at:  
  

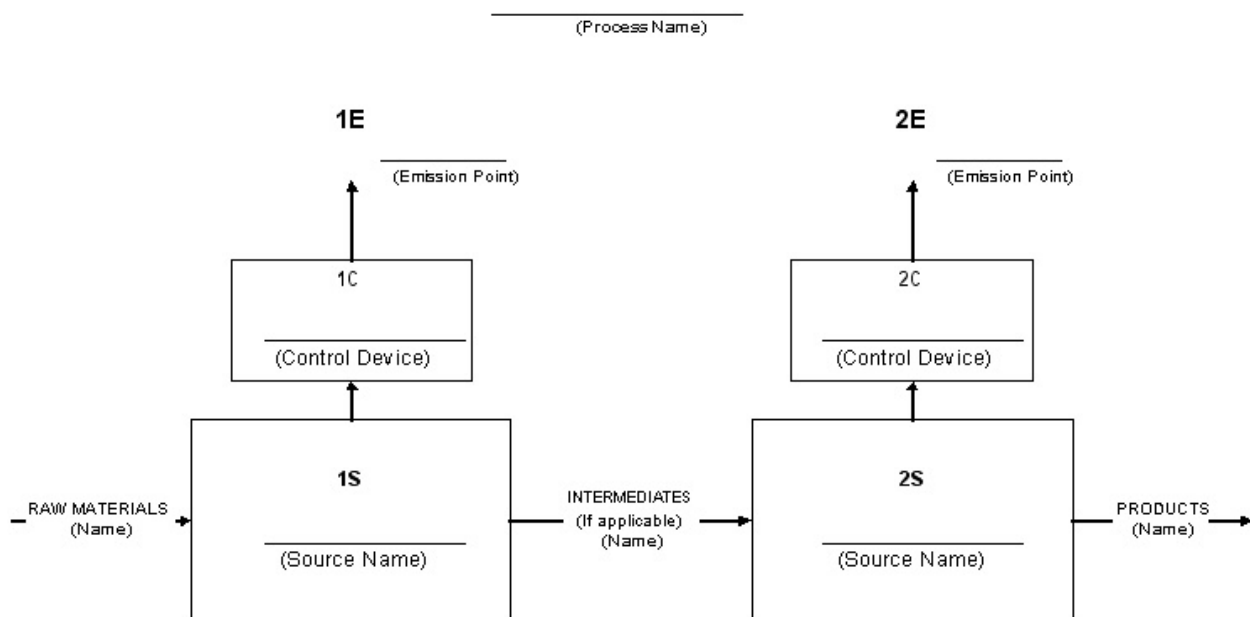
[www.ngs.noaa.gov/TOOLS/utm.shtml](http://www.ngs.noaa.gov/TOOLS/utm.shtml)
- 6A. **Individual To Contact If More Information Is Required.** The employee that is assigned to fill out the application and provide corrections to DAQ Permitting should be listed here. Typically, this is an engineer or an environmental technician or coordinator. In the case of small companies, this may be the owner.
- 6B, 6C, 6D, 6E. For the person listed in item 6A, please provide his/her official title, direct-dial telephone number, fax number and an e-mail address if available.
- 7A. If the application in question is for an existing facility, please provide the eight (8) digit DAQ plant identification number. This can be found on the cover page of the permit issued to the facility pursuant to 45CSR13. It is also found in the upper right-hand corner of the "Certificate to Operate" that DAQ issues registered facilities every year upon payment of fees. (NOTE: Title V facility numbers are NOT to be used here.)
- 7B. If the application in question is for an existing facility, please provide each DAQ permit number that relates to part or all of the process outlined in the

application. This permit number will begin with “R13-”as in R13-####. Also, if a prior PDF has been submitted for the process in question, indicate, if possible, the date submitted. A permit determination issued in 1999, for instance, will have the format “PD99-###”; if issued in the year 2000, the designation would be “PD00-###”, etc.

- 7C. **Is this PDF being submitted as the result of an enforcement action?** If yes, list.
  
- 8A. **Type of Emission Source.** Please check whichever of the boxes provided applies to the source outlined in the PDF application. A “new source” is one that has not yet been constructed (or is under construction, see definition of pre-construction activities in 45CSR13 sections 5.1 thru 5.3). A “modification” is a change that results in an increase or new emission at an existing source. An “administrative update” is a change to any part of an existing permit, from a purely administrative change (Class I), to an addition that results in an increase or new emission at an existing source covered by an DAQ permit (Class II). “Other” is for any situation which does not fit into any of the above, and should be explained fully in item 11B, Detailed Process Description.
  
- 8B. If the Administrative Update option is checked in item 8A, DAQ needs to obtain the applicant’s consent to update the existing permit with the information contained in the PDF. This assures the applicant that their existing permit will be updated to reflect changes in this PDF. In this case, the “YES” box should be checked. If the “NO” box is checked, this may result in a delay of review of the process change.
  
- 9. **Is Demolition or Physical Renovation at an Existing Facility Involved?** If YES is checked for item 9, CAUTION. The proposed facility addition or modification may be subject to the provisions of 45CSR15, “Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 61.” If the physical modification of the facility or process will involve the wrecking or removal of a load-bearing structural member, or the altering of one or more facility components in any way, please contact the DAQ’s Asbestos Workgroup at (304) 926-0475, for further information. 45CSR15 addresses inspection, emission control standards, transportation, and disposal of asbestos-containing material. Exposure to asbestos fibers, a known carcinogen, represents a potentially serious health hazard for you and a potentially significant financial liability to your employer.
  
- 10A. **Date of Anticipated Installation.** Please provide the anticipated date that the proposed source(s) will begin to be installed or when the proposed changes will begin to occur.

- 10B. **Date of Anticipated Start-up.** Please provide the anticipated date that the proposed source(s) will begin to operate. Note that this date includes any debugging operations and systems testing that will occur before actual production begins.
- 11A. **Provide a Detailed Process Flow Diagram.** Attach a detailed PROCESS FLOW DIAGRAM(S) or schematic(s) (labeled as **ATTACHMENT B**) clearly showing the pieces of equipment (i.e. emission sources), air pollution control devices, and emission points that are associated with the proposed changes. Also, show other major vessels, operations, associated piping, and instrumentation, as appropriate, in an understandable line sequence of operation. Sizing and specifications of equipment should be shown, as appropriate, on schematic drawing. The degree of detail will depend on the complexity of the process(es) used. For example, chemical processes usually require a very detailed PROCESS FLOW DIAGRAM or series of such diagrams. Please clearly label each item. An example of a labeling system for the PROCESS FLOW DIAGRAM is shown below (Figure 1).

**Figure 1**



Note the different designations above:

- Emission Sources are labeled **1S, 2S, 3S**, etc.
- Control devices are labeled **1C, 2C, 3C**, etc.
- Emission points are labeled **1E, 2E, 3E**, etc.

If the facility has its own designations, these may be used instead.

- 11B. **Provide a Detailed Process Description.** Please provide a detailed description of the proposed plant, facility and/or process for which the PDF is being submitted (labeled as **ATTACHMENT C**). Make sure that the designations (1S, 2S, 3S, etc.) and the appropriate source/control device/emission point names are correlated to the Process Flow Diagram (item 11A) and listed with a complete description of each. Include information on all sources or operations from which emissions can potentially occur; the associated or proposed air pollution control devices; and all associated emission points including emergency relief vents. Material handling processes shall include hourly (lb/hr) and yearly (TPY) throughputs, as well as plans to minimize the generation of fugitive emissions to the air. Be sure to clearly outline the sequence of events, equipment use, and operating parameters.
12. Please Provide Material Safety Data Sheets (MSDS) for all materials processed, used or produced. Label each of these as **ATTACHMENT D1, D2, D3, etc.** corresponding to as many different MSDSs as are required for materials used in the processes outlined in the PDF.
- 13A. **Regulated Air Pollutant Emissions.** For a new facility, the plant wide emissions based on the Potential To Emit (PTE) for all pollutant groups outlined in item 13A needs to be calculated and listed here. For an existing facility the proposed change of PTE (i.e. proposed PTE minus permitted PTE) needs to be calculated and listed here. PTE for any given pollutant is typically calculated before air pollution control devices, or as if the process emissions are without control devices. Some consideration for control devices that are inherent in the process may be given after consultation with the DAQ. PTE calculations are typically based on maximum design capacity of the process. Hourly PTE must be calculated and provided in pounds per hour (LB/HR or PPH). Yearly PTE must be calculated in tons per year (TON/YR or TPY) as if the facility or process in question is running 8,760 hours per year (unless some limitation on the process or a specific work practice limits this in some way. Such limitations may be approved only after consultation with the DAQ). The **pollutant** groups listed in item 13A include:
- Particulate Matter: **PM** (all compounds of 30 microns in diameter and less);
  - Criteria pollutants: Particular Matter **PM<sub>10</sub>** (only compounds under 10 microns in diameter), Volatile Organic Compounds VOCs (defined in 40CFR51, 100(s)), Carbon Monoxide **CO**, Nitrogen Oxides **NO<sub>x</sub>** (NO, NO<sub>2</sub>, NO<sub>3</sub>), Sulfur Dioxide **SO<sub>2</sub>**, and Lead **Pb** [Note that Lead has a much lower threshold on Table 45-13A]; (VOCs and NO<sub>x</sub> are precursors for Ozone formation);

- Hazardous Air Pollutants: HAPs are to be provided in aggregate (combined) form in item 13A but specified individually in the calculations outlined in item 13B; these 188 Hazardous Air Pollutants are listed in Section 112(b) of the 1990 Clean Air Act Amendment (see Appendix 1) and can also be found on the Internet at:  
[www.epa.gov/ttn/uatw/orig189.html](http://www.epa.gov/ttn/uatw/orig189.html)
- Toxic Air Pollutants: TAPs (pollutants with much lower triggering thresholds) are to be provided individually; attach additional pages as necessary to provide this information. TAPs are listed in 45CSR27 (see Appendix 2). The thresholds for TAPs in 45CSR27 are on a plant-wide basis (not just for the changes subject to this PDF);
- The Other category is provided for all other regulated pollutants not listed above, including Arsenic Compounds (inorganic), Asbestos, Beryllium, Lead or Lead compounds and Mercury, (listed in table 45-13A of 45CSR13, see Appendix 3); Mineral Acids per 45CSR7 (sulfuric acid mist, nitric acid mist and/or vapor, hydrochloric acid mist and/or vapor, phosphoric acid mist and/or vapor), etc. Please, list each “Other” pollutant individually. Attach additional pages as needed. The thresholds for the pollutants listed in Table 45-13A are on a plant-wide basis (not just for the changes subject to this PDF).

- 13B. **Please Provide All Supporting Calculations as ATTACHMENT E.** Calculate an hourly and yearly PTE for each process emission point shown in your Detailed Process Flow Diagram (item 11A) for each regulated air pollutant listed in item 13A. Be sure to include individual HAPs (see Appendix 1 for 188 HAPs); individual TAPs (listed in 45CSR27, Appendix 2); and other air pollutants listed in table 45-13A of 45CSR13 (Appendix 3), the Mineral Acids per 45CSR7 etc. Also include how emissions were derived, for example, using emission factors found in the U.S. Environmental Protection Agency’s AP-42, A Compilation of Air Pollutant Emission Factors, 5th edition which can be found on the Internet at:

[www.epa.gov/ttnchie1/ap42/](http://www.epa.gov/ttnchie1/ap42/)

For existing sources that are major for the purposes of 45CSR14 or 45CSR19, please provide calculations of actual emissions from the process before the change proposed.

14. **Certification of Data.** Self-explanatory. Electronic Signatures accepted.

**HAZARDOUS AIR POLLUTANTS**  
Per 1990 Clean Air Act Amendments, §112(b)

## HAZARDOUS AIR POLLUTANTS

75070 Acetaldehyde (voc)	111444 Dichloroethyl ether (Bis(2-chloroethyl)ether)(voc)
60335 Acetamide (voc)	542756 1,3-Dichloropropene (voc)
75058 Acetonitrile (voc)	62737 Dichlorvos (voc)
98862 Acetophenone (voc)	111422 Diethanolamine (voc)
53963 2-Acetylaminofluorene (voc)	121697 N,N-Diethyl aniline (N,N-Dimethylaniline)(voc)
107028 Acrolein (voc)	64675 Diethyl sulfate (voc)
79061 Acrylamide (voc)	119904 3,3-Dimethoxybenzidine (voc)
79107 Acrylic acid (voc)	60117 Dimethyl aminoazobenzene (voc)
107131 Acrylonitrile (voc)	119937 3,3-Dimethyl benzidine (voc)
107051 Allyl chloride (voc)	79447 Dimethyl carbamoyl chloride (voc)
92671 4-Aminobiphenyl (voc)	68122 Dimethyl formamide (voc)
62533 Aniline (voc)	57147 1,1-Dimethyl hydrazine (voc)
90040 o-Anisidine (voc)	131113 Dimethyl phthalate (voc)
1332214 Asbestos (TSP)	77781 Dimethyl sulfate (voc)
71432 Benzene (including benzene from gasoline) (voc)	534521 4,6-Dinitro-o-cresol, and salts (voc)
92875 Benzidine (voc)	51285 2,4-Dinitrophenol (voc)
98077 Benzotrichloride (voc)	121142 2,4-Dinitrotoluene (voc)
100447 Benzyl chloride (voc)	123911 1,4-Dioxane (1,4-Diethyleneoxide) (voc)
92524 Biphenyl (voc)	122667 1,2-Diphenylhydrazine (voc)
117817 Bis(2-ethylhexyl)phthalate (DEHP) (voc)	106898 Epichlorohydrin (l-Chloro-2,3-epoxypropane)(voc)
542881 Bis(chloromethyl)ether (voc)	106887 1,2-Epoxybutane (voc)
75252 Bromoform (voc)	140885 Ethyl acrylate (voc)
106990 1,3-Butadiene (voc)	100414 Ethyl benzene (voc)
156627 Calcium cyanamide (voc)	51796 Ethyl carbamate (Urethane) (voc)
105602 Caprolactam (voc) delisted 61FR30816, 6/18/96	75003 Ethyl chloride (Chloroethane) (voc)
133062 Captan (voc)	106934 Ethylene dibromide (Dibromoethane) (voc)
63252 Carbaryl (voc)	107062 Ethylene dichloride (1,2-Dichloroethane) (voc)
75150 Carbon disulfide (voc)	107211 Ethylene glycol (voc)
56235 Carbon tetrachloride (voc)	151564 Ethylene imine (Aziridine) (voc)
463581 Carbonyl sulfide (voc)	75218 Ethylene oxide (voc)
120809 Catechol (voc)	96457 Ethylene thiourea (voc)
133904 Chloramben (voc)	75343 Ethylidene dichloride (1,1-Dichloroethane) (voc)
57749 Chlordane (voc)	50000 Formaldehyde (voc)
7782505 Chlorine	76448 Heptachlor (voc)
79118 Chloroacetic acid (voc)	118741 Hexachlorobenzene (voc)
532274 2-Chloroacetophenone (voc)	87683 Hexachlorobutadiene (voc)
108907 Chlorobenzene (voc)	77474 Hexachlorocyclopentadiene (voc)
510156 Chlorobenzilate (voc)	67721 Hexachloroethane (voc)
67663 Chloroform (voc)	822060 Hexamethylene-1,6-diisocyanate (voc)
107302 Chloromethyl methyl ether (voc)	680319 Hexamethylphosphoramide (voc)
126998 Chloroprene (voc)	110543 Hexane (voc)
1319773 Cresols/Cresylic acid (isomers and mixture)(voc)	302012 Hydrazine (voc)
95487 o-Cresol (voc)	7647010 Hydrochloric acid
108394 m-Cresol (voc)	7664393 Hydrogen fluoride (Hydrofluoric acid)
106445 p-Cresol (voc)	123319 Hydroquinone (voc)
98828 Cumene (voc)	78591 Isophorone (voc)
94757 2,4-D, salts and esters (voc)	58899 Lindane (all isomers) (voc)
3547044 DDE (voc)	108316 Maleic anhydride (voc)
334883 Diazomethane (voc)	67561 Methanol (voc)
132649 Dibenzofurans (voc)	72435 Methoxychlor (voc)
96128 1,2-Dibromo-3-chloropropane (voc)	74839 Methyl bromide (Bromomethane) (voc)
84742 Dibutylphthalate (voc)	74873 Methyl chloride (Chloromethane) (voc)
106467 1,4-Dichlorobenzene(p) (voc)	71556 Methyl chloroform (1,1,1-Trichloroethane)
91941 3,3-Dichlorobenzidine (voc)	78933 Methyl ethyl ketone (2-Butanone) (voc)
	60344 Methyl hydrazine (voc)
	74884 Methyl iodide (Iodomethane) (voc)
	108101 Methyl isobutyl ketone (Hexone) (voc)

624839 Methyl isocyanate (voc)	7550450 Titanium tetrachloride (TSP)
80626 Methyl methacrylate (voc)	108883 Toluene (voc)
1634044 Methyl tert butyl ether (voc)	95807 2,4-Toluene diamine (voc)
101144 4,4-Methylene bis(2-chloroaniline) (voc)	584849 2,4-Toluene diisocyanate (voc)
75092 Methylene chloride (Dichloromethane)	95534 o-Toluidine (voc)
101688 Methylene diphenyl diisocyanate (MDI) (voc)	8001352 Toxaphene (chlorinated camphene) (voc)
101779 4,4-Methylenedianiline (voc)	120821 1,2,4-Trichlorobenzene (voc)
91203 Naphthalene (voc)	79005 1,1,2-Trichloroethane (voc)
98953 Nitrobenzene (voc)	79016 Trichloroethylene (voc)
92933 4-Nitrobiphenyl (voc)	95954 2,4,5-Trichlorophenol (voc)
100027 4-Nitrophenol (voc)	88062 2,4,6-Trichlorophenol (voc)
79469 2-Nitropropane (voc)	121448 Triethylamine (voc)
684935 N-Nitroso-N-methylurea (voc)	1582098 Trifluralin (voc)
62759 N-Nitrosodimethylamine (voc)	540841 2,2,4-Trimethylpentane (voc)
59892 N-Nitrosomorpholine (voc)	108054 Vinyl acetate (voc)
56382 Parathion (voc)	593602 Vinyl bromide (voc)
82688 Pentachloronitrobenzene (Quintobenzene) (voc)	75014 Vinyl chloride (voc)
87865 Pentachlorophenol (voc)	75354 Vinylidene chloride (1,1-Dichloroethylene) (voc)
108952 Phenol (voc)	1330207 Xylenes (isomers and mixture) (voc)
106503 p-Phenylenediamine (voc)	95476 o-Xylenes (voc)
75445 Phosgene (voc)	108383 m-Xylenes (voc)
7803512 Phosphine	106423 p-Xylenes (voc)
7723140 Phosphorus (voc)	0 Antimony Compounds (TSP)
85449 Phthalic anhydride (voc)	0 Arsenic Compounds (inorganic including arsine)(TSP)
1336363 Polychlorinated biphenyls (Aroclors) (voc)	0 Beryllium Compounds (TSP)
1120714 1,3-Propane sultone (voc)	0 Cadmium Compounds (TSP)
57578 beta-Propiolactone (voc)	0 Chromium Compounds (TSP)
123386 Propionaldehyde (voc)	0 Cobalt Compounds (TSP)
114261 Propoxur (Baygon) (voc)	0 Coke Oven Emissions (voc)
78875 Propylene dichloride (1,2-Dichloropropane) (voc)	0 Cyanide Compounds 1 (TSP)
75569 Propylene oxide (voc)	0 Glycol ethers 2 (voc)
75558 1,2-Propylenimine (2-Methyl aziridine) (voc)	0 Lead Compounds (TSP)
91225 Quinoline (voc)	0 Manganese Compounds (TSP)
106514 Quinone (voc)	0 Mercury Compounds (TSP)
100425 Styrene (voc)	0 Fine mineral fibers 3 (TSP)
96093 Styrene oxide (voc)	0 Nickel Compounds (TSP)
1746016 2,3,7,8-Tetrachlorodibenzo-p-dioxin (voc)	0 Polycyclic Organic Matter 4 (voc)
79345 1,1,2,2-Tetrachloroethane (voc)	0 Radionuclides (including radon) 5
127184 Tetrachloroethylene (Perchloroethylene) (voc)	0 Selenium Compounds (TSP)

**NOTE:** For all listings above which contain the word “compounds” and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.

1. X’CN where X = H’ or any other group where a formal dissociation may occur. For example, KCN or Ca(CN)2
2. Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethyleneglycol R-(OCH2CH2)n-OR’ where n = 1, 2, or 3R = alkyl or aryl groups R’ = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH2CH)n-OH. Polymers are excluded from the glycol category.
3. Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1micrometer or less.
4. Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.
5. A type of atom which spontaneously undergoes radioactive decay.



## 45CSR27

Toxic Air Pollutant	Potential Emission Rate	
	pounds/year	tons/year
Acrylonitrile .....	500	0.25
Allyl Chloride .....	10,000	5.00
Benzene .....	1,000	0.50
1,3 Butadiene .....	500	0.25
Carbon Tetrachloride .....	1,000	0.50
Chloroform .....	1,000	0.50
Ethylene Dichloride .....	1,000	0.50
Ethylene Oxide .....	500	0.25
Formaldehyde .....	1,000	0.50
Methylene Chloride .....	5,000	2.50
Propylene Oxide .....	5,000	2.50
Trichloroethylene .....	10,000	5.00
Vinyl Chloride .....	1,000	0.50
Vinylidene Chloride .....	2,000	1.00

TABLE 45-13A

Pollutant	Potential Emission Rate	
	pounds/year	tons/year
Acrylonitrile .....	500	0.25
Allyl Chloride .....	10,000	5.00
*Arsenic Compounds (Inorganic) .....	200	0.10
*Asbestos .....	14	0.007
Benzene .....	1,000	0.50
*Beryllium .....	0.8	0.0004
1,3 Butadiene .....	500	0.25
Carbon Tetrachloride .....	1,000	0.50
Chloroform .....	1,000	0.50
Ethylene Dichloride .....	1,000	0.50
Ethylene Oxide .....	500	0.25
Formaldehyde .....	1,000	0.50
*Lead or lead compounds .....	1,200	0.60
*Mercury .....	200	0.10
Methylene Chloride .....	5,000	2.50
Propylene Oxide .....	5,000	2.50
Trichloroethylene .....	10,000	5.00
Vinyl Chloride .....	1,000	0.50
Vinylidene Chloride .....	2,000	1.00

\* These pollutants are included only in the Table 45-13A.

The rest of the pollutants in this table are included in both Table 45-13A and Table 45CSR27 (above) with identical Potential Emission Rates.