

| Hazardous Air Contaminant   | CAS Number | Thresholds for Emission Points' (expressed as lbs/hr or lbs/yr) |           |         |         | Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |           |      |
|---|------------|---|-----------|---------|---------|--|--|---------------------|-----------|------|
|   |            | (a)   | (b)       | (c)     | (d)     |  |  |                     | (e)       | (f)  |
| Chloroform  | 67-66-3    | 1,776,876   | 7,300,000 | 2.62    | 10.2    | 17,380,952   | 61,258,741                             | 10,000              | Annual    | N/A  |
| Chloromethane (Methyl chloride)   | 74-87-3    | 77.3  | 317       | 77.3    | 317     | 756  | 2,663                                  | 1,172               | 24 Hr Avg | N/A  |
| 4-Chloro-o-phenylene diamine (4-Chloro-1,2-benzenediamine)              | 95-83-0    | 386   | 1,587     | 5.55    | 21.5    | 43.5   | 167                                    | 2,478               | 24 Hr Avg | BACT |
| beta-Chloroprene  | 126-99-8   | 2.43  | 10        | 2.43    | 10      | 23.8   | 83.9                                   | N/A                 | Annual    | N/A  |
| 2-Chloropropionic acid  | 598-78-7   | 0.0238  | 7.56      | 1.95    | 7.56    | 15.2   | 58.7                                   | 869                 | 24 Hr Avg | N/A  |
| o-Chlorostyrene   | 2039-87-4  | 15.2  | 59.2      | 15.2    | 59.2    | 0.187  | 0.72                                   | 10.7                | 24 Hr Avg | N/A  |
| o-Chlorotoluene   | 95-49-8    | 13.9  | 54        | 13.9    | 54      | 119  | 460                                    | 6,802               | 24 Hr Avg | N/A  |
| Chromium (metal) and compounds other than Chromium (VI)                 | 7440-47-3  | 0.0269  | 0.104     | 1.42    | 5.84    | 0.211  | 0.811                                  | 12                  | 24 Hr Avg | N/A  |
| Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr | 7440-47-3  | 0.148   | 0.608     | 1.42    | 5.84    | 13.9   | 49                                     | 0.008               | Annual    | N/A  |
| Chromium (VI): compounds and particulates                               | 7440-47-3  | 17.8  | 73        | 0.148   | 0.608   | 1.45   | 5.1                                    | N/A                 | Annual    | LAER |
| Chromyl chloride, as Cr   | 14977-61-8 | 0.148   | 0.608     | 0.148   | 0.608   | 1.45   | 5.1                                    | 0.1                 | Annual    | N/A  |
| Cobalt, elemental, and inorganic compounds, as Co                       | 7440-48-4  | 0.00851   | 0.0331    | 0.148   | 0.608   | 1.45   | 5.1                                    | N/A                 | Annual    | LAER |
| Coke oven emissions   | 7440-48-4  | 0.00107   | 0.00417   | 0.00851 | 0.0331  | 0.0667   | 0.257                                  | 3.8                 | 24 Hr Avg | N/A  |
| Copper and compounds, dusts and mists, as Cu                            | 7440-50-8  | 0.0107  | 0.0417    | 0.00107 | 0.00417 | 0.00842  | 0.0324                                 | 0.48                | 24 Hr Avg | N/A  |
| Copper and compounds, fume, as Cu                                       | 7440-50-8  | 41.3  | 170       | 0.0107  | 0.0417  | 0.0842   | 0.324                                  | 4.8                 | 24 Hr Avg | N/A  |
| p-Cresidine   | 120-71-8   | 41.3  | 170       | 41.3    | 170     | 404  | 1,425                                  | N/A                 | Annual    | LAER |
| Cresol (mixtures and isomers)   | 1319-77-3  | 1.19  | 4.62      | 1.19    | 4.62    | 9.31   | 35.9                                   | 24                  | 24 Hr Avg | N/A  |
| Crotonaldehyde  | 4170-30-3  | 0.0642  | 0.205     | 0.0642  | 0.205   | 0.393  | 1.06                                   | N/A                 | 24 Hr Avg | N/A  |
| Cumene (isopropyl benzene)  | 98-82-8    | 13.2  | 51.3      | 13.2    | 51.3    | 103  | 399                                    | 86                  | 24 Hr Avg | N/A  |
| Cyanamide   | 420-04-2   | 0.107   | 0.417     | 0.107   | 0.417   | 0.842  | 3.24                                   | 5,899               | 24 Hr Avg | N/A  |
| Cyanides, (inorganics), as CN   | 143-33-9   | 0.373   | 1.19      | 0.373   | 1.19    | 2.29   | 6.13                                   | 48                  | 24 Hr Avg | N/A  |
| Cyanogen  | 460-19-5   | 1.14  | 4.44      | 1.14    | 4.44    | 8.96   | 34.5                                   | 500                 | 1 Hr      | N/A  |
| Cyanogen chloride   | 506-77-4   | 0.0563  | 0.179     | 0.0563  | 0.179   | 0.345  | 1.32                                   | 511                 | 24 Hr Avg | N/A  |
| Cyclohexanol  | 108-93-0   | 11  | 42.7      | 11      | 42.7    | 86.2   | 332                                    | 75.4                | 1 Hr      | N/A  |
| Cyclohexanone   | 108-94-1   | 5.17  | 20.1      | 5.17    | 20.1    | 40.5   | 156                                    | 4,916               | 24 Hr Avg | N/A  |
| Cyclohexylamine   | 108-91-8   | 2.18  | 8.46      | 2.18    | 8.46    | 17.1   | 65.8                                   | 2,311               | 24 Hr Avg | N/A  |
| Cyclonite   | 121-82-4   | 0.0269  | 0.104     | 0.0269  | 0.104   | 0.211  | 0.811                                  | 973                 | 24 Hr Avg | N/A  |
| Cyclopentadiene   | 542-92-7   | 10.9  | 42.3      | 10.9    | 42.3    | 85.4   | 329                                    | 12                  | 24 Hr Avg | N/A  |
| Danthron (1,8-Dihydroxyanthraquinone)                                   | 117-10-2   | 80.8  | 332       | 80.8    | 332     | 790  | 2,784                                  | 4,866               | 24 Hr Avg | N/A  |
| DBCP (1,2-Dibromo-3-chloropropane)                                      | 96-12-8    | 0.935   | 3.84      | 0.935   | 3.84    | 9.15   | 32.2                                   | N/A                 | Annual    | BACT |
| DDT (Dichlorodiphenyltrichloroethane)                                   | 50-29-3    | 0.0537  | 0.209     | 0.0537  | 0.209   | 0.421  | 1.62                                   | N/A                 | Annual    | BACT |
| Diacetone alcohol   | 123-42-2   | 18.3  | 75.3      | 18.3    | 75.3    | 179  | 632                                    | 24                  | 24 Hr Avg | N/A  |
| 2,4-Diaminobisole sulfate   | 39156-41-7 | 480   | 1,973     | 480     | 1,973   | 4,698  | 16,556                                 | 5,701               | 24 Hr Avg | N/A  |
| 2,4-Diaminophenyl ether (4,4'-Oxydianiline)                             | 101-80-4   | 2.43  | 10        | 2.43    | 10      | 23.8   | 83.9                                   | N/A                 | Annual    | BACT |
| 2,4-Diaminotoluene (Toluene-2,4-diamine)                                | 95-80-7    | 1.62  | 6.64      | 1.62    | 6.64    | 15.8   | 55.7                                   | N/A                 | Annual    | BACT |

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|   |            | (a)  | (b)     | (c)    | (d)     |   |  |                     |
| o-Diamisidine and o-Diamisidine hydrochloride (3,3'-Dimethoxybenzidine and 3,3'-Dimethoxybenzidine hydrochloride) | 119-90-4   | 2.43   | 10      | 23.8   | 83.9    | N/A   | Annual                                 | BACT                |
| Diazomethane  | 334-88-3   | 0.0185   | 0.0718  | 0.145  | 0.558   | 8.25  | 24 Hr Avg                              | N/A                 |
| Dibenz(a,h)acridine   | 226-36-8   | 16.2   | 66.4    | 158    | 557     | N/A   | Annual                                 | BACT                |
| Dibenz(a,j)acridine   | 224-42-0   | 16.2   | 66.4    | 158    | 557     | N/A   | Annual                                 | BACT                |
| Dibenz(a,h)anthracene   | 53-70-3    | 1.48   | 6.08    | 14.5   | 51      | N/A   | Annual                                 | BACT                |
| 7H-Dibenzof(c,g)carbazole   | 194-59-2   | 1.62   | 6.64    | 15.8   | 55.7    | N/A   | Annual                                 | BACT                |
| Dibenz(a,e)pyrene   | 192-65-4   | 1.62   | 6.64    | 15.8   | 55.7    | N/A   | Annual                                 | BACT                |
| Dibenzo(a,h)pyrene  | 189-64-0   | 0.162  | 0.664   | 1.58   | 5.57    | N/A   | Annual                                 | BACT                |
| Dibenzo(a,i)pyrene  | 189-55-9   | 0.162  | 0.664   | 1.58   | 5.57    | N/A   | Annual                                 | BACT                |
| Dibenzo(a,j)pyrene  | 191-30-0   | 0.162  | 0.664   | 1.58   | 5.57    | N/A   | Annual                                 | BACT                |
| Diborane  | 19287-45-7 | 0.00608  | 0.0236  | 0.0477 | 0.184   | 2.72  | 24 Hr Avg                              | N/A                 |
| 1,2-Dibromo-3-chloropropane (DBCP)  | 96-12-8    | 0.935  | 3.84    | 9.15   | 32.2    | N/A   | Annual                                 | BACT                |
| 1,2-Dibromoethane (Ethylene dibromide; EDB)   | 106-93-4   | 8.08   | 33.2    | 79     | 278     | N/A   | Annual                                 | BACT                |
| 2-N-Dibutylaminoethanol   | 102-81-8   | 0.19   | 0.74    | 1.49   | 5.75    | 85.1  | 24 Hr Avg                              | N/A                 |
| Dibutylphenyl phosphate   | 2528-36-1  | 0.189  | 0.733   | 1.48   | 5.7     | 84.3  | 24 Hr Avg                              | N/A                 |
| Dibutyl phthalate (Di-n-butyl phthalate)  | 84-74-2    | 0.269  | 1.04    | 2.11   | 8.11    | 120   | 24 Hr Avg                              | N/A                 |
| Dichloroacetylene   | 7572-29-4  | 0.029  | 0.0923  | 0.178  | 0.476   | 38.8  | 1 Hr                                   | N/A                 |
| o-Dichlorobenzene (1,2-Dichlorobenzene)   | 95-50-1    | 8.07   | 31.4    | 63.3   | 244     | 3,608   | 24 Hr Avg                              | N/A                 |
| p-Dichlorobenzene (1,4-Dichlorobenzene)   | 106-46-7   | 162  | 664     | 1,580  | 5,569   | N/A   | Annual                                 | BACT                |
| 3,3'-Dichlorobenzidine  | 91-94-1    | 3.23   | 12.5    | 25.3   | 97.5    | 1,443   | 24 Hr Avg                              | N/A                 |
| 1,4-Dichloro-2-butene   | 764-41-0   | 0.00137  | 0.00533 | 0.0108 | 0.0414  | 0.613   | 24 Hr Avg                              | N/A                 |
| 1,3-Dichloro-5,5-dimethyl hydantoin   | 118-52-5   | 0.0107   | 0.0417  | 0.0842 | 0.324   | 4.8   | 24 Hr Avg                              | N/A                 |
| Dichlorodiphenyltrichloroethane (DDT)   | 50-29-3    | 18.3   | 75.3    | 179    | 632     | N/A   | Annual                                 | BACT                |
| 1,1-Dichloroethane (Ethylene dichloride)  | 75-34-3    | 21.7   | 84.5    | 170    | 656     | 24  | 24 Hr Avg                              | N/A                 |
| 1,2-Dichloroethane (Ethylene dichloride; EDC)   | 107-06-2   | 68.3   | 281     | 668    | 2,356   | 9,715   | 24 Hr Avg                              | N/A                 |
| Dichloroethyl ether (Bis(2-chloroethyl)ether)   | 111-44-4   | 2.17   | 8.45    | 17     | 65.6    | N/A   | Annual                                 | BACT                |
| 1,1-Dichloroethylene (Vinylidene chloride)  | 75-35-4    | 1.57   | 6.1     | 12.3   | 47.4    | 971   | 24 Hr Avg                              | N/A                 |
| 1,2-Dichloroethylene  | 540-59-0   | 1.06   | 4.14    | 8.35   | 32.2    | 702   | 24 Hr Avg                              | N/A                 |
| Dichloromethane (Methylene chloride)  | 75-09-2    | 42.6   | 166     | 334    | 1,286   | 19,033  | 24 Hr Avg                              | N/A                 |
| 1,1-Dichloro-1-nitroethane  | 594-72-9   | 9.33   | 36.2    | 73.1   | 282     | 4,168   | 24 Hr Avg                              | N/A                 |
| 1,2-Dichloropropane (Propylene dichloride)  | 78-87-5    | 3,781  | 15,532  | 36,981 | 130,338 | N/A   | Annual                                 | BACT                |
| Dicyclopentadiene   | 77-73-6    | 0.633  | 2.46    | 4.96   | 19.1    | 283   | 24 Hr Avg                              | N/A                 |
| Diethanolamine  | 1464-53-5  | 18.6   | 72.3    | 146    | 562     | 8,318   | 24 Hr Avg                              | N/A                 |
| Diethylamine  | 109-89-7   | 711  | 2,920   | 6,952  | 24,503  | 4   | Annual                                 | N/A                 |
|   |            | 1.45   | 5.64    | 11.4   | 43.8    | 649   | 24 Hr Avg                              | N/A                 |
|   |            | 2.43   | 10      | 23.8   | 83.9    | N/A   | Annual                                 | BACT                |
|   |            | 0.107  | 0.417   | 0.842  | 3.24    | 48  | 24 Hr Avg                              | N/A                 |
|   |            | 0.803  | 3.12    | 6.3    | 24.3    | 359   | 24 Hr Avg                              | N/A                 |

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|--|------------|--|---|---|-------------------------------------|---|--|---------------------|
|  |            | (c)<br>Emissions from Stacks <25 ft  | (d)<br>Emissions from Stacks 25 to <40 ft | (e)<br>Emissions from Stacks 40 to <75 ft | (f)<br>Emissions from Stacks ≥75 ft |   |  |                     |
| (a)  | (b)        | (c)  | (d)                                       | (e)                                       | (f)                                 | (g)   | (h)                                    | (i)                 |
| 2-Diethylaminoethanol  | 100-37-8   | 0.515  | 2   | 4.04                                      | 15.5                                | 230   | 24 Hr Avg                              | N/A                 |
| Diethylene triamine  | 111-40-0   | 0.227  | 0.881                                     | 1.78                                      | 6.84                                | 101   | 24 Hr Avg                              | N/A                 |
| Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)                         | 117-81-7   | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| Diethyl phthalate  | 84-66-2    | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| Diethyl sulfate  | 64-67-5    | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | BACT                |
| 1,4-Diethylene oxide (1,4-Dioxane)   | 123-91-1   | 3.87   | 15  | 30.3                                      | 117                                 | 1,730   | 24 Hr Avg                              | N/A                 |
| 1,1-Difluoroethane   | 75-37-6    | 231  | 948                                       | 2,257                                     | 7,956                               | N/A   | Annual                                 | BACT                |
| Diglycidyl ether (DGE)   | 2238-07-5  | 7,107,505  | 29,200,000                                | 69,523,810                                | 245,034,965                         | 40,000  | Annual                                 | N/A                 |
| Diglycidyl resorcinol ether  | 101-90-6   | 0.0286   | 0.111                                     | 0.224                                     | 0.863                               | 12.8  | 24 Hr Avg                              | N/A                 |
| 1,8-Dihydroxyanthraquinone (Danthron)  | 117-10-2   | 3.63   | 14.9                                      | 35.5                                      | 125                                 | N/A   | Annual                                 | BACT                |
| Diisobutyl ketone  | 108-83-8   | 80.8   | 332                                       | 790                                       | 2,784                               | N/A   | Annual                                 | BACT                |
| Diisopropylamine   | 108-18-9   | 7.81   | 30.4                                      | 61.2                                      | 236                                 | 3,490   | 24 Hr Avg                              | N/A                 |
| Dimethoxybenzidine and 3,3'-Dimethoxybenzidine hydrochloride (o-Dianisidine and o-Dianisidine hydrochloride) | 119-90-4   | 1.11   | 4.32                                      | 8.71                                      | 33.6                                | 497   | 24 Hr Avg                              | N/A                 |
| N,N-Dimethyl acetamide   | 127-19-5   | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | BACT                |
| Dimethylamine  | 124-40-3   | 1.91   | 7.44                                      | 15  | 57.8                                | 855   | 24 Hr Avg                              | N/A                 |
| 4-Dimethylaminobenzene   | 60-11-7    | 0.495  | 1.92                                      | 3.88                                      | 14.9                                | 221   | 24 Hr Avg                              | N/A                 |
| Dimethylamine (N,N-Dimethylamine)  | 121-69-7   | 1.37   | 5.62                                      | 13.4                                      | 47.1                                | N/A   | Annual                                 | BACT                |
| Dimethyl benzene (Xylene)(mixtures and isomers); Xylol   | 1330-20-7  | 1.33   | 5.17                                      | 10.4                                      | 40.2                                | 595   | 24 Hr Avg                              | N/A                 |
| 3,3'-Dimethylbenzidine (o-Tolidine)  | 119-93-7   | 23.3   | 90.6                                      | 183                                       | 704                                 | 10,421  | 24 Hr Avg                              | N/A                 |
| Dimethyl carbamoyl chloride  | 79-44-7    | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | BACT                |
| Dimethylethoxysilane   | 14857-34-2 | 0.48   | 1.97                                      | 4.7                                       | 16.6                                | N/A   | Annual                                 | BACT                |
| N,N-Dimethylformamide  | 68-12-2    | 0.114  | 0.445                                     | 0.897                                     | 3.46                                | 51.1  | 24 Hr Avg                              | N/A                 |
| 1,1-Dimethylhydrazine  | 57-14-7    | 1.61   | 6.24                                      | 12.6                                      | 48.5                                | 717   | 24 Hr Avg                              | N/A                 |
| Dimethylphthalate  | 131-11-3   | 5,331  | 21,900                                    | 52,143                                    | 183,776                             | 30  | Annual                                 | N/A                 |
| Dimethyl sulfate   | 77-78-1    | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | BACT                |
| Dimethylvinyl chloride (1-Chloro-2-methylpropene)  | 513-37-1   | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| Dinitolmide  | 148-01-6   | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | BACT                |
| Dinitrobenzene (mixtures and isomers)  | 528-29-0   | 0.0277   | 0.108                                     | 0.217                                     | 0.836                               | 12.4  | 24 Hr Avg                              | N/A                 |
| 1,6-Dinitropyrene  | 42397-64-8 | 137  | 562                                       | 1,337                                     | 4,712                               | N/A   | Annual                                 | BACT                |
| 1,8-Dinitropyrene  | 42397-65-9 | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| Dinitrotoluene (mixtures and isomers)  | 25321-14-6 | 0.0554   | 0.215                                     | 0.434                                     | 1.67                                | 24.8  | 24 Hr Avg                              | N/A                 |
| 1,4-Dioxane (1,4-Diethylene oxide)   | 123-91-1   | 0.162  | 0.664                                     | 1.58                                      | 5.57                                | N/A   | Annual                                 | BACT                |
| Dioxins and Furans, chlorinated (2,3,7,8-Tetrachlorodibenzo-p-dioxin), as equivalents                        | 1746-01-6  | 1.62   | 6.64                                      | 15.8                                      | 55.7                                | N/A   | Annual                                 | BACT                |
| Direct black 38 (Benzidine-based dye)  | 1937-37-7  | 0.0107   | 0.0417                                    | 0.0842                                    | 0.324                               | 4.8   | 24 Hr Avg                              | N/A                 |
| Direct blue 6 (Benzidine-based dye)  | 2602-46-2  | 231  | 948                                       | 2,257                                     | 7,956                               | N/A   | Annual                                 | BACT                |
| Disperse Blue 1  | 2475-45-8  | 3.87   | 15  | 30.3                                      | 117                                 | 1,730   | 24 Hr Avg                              | N/A                 |
|  |            | 0.0001   | 0.0001                                    | 0.0001                                    | 0.0001                              | N/A   | Annual                                 | LAER                |
|  |            | 0.846  | 3.48                                      | 8.28                                      | 29.2                                | N/A   | Annual                                 | BACT                |
|  |            | 0.846  | 3.48                                      | 8.28                                      | 29.2                                | N/A   | Annual                                 | BACT                |
|  |            | 1.367  | 5,615                                     | 13,370                                    | 47,122                              | N/A   | Annual                                 | BACT                |

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| (a)  | (b)        | (c)  | (d)                                       | (e)                                       | (f)                                 | (g)   | (h)                                    | (i)                 |
| Disulfiram   | 97-77-8    | 0.107  | 0.417                                     | 0.842                                     | 3.24                                | 48  | 24 Hr Avg                              | N/A                 |
| Divinyl benzene (mixtures and isomers)   | 1321-74-0  | 2.86   | 11.1                                      | 22.4                                      | 86.3                                | 1,278   | 24 Hr Avg                              | N/A                 |
| EGBE (2-Butoxyethanol; Ethylene glycol monobutyl ether; butyl cellosolve)                  | 111-76-2   | 5.19   | 20.2                                      | 40.7                                      | 157                                 | 2,320   | 24 Hr Avg                              | N/A                 |
| EGEE (2-Ethoxyethanol; Ethylene glycol monoethyl ether; cellosolve)                        | 110-80-5   | 0.99   | 3.85                                      | 7.76                                      | 29.9                                | 442   | 24 Hr Avg                              | N/A                 |
| EGEEA (2-Ethoxyethyl acetate; Ethylene glycol monoethyl ether acetate; Cellosolve acetate) | 111-15-9   | 1.45   | 5.64                                      | 11.4                                      | 43.8                                | 649   | 24 Hr Avg                              | N/A                 |
| EGME (2-Methoxyethanol; MethylCellosolve)  | 109-86-4   | 0.836  | 3.25                                      | 6.55                                      | 25.2                                | 373   | 24 Hr Avg                              | N/A                 |
| EGMEA (2-Methoxyethyl acetate; MethylCellosolve acetate)                                   | 110-49-6   | 1.3  | 5.04                                      | 10.2                                      | 39.2                                | 580   | 24 Hr Avg                              | N/A                 |
| Enflurane  | 13838-16-9 | 30.4   | 118                                       | 238                                       | 918                                 | 13,583  | 24 Hr Avg                              | N/A                 |
|  |            | 178  | 730                                       | 1,738                                     | 6,126                               | 1   | Annual                                 | N/A                 |
| Epichlorohydrin (1-Chloro-2,3-epoxypropane)  | 106-89-8   | 0.102  | 0.395                                     | 0.797                                     | 3.07                                | 45.4  | 24 Hr Avg                              | N/A                 |
|  |            | 1,481  | 6,083                                     | 14,484                                    | 51,049                              | N/A   | Annual                                 | BACT                |
| 1,2-Epoxybutane (1,2-Butylene oxide)   | 106-88-7   | 3,554  | 14,600                                    | 34,762                                    | 122,517                             | 20  | Annual                                 | N/A                 |
| Erionite (Zeolites)  | 66733-21-9 | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | LAER                |
| Ethanamine (Ethylamine)  | 75-04-7    | 0.495  | 1.92                                      | 3.88                                      | 14.9                                | 221   | 24 Hr Avg                              | N/A                 |
| Ethanolamine   | 141-43-5   | 0.403  | 1.56                                      | 3.16                                      | 12.2                                | 180   | 24 Hr Avg                              | N/A                 |
| 2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; Cellosolve)                        | 110-80-5   | 35,538   | 146,000                                   | 347,619                                   | 1,225,175                           | 200   | Annual                                 | N/A                 |
|  |            | 0.99   | 3.85                                      | 7.76                                      | 29.9                                | 442   | 24 Hr Avg                              | N/A                 |
| 2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; cellosolve acetate) | 111-15-9   | 1.45   | 5.64                                      | 11.4                                      | 43.8                                | 649   | 24 Hr Avg                              | N/A                 |
| Ethyl acrylate   | 140-88-5   | 1.1  | 4.27                                      | 8.62                                      | 33.2                                | 491   | 24 Hr Avg                              | N/A                 |
| Ethylamine (Ethanamine)  | 75-04-7    | 0.495  | 1.92                                      | 3.88                                      | 14.9                                | 221   | 24 Hr Avg                              | N/A                 |
| Ethyl amyl ketone  | 541-85-5   | 7.04   | 27.4                                      | 55.2                                      | 213                                 | 3,146   | 24 Hr Avg                              | N/A                 |
|  |            | 23.3   | 90.6                                      | 183                                       | 704                                 | 10,421  | 24 Hr Avg                              | N/A                 |
| Ethyl benzene  | 100-41-4   | 177,688  | 730,000                                   | 1,738,095                                 | 6,125,874                           | 1,000   | Annual                                 | N/A                 |
|  |            | 1.2  | 4.65                                      | 9.38                                      | 36.1                                | 535   | 24 Hr Avg                              | N/A                 |
| Ethyl bromide  | 74-96-4    | 1.12   | 4.36                                      | 8.8                                       | 33.9                                | 501   | 24 Hr Avg                              | N/A                 |
| Ethyl tert-butyl ether (ETBE)  | 637-92-3   | 12.5   | 48.7                                      | 98.3                                      | 379                                 | 5,604   | 24 Hr Avg                              | N/A                 |
| Ethyl butyl ketone   | 106-35-4   | 6.13   | 25.2                                      | 59.9                                      | 211                                 | N/A   | Annual                                 | BACT                |
| Ethyl carbamate (Urethane)   | 51-79-6    | 1,776,876  | 7,300,000                                 | 17,380,952                                | 61,258,741                          | 10,000  | Annual                                 | N/A                 |
|  |            | 14.2   | 55.1                                      | 111                                       | 428                                 | 6,333   | 24 Hr Avg                              | N/A                 |
| Ethyl chloride (Chloroethane)  | 75-00-3    | 0.055  | 0.214                                     | 0.431                                     | 1.66                                | 24.6  | 24 Hr Avg                              | N/A                 |
| Ethyl cyanoacrylate  | 7085-85-0  | 0.246  | 0.783                                     | 1.51                                      | 4.04                                | 329   | 1 Hr                                   | N/A                 |
| Ethylene chlorohydrin  | 107-07-3   | 1.32   | 5.13                                      | 10.3                                      | 39.9                                | 590   | 24 Hr Avg                              | N/A                 |
| Ethylenediamine  | 107-15-3   | 8.08   | 33.2                                      | 79  | 278                                 | N/A   | Annual                                 | BACT                |
| Ethylene dibromide (EDB; 1,2-Dibromoethane)  | 106-93-4   | 2.17   | 8.45                                      | 17  | 65.6                                | 971   | 24 Hr Avg                              | N/A                 |
| Ethylene dichloride (EDC; 1,2-Dichloroethane)  | 107-06-2   | 68.3   | 281                                       | 668                                       | 2,356                               | N/A   | Annual                                 | BACT                |
| Ethylene glycol monobutyl ether (2-Butoxyethanol; EGBE; butyl cellosolve)                  | 111-76-2   | 2,309,939  | 9,490,000                                 | 22,595,238                                | 79,636,364                          | 13,000  | Annual                                 | N/A                 |
| Ethylene glycol monoethyl ether (2-Ethoxyethanol; EGEE; cellosolve)                        | 110-80-5   | 35,538   | 146,000                                   | 347,619                                   | 1,225,175                           | 200   | 24 Hr Avg                              | N/A                 |
|  |            | 0.99   | 3.85                                      | 7.76                                      | 29.9                                | 442   | 24 Hr Avg                              | N/A                 |

| Hazardous Air Contaminant   | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |          |          |           | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|---|------------|--|----------|----------|-----------|---|--|---------------------|
|   |            | (a)  | (b)      | (c)      | (d)       |   |  |                     |
| Ethylene glycol monoethyl ether acetate (2-Ethoxyethyl acetate); EGEEA; Cellosolve Acetate) | 111-15-9   | 1.45   | 5.64     | 11.4     | 43.8      | 649   | 24 Hr Avg                              | N/A                 |
| Ethylene glycol vapor and aerosol   | 107-21-1   | 7.47   | 23.8     | 45.7     | 123       | 10,000  | 1 Hr                                   | N/A                 |
| Ethylene oxide  | 75-21-8    | 20.2   | 83       | 198      | 696       | N/A   | Annual                                 | LAER                |
| Ethylene thiourea   | 96-45-7    | 137  | 562      | 1,337    | 4,712     | N/A   | Annual                                 | BACT                |
| Ethylamine (Aziridine)  | 151-56-4   | 0.0473   | 0.184    | 0.371    | 1.43      | 21.1  | 24 Hr Avg                              | N/A                 |
| Ethylidene dichloride (1,1-Dichloroethane)  | 75-34-3    | 21.7   | 84.5     | 170      | 656       | 9,715   | 24 Hr Avg                              | N/A                 |
| Ethylidene norbornene   | 16219-75-3 | 1.84   | 5.85     | 11.2     | 30.2      | 2,458   | 1 Hr                                   | N/A                 |
| N-Ethylmorpholine   | 100-74-3   | 1.27   | 4.92     | 9.92     | 38.2      | 565   | 24 Hr Avg                              | N/A                 |
| Ethyl silicate  | 78-10-4    | 4.58   | 17.8     | 35.9     | 138       | 2,045   | 24 Hr Avg                              | N/A                 |
| Fenamipros  | 22224-92-6 | 0.00537  | 0.0209   | 0.0421   | 0.162     | 2.4   | 24 Hr Avg                              | N/A                 |
| Flour Dust (inhalable fraction)   |            | 0.0269   | 0.104    | 0.211    | 0.811     | 12  | 24 Hr Avg                              | N/A                 |
| Fluorides, (inorganics), as F   |            | 0.134  | 0.522    | 1.05     | 4.05      | 60  | 24 Hr Avg                              | N/A                 |
| Fluorine  | 7782-41-4  | 0.0835   | 0.324    | 0.654    | 2.52      | 37.3  | 24 Hr Avg                              | N/A                 |
| Formaldehyde  | 50-00-0    | 137  | 562      | 1,337    | 4,712     | N/A   | Annual                                 | BACT                |
| Formamide   | 75-12-7    | 0.99   | 3.84     | 7.76     | 29.9      | 442   | 24 Hr Avg                              | N/A                 |
| Formic acid   | 64-18-6    | 0.506  | 1.96     | 3.96     | 15.3      | 226   | 24 Hr Avg                              | N/A                 |
| Furan   | 110-00-9   | 2.43   | 10       | 23.8     | 83.9      | N/A   | Annual                                 | BACT                |
| Furfural  | 98-01-1    | 0.422  | 1.64     | 3.31     | 12.7      | 189   | 24 Hr Avg                              | N/A                 |
| Furfuryl alcohol  | 98-00-0    | 2.16   | 8.37     | 16.9     | 65.1      | 963   | 24 Hr Avg                              | N/A                 |
| Germanium tetrahydride  | 7782-65-2  | 0.0337   | 0.131    | 0.264    | 1.02      | 15  | 24 Hr Avg                              | N/A                 |
| Glutaraldehyde  | 111-30-8   | 0.0153   | 0.0487   | 0.0936   | 0.251     | 20.5  | 1 Hr                                   | N/A                 |
| Glycidol  | 556-52-5   | 0.325  | 1.26     | 2.55     | 9.83      | 145   | 24 Hr Avg                              | N/A                 |
| Graphite (all forms except graphite fiber)  | 7782-42-5  | 2.43   | 10       | 23.8     | 83.9      | N/A   | Annual                                 | BACT                |
| Halothane   | 151-67-7   | 0.107  | 0.417    | 0.842    | 3.24      | 48  | 24 Hr Avg                              | N/A                 |
| Hexachlorobenzene (HCB)   | 118-74-1   | 21.7   | 84.2     | 170      | 655       | 9,688   | 24 Hr Avg                              | N/A                 |
| Hexachloroethane  | 67-72-1    | 0.000107   | 0.000417 | 0.000842 | 0.00324   | 0.048   | 24 Hr Avg                              | N/A                 |
| Hexachloronaphthalene   | 1335-87-1  | 3.86   | 15.9     | 37.8     | 133       | N/A   | Annual                                 | BACT                |
| Hexamethyl phosphoramide  | 680-31-9   | 0.52   | 2.02     | 4.08     | 15.7      | 232   | 24 Hr Avg                              | N/A                 |
| Hexamethylene-1,6-diisocyanate (HDI)  | 822-06-0   | 444  | 1,825    | 4,345    | 15,315    | N/A   | Annual                                 | BACT                |
| n-Hexane  | 110-54-3   | 0.0107   | 0.0417   | 0.0842   | 0.324     | 4.8   | 24 Hr Avg                              | N/A                 |
| 1,6-Hexanediamine   | 124-09-4   | 2.43   | 10       | 23.8     | 83.9      | N/A   | Annual                                 | BACT                |
| 1-Hexene  | 592-41-6   | 1.78   | 7.3      | 17.4     | 61.3      | 0.01  | Annual                                 | N/A                 |
| Hexone (Methyl isobutyl ketone; MIBK)   | 108-10-1   | 0.00185  | 0.00718  | 0.0145   | 0.0558    | 0.826   | 24 Hr Avg                              | N/A                 |
| sec-Hexyl acetate   | 108-84-9   | 35,538   | 146,000  | 347,619  | 1,225,175 | 200   | Annual                                 | N/A                 |
| Hexylene glycol   | 107-41-5   | 9.47   | 36.8     | 74.2     | 286       | 4,230   | 24 Hr Avg                              | N/A                 |
| Hydrazine and hydrazine sulfate   | 302-01-2   | 0.128  | 0.496    | 1        | 3.85      | 57  | 24 Hr Avg                              | N/A                 |
|   |            | 5.55   | 21.6     | 43.5     | 167       | 2,478   | 24 Hr Avg                              | N/A                 |
|   |            | 11   | 42.7     | 86.2     | 332       | 4,916   | 24 Hr Avg                              | N/A                 |
|   |            | 15.8   | 61.5     | 124      | 478       | 7,078   | 24 Hr Avg                              | N/A                 |
|   |            | 9.02   | 28.7     | 55.2     | 148       | 12,083  | 1 Hr                                   | N/A                 |
|   |            | 0.363  | 1.49     | 3.55     | 12.5      | N/A   | Annual                                 | BACT                |
|   |            | 0.000704   | 0.00274  | 0.00552  | 0.0213    | 0.315   | 24 Hr Avg                              | N/A                 |

| Hazardous Air Contaminant                                  | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |         |        |         | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|--|------------|--|---------|--------|---------|---|--|---------------------|
|  |            | (a)  | (b)     | (c)    | (d)     |   |  |                     |
| Hydrochloric acid (Hydrogen chloride; Muriatic acid)       | 7647-01-0  | 0.557  | 1.77    | 3.41   | 9.15    | 746   | 1 Hr                                   | N/A                 |
| Hydrogenated terphenyls                                    | 61788-32-7 | 3.534  | 14,600  | 34,762 | 122,517 | 20  | Annual                                 | N/A                 |
| Hydrogen bromide   | 10035-10-6 | 0.265  | 1.03    | 2.08   | 7.99    | 118   | 24 Hr Avg                              | N/A                 |
| Hydrogen chloride (Hydrochloric acid; Muriatic acid)       | 7647-01-0  | 0.741  | 2.36    | 4.54   | 12.2    | 993   | 1 Hr                                   | N/A                 |
| Hydrogen cyanide   | 74-90-8    | 3.554  | 14,600  | 34,762 | 122,517 | 20  | Annual                                 | N/A                 |
| Hydrogen fluoride (Hydrofluoric acid)                      | 7664-39-3  | 0.557  | 1.77    | 3.41   | 9.15    | 746   | 1 Hr                                   | N/A                 |
| Hydrogen peroxide  | 7722-84-1  | 0.388  | 1.24    | 2.38   | 6.38    | 520   | 1 Hr                                   | N/A                 |
| Hydrogen sulfide   | 7783-06-4  | 0.183  | 0.584   | 1.12   | 3.01    | 246   | 1 Hr                                   | N/A                 |
| Hydroquinone   | 123-31-9   | 0.0747   | 0.29    | 0.586  | 2.26    | 33.4  | 24 Hr Avg                              | N/A                 |
| 2-Hydroxypropyl acrylate                                   | 999-61-1   | 0.749  | 2.91    | 5.87   | 22.6    | 335   | 24 Hr Avg                              | N/A                 |
| Indeno(1,2,3-cd)pyrene                                     | 193-39-5   | 0.107  | 0.417   | 0.842  | 3.24    | 48  | 24 Hr Avg                              | N/A                 |
| Indium   | 7440-74-6  | 0.143  | 0.555   | 1.12   | 4.32    | 63.9  | 24 Hr Avg                              | N/A                 |
| Iodine   | 7553-56-2  | 16.2   | 66.4    | 158    | 537     | N/A   | Annual                                 | BACT                |
| Iodomethane (Methyl iodide)                                | 74-88-4    | 0.00537  | 0.0209  | 0.0421 | 0.162   | 2.4   | 24 Hr Avg                              | N/A                 |
| Iron oxide dust and fume, as Fe                            | 1309-37-1  | 0.0775   | 0.247   | 0.475  | 1.27    | 104   | 1 Hr                                   | N/A                 |
| Iron salts, soluble, as Fe                                 | 74-88-4    | 0.624  | 2.42    | 4.89   | 18.8    | 279   | 24 Hr Avg                              | N/A                 |
| Isobutyl alcohol   | 78-83-1    | 0.269  | 1.04    | 2.11   | 8.11    | 120   | 24 Hr Avg                              | N/A                 |
| Isocetyl alcohol   | 26952-21-6 | 0.0537   | 0.209   | 0.421  | 1.62    | 24  | 24 Hr Avg                              | N/A                 |
| Isophorone   | 78-59-1    | 8.14   | 31.6    | 63.8   | 246     | 3,638   | 24 Hr Avg                              | N/A                 |
| Isophorone diisocyanate                                    | 4098-71-9  | 14.3   | 55.6    | 112    | 432     | 6,392   | 24 Hr Avg                              | N/A                 |
| Isoprene   | 78-79-5    | 2.11   | 6.72    | 12.9   | 34.7    | 2826  | 1 Hr                                   | N/A                 |
| 2-Isopropoxyethanol  | 109-59-1   | 0.00244  | 0.00949 | 0.0191 | 0.0737  | 1.09  | 24 Hr Avg                              | N/A                 |
| Isopropylamine   | 75-31-0    | 2.43   | 10      | 23.8   | 83.9    | N/A   | Annual                                 | BACT                |
| Isopropyl benzene (Cumene)                                 | 98-82-8    | 5.72   | 22.2    | 44.8   | 173     | 2,556   | 24 Hr Avg                              | N/A                 |
| Isopropyl glycidyl ether                                   | 4016-14-2  | 0.649  | 2.52    | 5.09   | 19.6    | 290   | 24 Hr Avg                              | N/A                 |
| N-Isopropylaniline   | 768-52-5   | 13.2   | 51.3    | 103    | 399     | 5,899   | 24 Hr Avg                              | N/A                 |
| Kaolin   | 1332-58-7  | 12.8   | 49.6    | 100    | 385     | 5,702   | 24 Hr Avg                              | N/A                 |
| Ketone (Chlorocone)  | 143-50-0   | 0.594  | 2.31    | 4.66   | 17.9    | 265   | 24 Hr Avg                              | N/A                 |
| Ketene   | 463-51-4   | 0.107  | 0.417   | 0.842  | 3.24    | 48  | 24 Hr Avg                              | N/A                 |
| Lead Acetate, as Pb  | 301-04-2   | 0.386  | 1.59    | 3.78   | 13.3    | N/A   | Annual                                 | BACT                |
| Lead Phosphate, as Pb                                      | 7446-27-7  | 0.0462   | 0.179   | 0.362  | 1.39    | 20.6  | 24 Hr Avg                              | N/A                 |
| Maleic anhydride   | 108-31-6   | 22.2   | 91.3    | 217    | 766     | N/A   | Annual                                 | BACT                |
| Manganese, elemental and inorganic compounds, as Mn        | 7439-96-5  | 148  | 608     | 1,448  | 5,105   | N/A   | Annual                                 | BACT                |
| Mercury, as Hg, alkyl compounds                            | 7439-97-6  | 0.0215   | 0.0837  | 0.169  | 0.65    | 9.63  | 24 Hr Avg                              | N/A                 |
| Mercury, as Hg, aryl compounds                             | 7439-97-6  | 0.0107   | 0.0417  | 0.0842 | 0.324   | 4.8   | 24 Hr Avg                              | N/A                 |
| Mercury, as Hg, inorganic forms including metallic mercury | 7439-97-6  | 0.00537  | 0.0209  | 0.0421 | 0.162   | 0.24  | 24 Hr Avg                              | N/A                 |
| Mesityl oxide  | 141-79-7   | 0.00537  | 0.0209  | 0.0421 | 0.162   | 2.4   | 24 Hr Avg                              | N/A                 |
| Methacrylic acid   | 79-41-4    | 53.3   | 219     | 521    | 1,838   | 0.3   | Annual                                 | N/A                 |
| 2-Methoxyethanol (Methyl Cellosolve; EGME)                 | 109-86-4   | 0.00134  | 0.00522 | 0.0105 | 0.0405  | 0.6   | 24 Hr Avg                              | N/A                 |
| 2-Methoxyethyl acetate (Methyl Cellosolve acetate; EGMEA)  | 110-49-6   | 3.23   | 12.6    | 25.4   | 97.6    | 1,445   | 24 Hr Avg                              | N/A                 |
|  |            | 3.78   | 14.7    | 29.7   | 114     | 1,690   | 24 Hr Avg                              | N/A                 |
|  |            | 0.836  | 3.25    | 6.55   | 25.2    | 373   | 24 Hr Avg                              | N/A                 |
|  |            | 1.3  | 5.04    | 10.2   | 39.2    | 580   | 24 Hr Avg                              | N/A                 |



| Hazardous Air Contaminant                               | CAS Number | Thresholds for Emission Points' (expressed as lbs/hr or lbs/yr) |           |           |            | Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |     |     |     |
|---|------------|---|-----------|-----------|------------|--|--|---------------------|-----|-----|-----|
|   |            | (a)   |           |           |            |  |  |                     | (e) | (h) | (i) |
|   |            | (c)   | (d)       | (e)       | (f)        |  |  |                     |     |     |     |
| Morpholine  | 110-91-8   | 3.83  | 14.9      | 30        | 116        | 1,710  | 24 Hr Avg                              | N/A                 |     |     |     |
| MTBE (Methyl tert-butyl ether)                          | 1634-04-4  | 533,063   | 2,190,000 | 5,214,286 | 18,377,622 | 3,000  | Annual                                 | N/A                 |     |     |     |
| Muriatic acid (Hydrogen chloride, Hydrochloric acid)    | 7647-01-0  | 3,554   | 14,600    | 34,762    | 122,517    | 20   | Annual                                 | N/A                 |     |     |     |
| Mustard gas   | 505-60-2   | 0.557   | 1.77      | 3.41      | 9.15       | 746  | 1 Hr                                   | N/A                 |     |     |     |
| Naphthalene   | 91-20-3    | 2.43  | 10        | 23.8      | 83.9       | N/A  | Annual                                 | LAER                |     |     |     |
| 2-Naphthylamine   | 91-59-8    | 2.82  | 10.9      | 22.1      | 85         | 1,258  | 24 Hr Avg                              | N/A                 |     |     |     |
| Nickel and compounds, as Ni                             | 7440-02-0  | 2.43  | 10        | 23.8      | 83.9       | N/A  | Annual                                 | LAER                |     |     |     |
| Nickel carbonyl, as Ni                                  | 13463-39-3 | 6.83  | 28.1      | 66.8      | 236        | N/A  | Annual                                 | BACT                |     |     |     |
| Nickel subsulfide, as Ni                                | 12035-72-2 | 6.83  | 28.1      | 66.8      | 236        | N/A  | Annual                                 | BACT                |     |     |     |
| Nitric acid   | 7697-37-2  | 0.0188  | 0.0729    | 0.147     | 0.566      | 8.38   | 24 Hr Avg                              | N/A                 |     |     |     |
| Nitroacetic acid  | 139-13-9   | 3.7   | 15.2      | 36.2      | 128        | N/A  | Annual                                 | LAER                |     |     |     |
| p-Nitroaniline  | 100-01-6   | 0.277   | 1.08      | 2.17      | 8.36       | 124  | 24 Hr Avg                              | N/A                 |     |     |     |
| Nitrobenzene  | 98-95-3    | 1,185   | 4,867     | 11,587    | 40,839     | N/A  | Annual                                 | BACT                |     |     |     |
| p-Nitrochlorobenzene                                    | 100-00-5   | 0.161   | 0.626     | 1.26      | 4.86       | 72   | 24 Hr Avg                              | N/A                 |     |     |     |
| 6-Nitrochrysene   | 7496-02-8  | 0.27  | 1.05      | 2.12      | 8.17       | 121  | 24 Hr Avg                              | N/A                 |     |     |     |
| Nitroethane   | 79-24-3    | 0.0346  | 0.134     | 0.271     | 1.05       | 15.5   | 24 Hr Avg                              | N/A                 |     |     |     |
| Nitrofen  | 1836-75-5  | 0.162   | 0.664     | 1.58      | 5.57       | N/A  | Annual                                 | BACT                |     |     |     |
| Nitrogen mustard (2,2-Dichloro-N-methyldiethylamine)    | 51-75-2    | 16.5  | 64.1      | 129       | 498        | 7,369  | 24 Hr Avg                              | N/A                 |     |     |     |
| Nitromethane  | 75-52-5    | 77.3  | 317       | 756       | 2,663      | N/A  | Annual                                 | BACT                |     |     |     |
| 1-Nitropropane  | 108-03-2   | 2.43  | 10        | 23.8      | 83.9       | N/A  | Annual                                 | BACT                |     |     |     |
| 2-Nitropropane  | 79-46-9    | 2.68  | 10.4      | 21        | 81         | 1,198  | 24 Hr Avg                              | N/A                 |     |     |     |
| 1-Nitropyrene   | 552-43-0   | 4.89  | 19        | 38.4      | 148        | 2,186  | 24 Hr Avg                              | N/A                 |     |     |     |
| 4-Nitropyrene   | 57835-92-4 | 2.43  | 10        | 23.8      | 83.9       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrosodi-n-butylamine                                | 924-16-3   | 1.96  | 7.6       | 15.3      | 59.1       | 875  | 24 Hr Avg                              | N/A                 |     |     |     |
| N-Nitrosodimethanamine                                  | 1116-54-7  | 16.2  | 66.4      | 158       | 557        | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrosodiethylamine                                   | 55-18-5    | 1.11  | 4.56      | 10.9      | 38.3       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrosodipropylamine                                  | 62-75-9    | 2.22  | 9.13      | 21.7      | 76.6       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitroso-N-ethylurea                                   | 759-73-9   | 0.0413  | 0.17      | 0.404     | 1.42       | N/A  | Annual                                 | BACT                |     |     |     |
| 4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK) | 64091-91-4 | 0.127   | 0.521     | 1.24      | 4.38       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitroso-N-methylurea                                  | 684-93-5   | 0.888   | 3.65      | 8.69      | 30.6       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrosomethylvinylamine                               | 4549-40-0  | 0.231   | 0.948     | 2.26      | 7.96       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrosomorpholine                                     | 59-89-2    | 2.43  | 10        | 23.8      | 83.9       | N/A  | Annual                                 | BACT                |     |     |     |
| N'-Nitrosomocifone                                      | 16543-55-8 | 0.935   | 3.84      | 9.15      | 32.2       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrosopiperidine                                     | 100-75-4   | 2.43  | 10        | 23.8      | 83.9       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrosopyrrolidine                                    | 930-55-2   | 0.658   | 2.7       | 6.44      | 22.7       | N/A  | Annual                                 | BACT                |     |     |     |
| N-Nitrososarcosine                                      | 13256-22-9 | 2.91  | 12        | 28.5      | 100        | N/A  | Annual                                 | BACT                |     |     |     |
| Nitroethane (mixtures and isomers)                      | 88-72-2    | 2.43  | 10        | 23.8      | 83.9       | N/A  | Annual                                 | BACT                |     |     |     |
| Nitrous oxide   | 10024-97-2 | 0.603   | 2.34      | 4.72      | 18.2       | 269  | 24 Hr Avg                              | N/A                 |     |     |     |
|   |            | 4.84  | 18.8      | 37.9      | 146        | 2,160  | 24 Hr Avg                              | N/A                 |     |     |     |



| Hazardous Air Contaminant                                   | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |           |           |            |       |           | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|---|------------|--|-----------|-----------|------------|-------|-----------|---|--|---------------------|
|   |            | (a)  |           |           |            |       |           |   |  |                     |
|   |            | (b)  | (c)       | (d)       | (e)        | (f)   | (g)       |   |  |                     |
| Octachloronaphthalene                                       | 2234-13-1  | 0.00537  | 0.0209    | 0.0421    | 0.162      | 2.4   | 24 Hr Avg | N/A   |  |                     |
| Oxalic acid   | 144-62-7   | 0.0537   | 0.209     | 0.421     | 1.62       | 24    | 24 Hr Avg | N/A   |  |                     |
| P,p'-Oxybis(benzenesulfonyl hydrazide)                      | 80-51-3    | 0.00537  | 0.0209    | 0.0421    | 0.162      | 2.4   | 24 Hr Avg | N/A   |  |                     |
| 4,4'-Oxydianiline (2,4-Diaminophenyl ether)                 | 101-80-4   | 2.43   | 10        | 23.8      | 83.9       | N/A   | Annual    | BACT  |  |                     |
| Pentachloronaphthalene                                      | 1321-64-8  | 0.0269   | 0.104     | 0.211     | 0.811      | 12    | 24 Hr Avg | N/A   |  |                     |
| Pentachloronitrobenzene (Quintobenzene; PCNB)               | 82-68-8    | 0.0269   | 0.104     | 0.211     | 0.811      | 12    | 24 Hr Avg | N/A   |  |                     |
| Pentachlorophenol (PCP)                                     | 87-86-5    | 0.0269   | 0.104     | 0.211     | 0.811      | 12    | 24 Hr Avg | N/A   |  |                     |
| Pentyl Acetate (mixtures and isomers)                       | 628-63-7   | 14.3   | 55.6      | 112       | 432        | 6,390 | 24 Hr Avg | N/A   |  |                     |
| Perchloroethylene (Tetrachloroethylene)                     | 127-18-4   | 301  | 1,237     | 2,946     | 10,383     | N/A   | Annual    | BACT  |  |                     |
| Perchloromethyl mercaptan                                   | 594-42-3   | 9.11   | 35.4      | 71.4      | 275        | 4,069 | 24 Hr Avg | N/A   |  |                     |
| Perfluoroisobutylene  | 382-21-8   | 0.0408   | 0.159     | 0.32      | 1.23       | 18.2  | 24 Hr Avg | N/A   |  |                     |
| Persulfates (Ammonium, Potassium, Sodium)                   | 7727-54-0  | 0.00611  | 0.0195    | 0.0374    | 0.1        | 8.18  | 1 Hr      | N/A   |  |                     |
| PGME (Propylene glycol monomethyl ether)                    | 107-98-2   | 0.00537  | 0.0209    | 0.0421    | 0.162      | 2.4   | 24 Hr Avg | N/A   |  |                     |
| Phenol  | 108-95-2   | 355,375  | 1,460,000 | 3,476,190 | 12,251,748 | 2,000 | Annual    | N/A   |  |                     |
| Phenolphthalein   | 108-95-2   | 1.03   | 4.02      | 8.1       | 31.2       | 462   | 24 Hr Avg | N/A   |  |                     |
| Phenylenediamine (mixtures and isomers)                     | 77-09-8    | 2.43   | 10        | 23.8      | 83.9       | N/A   | Annual    | BACT  |  |                     |
| Phenyl ether vapor  | 106-50-3   | 0.00537  | 0.0209    | 0.0421    | 0.162      | 2.4   | 24 Hr Avg | N/A   |  |                     |
| Phenyl glycidyl ether (PGE)                                 | 101-84-8   | 0.374  | 1.45      | 2.93      | 11.3       | 167   | 24 Hr Avg | N/A   |  |                     |
| Phenylhydrazine   | 122-60-1   | 0.033  | 0.128     | 0.259     | 0.996      | 14.7  | 24 Hr Avg | N/A   |  |                     |
| Phenyl mercaptan  | 100-63-0   | 0.0238   | 0.0923    | 0.186     | 0.717      | 10.6  | 24 Hr Avg | N/A   |  |                     |
| Phosgene  | 108-98-5   | 0.121  | 0.47      | 0.949     | 3.65       | 54.1  | 24 Hr Avg | N/A   |  |                     |
| Phosphine   | 75-44-5    | 0.0217   | 0.0844    | 0.17      | 0.656      | 9.71  | 24 Hr Avg | N/A   |  |                     |
| Phosphoric acid   | 7803-51-2  | 0.0224   | 0.0871    | 0.176     | 0.677      | 10    | 24 Hr Avg | N/A   |  |                     |
| Phosphorus (yellow)   | 7664-38-2  | 0.0537   | 0.209     | 0.421     | 1.62       | 24    | 24 Hr Avg | N/A   |  |                     |
| Phosphorus oxychloride                                      | 7723-14-0  | 1,777  | 7,300     | 17,381    | 61,259     | 10    | Annual    | N/A   |  |                     |
| Phosphorus pentachloride                                    | 10025-87-3 | 0.00544  | 0.0212    | 0.0427    | 0.164      | 2.43  | 24 Hr Avg | N/A   |  |                     |
| Phosphorus pentasulfide                                     | 10026-13-8 | 0.037  | 0.131     | 0.264     | 1.02       | 15.1  | 24 Hr Avg | N/A   |  |                     |
| Phthalic anhydride  | 1314-80-3  | 0.0457   | 0.178     | 0.359     | 1.38       | 20.4  | 24 Hr Avg | N/A   |  |                     |
| Picric acid   | 7719-12-2  | 0.0537   | 0.209     | 0.421     | 1.62       | 24    | 24 Hr Avg | N/A   |  |                     |
| Platinum (metal)  | 85-44-9    | 0.0604   | 0.234     | 0.473     | 1.82       | 27    | 24 Hr Avg | N/A   |  |                     |
| Platinum, soluble salts, as Pt                              | 88-89-1    | 0.325  | 1.26      | 2.55      | 9.82       | 145   | 24 Hr Avg | N/A   |  |                     |
| Polybrominated biphenyls (PBBs; Bromodiphenyls)             | 7440-06-4  | 0.00537  | 0.0209    | 0.0421    | 0.162      | 2.4   | 24 Hr Avg | N/A   |  |                     |
| Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor) | 7440-06-4  | 0.0537   | 0.209     | 0.421     | 1.62       | 24    | 24 Hr Avg | N/A   |  |                     |
| Potassium hydroxide   | 59536-65-1 | 0.000107   | 0.000417  | 0.000842  | 0.00324    | 0.048 | 24 Hr Avg | N/A   |  |                     |
| 1,3-Propane sultone   | 1336-36-3  | 0.207  | 0.849     | 2.02      | 7.12       | N/A   | Annual    | BACT  |  |                     |
| Propargyl alcohol   | 1310-58-3  | 0.0269   | 0.104     | 0.211     | 0.811      | 12    | 24 Hr Avg | N/A   |  |                     |
| beta-Propiolactone  | 1120-71-4  | 0.1  | 0.1       | 0.1       | 0.1        | N/A   | Annual    | BACT  |  |                     |
| Propionic acid  | 107-19-7   | 0.149  | 0.476     | 0.914     | 2.45       | 200   | 1 Hr      | N/A   |  |                     |
|   | 57-57-8    | 2.58   | 10.6      | 25.2      | 88.8       | N/A   | Annual    | BACT  |  |                     |
|   |            | 0.123  | 0.479     | 0.965     | 3.72       | 55    | 24 Hr Avg | N/A   |  |                     |
|   |            | 0.444  | 1.83      | 4.35      | 15.3       | N/A   | Annual    | BACT  |  |                     |
|   |            | 0.0792   | 0.308     | 0.62      | 2.39       | 35.4  | 24 Hr Avg | N/A   |  |                     |
|   | 79-09-4    | 1.63   | 6.32      | 12.8      | 49.1       | 727   | 24 Hr Avg | N/A   |  |                     |

| Hazardous Air Contaminant   | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |   |   |                                     | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|---|------------|--|---|---|-------------------------------------|---|--|---------------------|
|   |            | (c)<br>Emissions from Stacks <25 ft  | (d)<br>Emissions from Stacks 25 to <40 ft | (e)<br>Emissions from Stacks 40 to <75 ft | (f)<br>Emissions from Stacks ≥75 ft |   |  |                     |
| (a)   | (b)        | (c)  | (d)                                       | (e)                                       | (f)                                 | (g)   | (h)                                    | (i)                 |
| Propylene dichloride (1,2-Dichloropropane)  | 78-87-5    | 711  | 2,920                                     | 6,952                                     | 24,503                              | 4   | Annual                                 | N/A                 |
| Propylene glycol monomethyl ether (PGME)  | 107-98-2   | 18.6   | 72.3                                      | 146                                       | 562                                 | 8,318   | 24 Hr Avg                              | N/A                 |
| Propylene oxide   | 75-56-9    | 5,331  | 21,900                                    | 52,143                                    | 183,776                             | 2,000   | Annual                                 | N/A                 |
|   |            | 2.55   | 9.91                                      | 20  | 77                                  | 1,140   | 24 Hr Avg                              | N/A                 |
|   |            | 480  | 1,973                                     | 4,698                                     | 16,556                              | N/A   | Annual                                 | BACT                |
| Propylenimine (2-Methyl aziridine; Propylene imine)                               | 75-55-8    | 0.251  | 0.975                                     | 1.97                                      | 7.57                                | 112   | 24 Hr Avg                              | N/A                 |
|   |            | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | BACT                |
| Pyridine  | 110-86-1   | 0.77   | 2.99                                      | 6.04                                      | 23.2                                | 344   | 24 Hr Avg                              | N/A                 |
| Pyrocatechol (Catechol)   | 120-80-9   | 1.21   | 4.7                                       | 9.48                                      | 36.5                                | 540   | 24 Hr Avg                              | N/A                 |
| Quintobenzene (Pentachloronitrobenzene)   | 82-68-8    | 0.0269   | 0.104                                     | 0.211                                     | 0.811                               | 12  | 24 Hr Avg                              | N/A                 |
| Resorcinol  | 108-46-3   | 2.42   | 9.4                                       | 19  | 73                                  | 1,081   | 24 Hr Avg                              | N/A                 |
| Rhodium (metal) and insoluble compounds, as Rh                                    | 7440-16-6  | 0.0537   | 0.209                                     | 0.421                                     | 1.62                                | 24  | 24 Hr Avg                              | N/A                 |
| Rhodium, soluble compounds, as Rh   | 7440-16-6  | 0.000537   | 0.00209                                   | 0.00421                                   | 0.0162                              | 0.24  | 24 Hr Avg                              | N/A                 |
| Safrrole  | 94-59-7    | 28.2   | 116                                       | 276                                       | 972                                 | N/A   | Annual                                 | BACT                |
| Selenium and compounds, as Se   | 7782-49-2  | 0.0107   | 0.0417                                    | 0.0842                                    | 0.324                               | 4.8   | 24 Hr Avg                              | N/A                 |
| Silicon tetrahydride (Silane)   | 7803-62-5  | 0.353  | 1.37                                      | 2.77                                      | 10.7                                | 158   | 24 Hr Avg                              | N/A                 |
| Sodium Azide, as sodium azide or hydrazoic acid vapor                             | 26628-22-8 | 0.0218   | 0.0696                                    | 0.134                                     | 0.359                               | 29.3  | 1 Hr                                   | N/A                 |
| Sodium bisulfite  | 7631-90-5  | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| Sodium hydroxide  | 1310-73-2  | 0.149  | 0.476                                     | 0.914                                     | 2.45                                | 200   | 1 Hr                                   | N/A                 |
| Sodium metabisulfite  | 7681-57-4  | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| Standard solvent (Mineral spirits)  | 8052-41-3  | 30.8   | 119                                       | 241                                       | 929                                 | 13,742  | 24 Hr Avg                              | N/A                 |
| Strong inorganic acid mists containing sulfuric acid (>35% by weight)             | 7664-93-9  | 2.43   | 10  | 23.8                                      | 83.9                                | N/A   | Annual                                 | BACT                |
| Styrene, monomer  | 100-42-5   | 4.58   | 17.8                                      | 35.9                                      | 138                                 | 2,045   | 24 Hr Avg                              | N/A                 |
|   |            | 177,688  | 730,000                                   | 1,738,095                                 | 6,125,874                           | 1,000   | Annual                                 | N/A                 |
| Sulfallate  | 95-06-7    | 32.9   | 135                                       | 322                                       | 1,134                               | N/A   | Annual                                 | BACT                |
| Sulfometuron methyl   | 74222-97-2 | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| Sulfur monochloride   | 10025-67-9 | 0.412  | 1.31                                      | 2.53                                      | 6.78                                | 552   | 1 Hr                                   | N/A                 |
| Sulfur tetrafluoride  | 7783-60-0  | 0.033  | 0.105                                     | 0.202                                     | 0.542                               | 44.2  | 1 Hr                                   | N/A                 |
| Sulfuric acid   | 7664-93-9  | 0.0537   | 0.209                                     | 0.421                                     | 1.62                                | 24  | 24 Hr Avg                              | N/A                 |
| Subprofos   | 35400-43-2 | 0.0537   | 0.209                                     | 0.421                                     | 1.62                                | 24  | 24 Hr Avg                              | N/A                 |
| Talc, containing no asbestos fibers   | 14807-96-6 | 0.107  | 0.417                                     | 0.842                                     | 3.24                                | 48  | 24 Hr Avg                              | N/A                 |
| Tantalum, metal and oxide dusts, as Ta  | 7440-25-7  | 0.269  | 1.04                                      | 2.11                                      | 8.11                                | 120   | 24 Hr Avg                              | N/A                 |
| TCDD (2,3,7,8-Tetrachlorodibenzo-p-dioxin), as equivalents                        | 1746-01-6  | 0.0001   | 0.0001                                    | 0.0001                                    | 0.0001                              | N/A   | Annual                                 | LAER                |
| Tellurium and compounds, except hydrogen telluride, as Te                         | 13494-80-9 | 0.00537  | 0.0209                                    | 0.0421                                    | 0.162                               | 2.4   | 24 Hr Avg                              | N/A                 |
| Terphenyls  | 26140-60-3 | 0.373  | 1.19                                      | 2.29                                      | 6.13                                | 500   | 1 Hr                                   | N/A                 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents | 1746-01-6  | 0.0001   | 0.0001                                    | 0.0001                                    | 0.0001                              | N/A   | Annual                                 | LAER                |
| 1,1,2,2-Tetrachloroethane   | 79-34-5    | 0.369  | 1.43                                      | 2.89                                      | 11.1                                | 165   | 24 Hr Avg                              | N/A                 |
| Tetrachloroethylene (Perchloroethylene)   | 127-18-4   | 9.11   | 35.4                                      | 71.4                                      | 275                                 | 4,069   | 24 Hr Avg                              | N/A                 |
|   |            | 301  | 1,237                                     | 2,946                                     | 10,383                              | N/A   | Annual                                 | BACT                |
| Tetrachloronaphthalene  | 1335-88-2  | 0.107  | 0.417                                     | 0.842                                     | 3.24                                | 48  | 24 Hr Avg                              | N/A                 |

| Hazardous Air Contaminant   | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |            |             |             | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|---|------------|--|------------|-------------|-------------|---|--|---------------------|
|   |            | (a)  |            |             |             |   |  |                     |
|   |            | (c)  | (d)        | (e)         | (f)         |   |  |                     |
| 1,1,1,2-Tetrafluoroethane   | 811-97-2   | 14,215,010   | 58,400,000 | 139,047,619 | 490,069,930 | 80,000  | Annual                                 | N/A                 |
| Tetrafluoroethylene   | 116-14-3   | 0.44   | 1.71       | 3.45        | 13.3        | 197   | 24 Hr Avg                              | N/A                 |
| Tetrahydrofuran   | 109-99-9   | 2.43   | 10         | 23.8        | 83.9        | N/A   | Annual                                 | BACT                |
| Tetramethane  | 509-14-8   | 31.7   | 123        | 248         | 956         | 14,155  | 24 Hr Avg                              | N/A                 |
| Thallium, elemental and soluble compounds, as Tl                      | 7440-28-0  | 0.00215  | 0.00837    | 0.0169      | 0.065       | 0.962   | 24 Hr Avg                              | N/A                 |
| Thioacetamide   | 62-55-5    | 2.43   | 10         | 23.8        | 83.9        | N/A   | Annual                                 | BACT                |
| Thionyl chloride  | 7719-09-7  | 0.00537  | 0.0209     | 0.0421      | 0.162       | 2.4   | 24 Hr Avg                              | N/A                 |
| Thiourea  | 7719-09-7  | 1.05   | 4.29       | 10.2        | 36          | N/A   | Annual                                 | BACT                |
| Tin organic compounds, as Sn  | 62-56-6    | 0.363  | 1.16       | 2.23        | 5.97        | 487   | 1 Hr                                   | N/A                 |
| Tin, metal, oxides and inorganic compounds, except tin hydride, as Sn | 7440-31-5  | 84.6   | 348        | 828         | 2,917       | N/A   | Annual                                 | BACT                |
| o-Tolidine (3,3'-Dimethylbenzidine)                                   | 7440-31-5  | 0.00537  | 0.0209     | 0.0421      | 0.162       | 2.4   | 24 Hr Avg                              | N/A                 |
| Toluene (Toluol)  | 119-93-7   | 0.107  | 0.417      | 0.842       | 3.24        | 48  | 24 Hr Avg                              | N/A                 |
| 2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)            | 108-88-3   | 2.43   | 10         | 23.8        | 83.9        | N/A   | Annual                                 | BACT                |
| Toluene-2,4-diamine (2,4-Diaminotoluene) m- and p-Toluidine           | 108-44-1   | 71,075   | 292,000    | 695,238     | 2,450,350   | 400   | Annual                                 | N/A                 |
| o-Toluidine and o-toluidine hydrochloride and mixed isomers           | 95-53-4    | 10.1   | 39.3       | 79.3        | 306         | 4,522   | 24 Hr Avg                              | N/A                 |
| Toluol (Toluene)  | 108-88-3   | 162  | 664        | 1,580       | 5,569       | N/A   | Annual                                 | BACT                |
| Tributyl phosphate  | 126-73-8   | 0.00191  | 0.00743    | 0.015       | 0.0578      | 0.855   | 24 Hr Avg                              | N/A                 |
| Trichloroacetic acid  | 76-03-9    | 12.4   | 51.1       | 122         | 429         | 0.07  | Annual                                 | N/A                 |
| 1,1,1,2-Trichlorobenzene  | 120-82-1   | 1.62   | 6.64       | 15.8        | 55.7        | N/A   | Annual                                 | BACT                |
| 1,1,1,2-Trichloroethane   | 79-00-5    | 0.471  | 1.83       | 3.69        | 14.2        | 210   | 24 Hr Avg                              | N/A                 |
| Trichloroethylene (Trichloroethene)                                   | 79-01-6    | 34.8   | 143        | 341         | 1,201       | N/A   | Annual                                 | BACT                |
| Trichloronaphthalene  | 1321-65-9  | 0.471  | 1.83       | 3.69        | 14.2        | 210   | 24 Hr Avg                              | N/A                 |
| 2,4,6-Trichlorophenol   | 88-06-2    | 71,075   | 292,000    | 695,238     | 2,450,350   | 400   | Annual                                 | N/A                 |
| 1,2,3-Trichloropropane  | 96-18-4    | 10.1   | 39.3       | 79.3        | 306         | 4,522   | 24 Hr Avg                              | N/A                 |
| Triethanolamine   | 102-71-6   | 0.117  | 0.455      | 0.917       | 3.53        | 52.3  | 24 Hr Avg                              | N/A                 |
| Triethylamine   | 121-44-8   | 0.359  | 1.39       | 2.81        | 10.8        | 160   | 24 Hr Avg                              | N/A                 |
| 1,3,5-Triglycidyl-s-triazinetriene                                    | 2451-62-9  | 2.77   | 8.82       | 17          | 45.5        | 3,711   | 24 Hr Avg                              | N/A                 |
| Trimellitic anhydride   | 552-30-7   | 2.93   | 11.4       | 23          | 88.5        | 1,310   | 1 Hr                                   | N/A                 |
| Trimethyl benzene (mixtures and isomers)                              | 25551-13-7 | 888  | 3,650      | 8,690       | 30,629      | N/A   | 24 Hr Avg                              | N/A                 |
| Trimethylamine  | 75-50-3    | 14.4   | 56.1       | 113         | 436         | N/A   | Annual                                 | BACT                |
| 2,4,6-Trinitrotoluene (TNT)   | 118-96-7   | 0.269  | 1.04       | 2.11        | 8.11        | 120   | 24 Hr Avg                              | N/A                 |
| Triorthocresyl phosphate  | 78-30-8    | 573  | 2,355      | 5,607       | 19,761      | N/A   | Annual                                 | BACT                |
|   |            | 2.43   | 10         | 23.8        | 83.9        | N/A   | Annual                                 | BACT                |
|   |            | 3.24   | 12.6       | 25.4        | 97.8        | 1,447   | 24 Hr Avg                              | N/A                 |
|   |            | 0.269  | 1.04       | 2.11        | 8.11        | 120   | 24 Hr Avg                              | N/A                 |
|   |            | 0.222  | 0.864      | 1.74        | 6.71        | 99.3  | 24 Hr Avg                              | N/A                 |
|   |            | 0.00269  | 0.0104     | 0.0211      | 0.0811      | 1.2   | 24 Hr Avg                              | N/A                 |
|   |            | 0.00299  | 0.00951    | 0.0183      | 0.0491      | 4   | 1 Hr                                   | N/A                 |
|   |            | 6.6  | 25.6       | 51.7        | 199         | 2,949   | 24 Hr Avg                              | N/A                 |
|   |            | 0.649  | 2.52       | 5.09        | 19.6        | 290   | 24 Hr Avg                              | N/A                 |
|   |            | 0.00537  | 0.0209     | 0.0421      | 0.162       | 2.4   | 24 Hr Avg                              | N/A                 |
|   |            | 0.00537  | 0.0209     | 0.0421      | 0.162       | 2.4   | 24 Hr Avg                              | N/A                 |

| Hazardous Air Contaminant                                   | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |                                    |                                    |                              | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|---|------------|--|------------------------------------|------------------------------------|------------------------------|---|--|---------------------|
|   |            | Emissions from Stacks <25 ft   | Emissions from Stacks 25 to <40 ft | Emissions from Stacks 40 to <75 ft | Emissions from Stacks ≥75 ft |   |  |                     |
| (a)   | (b)        | (c)  | (d)                                | (e)                                | (f)                          | (g)   | (h)                                    | (i)                 |
| Triphenyl phosphate   | 115-86-6   | 0.161  | 0.626                              | 1.26                               | 4.86                         | 72  | 24 Hr Avg                              | N/A                 |
| Tris(2,3-dibromopropyl) phosphate                           | 126-72-7   | 2.69   | 11.1                               | 26.3                               | 92.8                         | N/A   | Annual                                 | BACT                |
| Tungsten, as W, metal and insoluble compounds               | 7440-33-7  | 0.269  | 1.04                               | 2.11                               | 8.11                         | 120   | 24 Hr Avg                              | N/A                 |
| Tungsten, as W, soluble compounds                           | 7440-33-7  | 0.0537   | 0.209                              | 0.421                              | 1.62                         | 24  | 24 Hr Avg                              | N/A                 |
| Uranium (natural), soluble and insoluble compounds, as U    | 7440-61-1  | 0.0107   | 0.0417                             | 0.0842                             | 0.324                        | 4.8   | 24 Hr Avg                              | N/A                 |
| Urethane (Ethyl carbamate)                                  | 51-79-6    | 6.13   | 25.2                               | 59.9                               | 211                          | N/A   | Annual                                 | BACT                |
| n-Valeraldehyde   | 110-62-3   | 9.46   | 36.8                               | 74.2                               | 286                          | 4.227   | 24 Hr Avg                              | N/A                 |
| Vanadium pentoxide, as V2O5, respirable dust and fume       | 1314-62-1  | 0.00269  | 0.0104                             | 0.0211                             | 0.0811                       | 1.2   | 24 Hr Avg                              | N/A                 |
| Vinyl acetate   | 108-05-4   | 35.538   | 146,000                            | 347,619                            | 1,225,175                    | 200   | Annual                                 | N/A                 |
| Vinyl bromide   | 593-60-2   | 1.89   | 7.35                               | 14.8                               | 57.1                         | 845   | 24 Hr Avg                              | N/A                 |
| Vinyl chloride  | 75-01-4    | 17,769   | 73,000                             | 173,810                            | 612,587                      | 52.5  | 24 Hr Avg                              | N/A                 |
| Vinyl cyclohexene dioxide (4-vinyl-1-cyclohexene diepoxide) | 106-87-6   | 2.43   | 10                                 | 23.8                               | 83.9                         | N/A   | Annual                                 | LAER                |
| 4-Vinyl cyclohexene   | 100-40-3   | 0.0308   | 0.12                               | 0.241                              | 0.93                         | N/A   | Annual                                 | BACT                |
| Vinyl fluoride  | 75-02-5    | 0.0238   | 0.0923                             | 0.186                              | 0.717                        | 13.8  | 24 Hr Avg                              | N/A                 |
| Vinylidene chloride (1,1-Dichloroethylene)                  | 75-35-4    | 0.101  | 0.393                              | 0.793                              | 3.05                         | 10.6  | 24 Hr Avg                              | N/A                 |
| Vinyl toluene   | 25013-15-4 | 1.06   | 4.14                               | 8.35                               | 32.2                         | 45.2  | 24 Hr Avg                              | N/A                 |
| Xylene (mixtures and isomers) (Xylol; Dimethyl Benzene)     | 1330-20-7  | 13   | 50.4                               | 102                                | 392                          | 476   | 24 Hr Avg                              | N/A                 |
| m-Xylene-alpha.alpha'-diamine                               | 1477-55-0  | 23.3   | 90.6                               | 183                                | 704                          | 5,800   | 24 Hr Avg                              | N/A                 |
| Xylidine (mixtures and isomers)                             | 1300-73-8  | 0.00747  | 0.0238                             | 0.0457                             | 0.123                        | 10,421  | 24 Hr Avg                              | N/A                 |
| Yttrium metal and compounds, as Y                           | 7440-65-5  | 0.133  | 0.517                              | 1.04                               | 4.02                         | 10  | 1 Hr                                   | N/A                 |
| Zeolites (Erionite)   | 66733-21-9 | 0.0537   | 0.209                              | 0.421                              | 1.62                         | 59.5  | 24 Hr Avg                              | N/A                 |
| Zirconium and compounds, as Zr                              | 7440-67-7  | 2.43   | 10                                 | 23.8                               | 83.9                         | 24  | 24 Hr Avg                              | N/A                 |
|   |            | 0.269  | 1.04                               | 2.11                               | 8.11                         | N/A   | Annual                                 | LAER                |
|   |            |  |                                    |                                    |                              | 120   | 24 Hr Avg                              | N/A                 |

Note: The emission rates in columns (c) to (f) in Table A for any hazardous air contaminant may only be used if emissions are from an unobstructed vertical discharge point. Owners and operators of sources unable to use this table should refer to s. NR 445.08(2).

<sup>1</sup>For purposes of calculating non-exempt, potential to emit emissions for comparison with the threshold value in column (c), (d), (e) or (f) in the table the owner or operator of a source would:

-combine non-exempt, potential to emit emissions for each contaminant for all stacks within each of the 4 stack categories,

-compare each group of non-exempt, potential to emit emissions against the respective threshold found in column (c), (d), (e) or (f) in the table

-if any group exceeds its respective threshold in column (c), (d), (e) or (f), consider all non-exempt, potential to emit emissions from the source in determining compliance with the applicable standard or control requirement

Table B  
Emission Thresholds, Standards and Control Requirements for Manufacture or Treatment of Pesticides, Rodenticides, Insecticides, Herbicides or Fungicides

| Hazardous Air Contaminant               | CAS Number | Thresholds for Emission Points' (expressed as lbs/hr or lbs/yr) |        |        |         |      |           | Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|---|------------|---|--------|--------|---------|------|-----------|--|--|---------------------|
|   |            | (a)   | (b)    | (c)    | (d)     | (e)  | (f)       |  |  |                     |
| Aldrin                                  | 309-00-2   | 0.0134  | 0.0522 | 0.105  | 0.405   | 6    | 24 Hr Avg | N/A  |  |                     |
| Amitrole                                | 61-82-5    | 6.58  | 27     | 64.4   | 227     | N/A  | Annual    | BACT   |  |                     |
| Antimony hydride (Stibine)              | 7803-52-3  | 0.0107  | 0.0417 | 0.0842 | 0.324   | 4.8  | 24 Hr Avg | N/A  |  |                     |
| ANTU                                    | 86-88-4    | 0.0274  | 0.107  | 0.215  | 0.828   | 12.2 | 24 Hr Avg | N/A  |  |                     |
| Atrazine                                | 1912-24-9  | 0.0161  | 0.0626 | 0.126  | 0.486   | 7.2  | 24 Hr Avg | N/A  |  |                     |
| Azinphos-methyl                         | 86-50-0    | 0.0107  | 0.0417 | 0.0842 | 0.324   | 120  | 24 Hr Avg | N/A  |  |                     |
| Baygon (Propoxur)                       | 114-26-1   | 0.0269  | 0.104  | 0.211  | 0.811   | 12   | 24 Hr Avg | N/A  |  |                     |
| Benomyl                                 | 17804-35-2 | 0.537   | 2.09   | 4.21   | 16.2    | 240  | 24 Hr Avg | N/A  |  |                     |
| Bromacil                                | 314-40-9   | 0.537   | 2.09   | 4.21   | 16.2    | 240  | 24 Hr Avg | N/A  |  |                     |
| Bromomethane (Methyl bromide)           | 74-83-9    | 888   | 3,650  | 8,690  | 30,629  | 5    | Annual    | N/A  |  |                     |
| Captan                                  | 2425-06-1  | 0.209   | 0.81   | 1.64   | 6.3     | 93.2 | 24 Hr Avg | N/A  |  |                     |
| Captan                                  | 133-06-2   | 0.00537   | 0.0209 | 0.0421 | 0.162   | 2.4  | 24 Hr Avg | N/A  |  |                     |
| Carbaryl                                | 63-25-2    | 0.269   | 1.04   | 2.11   | 8.11    | 120  | 24 Hr Avg | N/A  |  |                     |
| Carbofuran                              | 1563-66-2  | 0.00537   | 0.0209 | 0.0421 | 0.162   | 2.4  | 24 Hr Avg | N/A  |  |                     |
| Chlordane                               | 57-74-9    | 0.0269  | 0.104  | 0.211  | 0.811   | 12   | 24 Hr Avg | N/A  |  |                     |
| Chlorinated camphene (Toxaphene)        | 8001-35-2  | 5.55  | 22.8   | 54.3   | 191     | N/A  | Annual    | BACT   |  |                     |
| 1-Chloro-1-nitropropane                 | 600-25-9   | 0.0269  | 0.104  | 0.211  | 0.811   | 12   | 24 Hr Avg | N/A  |  |                     |
| Chloropierin (Trichloronitromethane)    | 76-06-2    | 0.543   | 2.11   | 4.25   | 16.4    | 243  | 24 Hr Avg | N/A  |  |                     |
| Chlorpyrifos                            | 2921-88-2  | 0.0361  | 0.14   | 0.283  | 1.09    | 16.1 | 24 Hr Avg | N/A  |  |                     |
| Cruformate                              | 299-86-5   | 0.0107  | 0.0417 | 0.0842 | 0.324   | 4.8  | 24 Hr Avg | N/A  |  |                     |
| Cyhexatin                               | 13121-70-5 | 0.269   | 1.04   | 2.11   | 8.11    | 120  | 24 Hr Avg | N/A  |  |                     |
| Demeton                                 | 8065-48-3  | 0.00568   | 0.0221 | 0.0445 | 0.171   | 2.54 | 24 Hr Avg | N/A  |  |                     |
| Diazinon                                | 333-41-5   | 0.00537   | 0.0209 | 0.0421 | 0.162   | 2.4  | 24 Hr Avg | N/A  |  |                     |
| 1,3-Dichloropropene                     | 542-75-6   | 444   | 1,825  | 4,345  | 15,315  | N/A  | Annual    | BACT   |  |                     |
| 2,2-Dichloropropionic acid              | 75-99-0    | 3,554   | 14,600 | 34,762 | 122,517 | 109  | 24 Hr Avg | N/A  |  |                     |
| Dichlorvos                              | 62-73-7    | 88.8  | 365    | 869    | 3,063   | 20   | Annual    | N/A  |  |                     |
| Dicrotophos                             | 141-66-2   | 0.0483  | 0.188  | 0.379  | 1.46    | 0.5  | Annual    | N/A  |  |                     |
| Dieldrin                                | 60-57-1    | 0.0134  | 0.0522 | 0.105  | 0.405   | 21.6 | 24 Hr Avg | N/A  |  |                     |
| Dinitro-o-cresol (4,6-Dinitro-o-cresol) | 534-52-1   | 0.0107  | 0.0417 | 0.0842 | 0.324   | 6    | 24 Hr Avg | N/A  |  |                     |
|   |            |   |        |        |         | 4.8  | 24 Hr Avg | N/A  |  |                     |

| Hazardous Air Contaminant                                      | CAS Number | Thresholds for Emission Points' (expressed as lbs/hr or lbs/yr) |        |        |        | Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|--|------------|---|--------|--------|--------|--|--|---------------------|
|  |            | (a)   | (b)    | (c)    | (d)    |  |  |                     |
| Dioxathion   | 78-34-2    | 0.0107  | 0.0417 | 0.0842 | 0.324  | 4.8  | 24 Hr Avg                              | N/A                 |
| Diquat, respirable dust (various compounds) (Diquat dibromide) | 2764-72-9  | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Diquat, total dust (various compounds) (Diquat dibromide)      | 2764-72-9  | 0.0269  | 0.104  | 0.211  | 0.811  | 12   | 24 Hr Avg                              | N/A                 |
| Disulfoton   | 298-04-4   | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Endosulfan   | 115-29-7   | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Endrin   | 72-20-8    | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| EPN  | 2104-64-5  | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Ethion   | 563-12-2   | 0.0215  | 0.0835 | 0.168  | 0.649  | 9.6  | 24 Hr Avg                              | N/A                 |
| Fensulfathion  | 115-90-2   | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Fenitrothion   | 55-38-9    | 0.0107  | 0.0417 | 0.0842 | 0.324  | 4.8  | 24 Hr Avg                              | N/A                 |
| Fonofos  | 944-22-9   | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Heptachlor and heptachlor epoxide                              | 76-44-8    | 0.00269   | 0.0104 | 0.0211 | 0.0811 | 1.2  | 24 Hr Avg                              | N/A                 |
| Hexachlorobutadiene  | 87-68-3    | 0.0115  | 0.0445 | 0.0898 | 0.346  | 5.12   | 24 Hr Avg                              | N/A                 |
| Hexachlorocyclohexane and isomers (Lindane and isomers)        | 58-89-9    | 0.0269  | 0.104  | 0.211  | 0.811  | 12   | 24 Hr Avg                              | N/A                 |
| Hexachlorocyclopentadiene                                      | 77-47-4    | 0.00599   | 0.0233 | 0.047  | 0.181  | 2.68   | Annual                                 | BACT                |
| Lindane and other hexachlorocyclohexane isomers                | 58-89-9    | 5.73  | 23.5   | 56.1   | 198    | N/A  | Annual                                 | BACT                |
| Methomyl   | 16752-77-5 | 0.0269  | 0.104  | 0.211  | 0.811  | 12   | 24 Hr Avg                              | N/A                 |
| Methyl bromide (Bromomethane)                                  | 74-83-9    | 0.134   | 0.522  | 1.05   | 4.05   | 60   | 24 Hr Avg                              | N/A                 |
| Methyl demeton   | 8022-00-2  | 888   | 3,650  | 8,690  | 30,629 | 5  | Annual                                 | N/A                 |
| Methyl parathion   | 298-00-0   | 0.209   | 0.81   | 1.64   | 6.3    | 93.2   | 24 Hr Avg                              | N/A                 |
| Metribuzin   | 21087-64-9 | 0.0269  | 0.104  | 0.211  | 0.811  | 12   | 24 Hr Avg                              | N/A                 |
| Mevinphos (Phosdrin)   | 7786-34-7  | 0.0107  | 0.0417 | 0.0842 | 0.324  | 4.8  | 24 Hr Avg                              | N/A                 |
| Monocrotophos  | 6923-22-4  | 0.269   | 1.04   | 2.11   | 8.11   | 120  | 24 Hr Avg                              | N/A                 |
| Naled  | 300-76-5   | 0.00483   | 0.0188 | 0.0379 | 0.146  | 2.16   | 24 Hr Avg                              | N/A                 |
| Paraquat (respirable sizes) (Paraquat chloride)                | 1910-42-5  | 0.0134  | 0.0522 | 0.105  | 0.405  | 6  | 24 Hr Avg                              | N/A                 |
| Parathion  | 56-38-2    | 0.161   | 0.626  | 1.26   | 4.86   | 72   | 24 Hr Avg                              | N/A                 |
| Phenothiazine  | 92-84-2    | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Phorate  | 298-02-2   | 0.269   | 1.04   | 2.11   | 8.11   | 120  | 24 Hr Avg                              | N/A                 |
| Pindone  | 83-26-1    | 0.00269   | 0.0104 | 0.0211 | 0.0811 | 1.2  | 24 Hr Avg                              | N/A                 |
| Propoxur (Baygon)  | 114-26-1   | 0.00537   | 0.0209 | 0.0421 | 0.162  | 2.4  | 24 Hr Avg                              | N/A                 |
| Pyrethrum  | 8003-34-7  | 0.0269  | 0.104  | 0.211  | 0.811  | 12   | 24 Hr Avg                              | N/A                 |
| Quinone  | 106-51-4   | 0.269   | 1.04   | 2.11   | 8.11   | 120  | 24 Hr Avg                              | N/A                 |
| Rotenone (commercial)  | 83-79-4    | 0.0237  | 0.0923 | 0.186  | 0.717  | 10.6   | 24 Hr Avg                              | N/A                 |
| Sodium fluoroacetate   | 62-74-8    | 0.269   | 1.04   | 2.11   | 8.11   | 120  | 24 Hr Avg                              | N/A                 |
| Sibine (Antimony hydride)                                      | 7803-52-3  | 0.00269   | 0.0104 | 0.0211 | 0.0811 | 1.2  | 24 Hr Avg                              | N/A                 |
| Strychnine   | 57-24-9    | 0.0274  | 0.107  | 0.215  | 0.828  | 12.2   | 24 Hr Avg                              | N/A                 |
| Sulfotep (TEDP)  | 3689-24-5  | 0.00806   | 0.0313 | 0.0632 | 0.243  | 3.6  | 24 Hr Avg                              | N/A                 |
| Sulfuryl fluoride  | 2699-79-8  | 0.0107  | 0.0417 | 0.0842 | 0.324  | 4.8  | 24 Hr Avg                              | N/A                 |
|  |            | 1.12  | 4.36   | 8.79   | 33.8   | 501  | 24 Hr Avg                              | N/A                 |

| Hazardous Air Contaminant        | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |                                    |                                    |                              | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|----------------------------------|------------|--|------------------------------------|------------------------------------|------------------------------|---|--|---------------------|
|                                  |            | Emissions from Stacks <25 ft   | Emissions from Stacks 25 to <40 ft | Emissions from Stacks 40 to <75 ft | Emissions from Stacks ≥75 ft |   |  |                     |
| (a)                              | (b)        | (c)  | (d)                                | (e)                                | (f)                          | (g)   | (h)                                    | (i)                 |
| TEPP                             | 107-49-3   | 0.00269  | 0.0104                             | 0.0211                             | 0.0811                       | 1.2   | 24 Hr Avg                              | N/A                 |
| Thiram                           | 137-26-8   | 0.0537   | 0.209                              | 0.421                              | 1.62                         | 24  | 24 Hr Avg                              | N/A                 |
| Toxaphene (Chlorinated camphene) | 8001-35-2  | 5.55   | 22.8                               | 54.3                               | 191                          | N/A   | Annual                                 | BACT                |
| Trichlorofromethane (Chloroform) | 76-06-2    | 0.0269   | 0.104                              | 0.211                              | 0.811                        | 12  | 24 Hr Avg                              | N/A                 |
| Warfarin                         | 81-81-2    | 0.0361   | 0.14                               | 0.283                              | 1.09                         | 16.1  | 24 Hr Avg                              | N/A                 |
|                                  |            | 0.00537  | 0.0209                             | 0.0421                             | 0.162                        | 2.4   | 24 Hr Avg                              | N/A                 |

**Note:** The emission rates in columns (c) to (f) in Table B for any hazardous air contaminant may only be used if emissions are from an unobstructed vertical discharge point. Owners and operators of sources unable to use this table should refer to s. NR 445.08(2).

<sup>1</sup>For purposes of calculating non-exempt, potential to emit emissions for comparison with the threshold value in column (c), (d), (e) or (f) in the table the owner or operator of a source would: -combine non-exempt, potential to emit emissions for each contaminant for all stacks within each of the 4 stack categories.

-compare each group of non-exempt, potential to emit emissions against the respective threshold found in column (c), (d), (e) or (f) in the table -if any group exceeds its respective threshold in column (c), (d), (e) or (f), consider all non-exempt, potential to emit emissions from the source in determining compliance with the applicable or control requirement

Table C  
Emission Thresholds and Control Requirements for Manufacture or Treatment of Pharmaceuticals

| Hazardous Air Contaminant                                  | CAS Number | Thresholds for Emission Points' (expressed as lbs/hr or lbs/yr) |  |  |                                  | Ambient Air Standard (per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|--|------------|---|--|--|----------------------------------|--|--|---------------------|
|  |            | (c) Emissions from Stacks <25 ft                                | (d) Emissions from Stacks 25 to <40 ft | (e) Emissions from Stacks 40 to <75 ft | (f) Emissions from Stacks ≥75 ft |  |  |                     |
| (a)  | (b)        | (c)   | (d)                                    | (e)                                    | (f)                              | (g)  | (h)                                    | (i)                 |
| Adriamycin   | 23214-92-8 | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| 5-Azacytidine  | 320-67-2   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Azathioprine   | 446-86-6   | 3.48  | 14.3                                   | 34.1                                   | 120                              | N/A  | Annual                                 | LAER                |
| Bischloroethyl nitrosourea                                 | 154-93-8   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlormaphazine)   | 494-03-1   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| Bis(chloromethyl) ether (BCME) and technical grade         | 542-88-1   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| 1,4-Butanediol dimethanesulphonate (Myleran; busulphan)    | 55-98-1    | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| Chlorambucil   | 305-03-3   | 0.0137  | 0.0562                                 | 0.134                                  | 0.471                            | N/A  | Annual                                 | LAER                |
| Chlornaphazine (N,N-Bis (2-chloroethyl)-2-naphthylamine)   | 494-03-1   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| 1-Chloroethyl-3-(4-methylcyclohexyl)-1-nitrosourea (McCNU) | 13909-09-6 | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| 1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)        | 13010-47-4 | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Chloromethyl methyl ether (CMME)                           | 107-30-2   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| Chlorozotocin  | 54749-90-5 | 0.0258  | 0.106                                  | 0.252                                  | 0.888                            | N/A  | Annual                                 | BACT                |
| Cisplatin  | 15663-27-1 | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Cyclophosphamide   | 50-18-0    | 10.5  | 42.9                                   | 102                                    | 360                              | N/A  | Annual                                 | LAER                |
| Cyclosporin A (Cyclosporine; Cyclosporin)                  | 59865-13-3 | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| Decarbazine  | 4342-03-4  | 0.127   | 0.521                                  | 1.24                                   | 4.38                             | N/A  | Annual                                 | BACT                |
| Diethylstilbestrol (DES)                                   | 56-53-1    | 0.0178  | 0.073                                  | 0.174                                  | 0.613                            | N/A  | Annual                                 | LAER                |
| Estradiol (Oestradiol)                                     | 50-28-2    | 0.162   | 0.664                                  | 1.58                                   | 5.57                             | N/A  | Annual                                 | BACT                |
| Estrogens, conjugated                                      |            | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| Estrogens, not conjugated: Estrone                         | 53-16-7    | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Estrogens, not conjugated: Ethinylestradiol                | 57-63-6    | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Ethyl methanesulfonate                                     | 62-50-0    | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Iron dextran complex                                       | 9004-66-4  | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Melphalan  | 148-82-3   | 0.048   | 0.197                                  | 0.47                                   | 1.66                             | N/A  | Annual                                 | LAER                |
| Mestranol  | 72-33-3    | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Methoxsalen (8-Methoxypsoralen)                            | 298-81-7   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| Methyl methanesulfonate                                    | 66-27-3    | 63.5  | 261                                    | 621                                    | 2,188                            | N/A  | Annual                                 | BACT                |
| N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)                | 70-25-7    | 0.74  | 3.04                                   | 7.24                                   | 25.5                             | N/A  | Annual                                 | BACT                |
| Metronidazole  | 443-48-1   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Myleran (1,4-Butanediol dimethanesulphonate; busulphan)    | 55-98-1    | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | LAER                |
| o-Nitroanisole   | 91-23-6    | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Ochratoxin A   | 303-47-9   | 2.43  | 10                                     | 23.8                                   | 83.9                             | N/A  | Annual                                 | BACT                |
| Oestradiol (Estradiol)                                     | 50-28-2    | 0.162   | 0.664                                  | 1.58                                   | 5.57                             | N/A  | Annual                                 | BACT                |
| Phenacetin   | 62-44-2    | 2.820   | 11,587                                 | 27,589                                 | 97,236                           | N/A  | Annual                                 | BACT                |



| Hazardous Air Contaminant                         | CAS Number | Thresholds for Emission Points <sup>1</sup><br>(expressed as lbs/hr or lbs/yr) |                                    |                                    |                              | Ambient Air Standard<br>(per time period in column (h) expressed as micrograms per cubic meter) | Time Period for Standard and Threshold | Control Requirement |
|---|------------|--|------------------------------------|------------------------------------|------------------------------|---|--|---------------------|
|   |            | Emissions from Stacks <25 ft   | Emissions from Stacks 25 to <40 ft | Emissions from Stacks 40 to <75 ft | Emissions from Stacks ≥75 ft |   |  |                     |
| (a)   | (b)        | (c)  | (d)                                | (e)                                | (f)                          | (g)   | (h)                                    | (i)                 |
| Phenazopyridine and phenazopyridine hydrochloride | 136-40-3   | 36.3   | 149                                | 355                                | 1250                         | N/A   | Annual                                 | BACT                |
| Phenoxybenzamine hydrochloride                    | 63-92-3    | 2.31   | 9.48                               | 22.6                               | 79.6                         | N/A   | Annual                                 | BACT                |
| Phenytin and sodium salt of phenytin              | 57-41-0    | 2.43   | 10                                 | 23.8                               | 83.9                         | N/A   | Annual                                 | BACT                |
| Procabazine and procabazine hydrochloride         | 366-70-1   | 0.444  | 1.83                               | 4.35                               | 15.3                         | N/A   | Annual                                 | BACT                |
| Propylthiouracil                                  | 51-52-5    | 6.13   | 25.2                               | 59.9                               | 211                          | N/A   | Annual                                 | BACT                |
| Streptozotocin                                    | 18883-66-4 | 0.0573   | 0.235                              | 0.561                              | 1.98                         | N/A   | Annual                                 | BACT                |
| Tamoxifen   | 10540-29-1 | 2.43   | 10                                 | 23.8                               | 83.9                         | N/A   | Annual                                 | BACT                |
| Thioepa (Tris(1-aziridinyl)phosphine sulfide)     | 52-24-4    | 0.523  | 2.15                               | 5.11                               | 18                           | N/A   | Annual                                 | LAER                |
| Tris(1-aziridinyl)phosphine sulfide (Thioepa)     | 52-24-4    | 0.523  | 2.15                               | 5.11                               | 18                           | N/A   | Annual                                 | LAER                |

Note: The emission rates in columns (c) to (f) in Table C for any hazardous air contaminant may only be used if emissions are from an unobstructed vertical discharge point. Owners and operators of sources unable to use this table should refer to s. NR 445.08(2).

<sup>1</sup>For purposes of calculating non-exempt, potential to emit emissions for comparison with the threshold value in column (c), (d), (e) or (f) in the table the owner or operator of a source would combine non-exempt, potential to emit emissions for each contaminant for all stacks within each of the 4 stack categories, compare each group of non-exempt, potential to emit emissions against the respective threshold found in column (c), (d), (e) or (f) in the table - if any group exceeds it's respective threshold in column (c), (d), (e) or (f), consider all non-exempt, potential to emit emissions from the source in determining compliance with the applicable standard or control requirement

**NR 445.08 Compliance requirements. (1) COMPLIANCE DETERMINATION.** Determination of compliance shall be done while the source is operating under the conditions required by permit or order resulting in the greatest emissions of the hazardous air contaminant, or absent a permit or order, by using the maximum theoretical emissions from the source.

**(2) COMPLIANCE METHODS.** The owner or operator of a source shall achieve compliance with the emission limitations and control requirements in s. NR 445.07(1), (2) or (3) for each hazardous air contaminant by doing one or any combination of the following. A source unable to meet the requirements of s. NR 445.07(6)(a) and (b) may not use par. (a) by itself or in combination with other methods to achieve compliance under this subsection.

(a) Limiting non-exempt, potential to emit emissions from the source of each hazardous air contaminant to less than the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07.

(b) Limiting the quantity, concentration or duration of non-exempt, potential to emit emissions from the source of each hazardous air contaminant that has a standard expressed as an ambient air concentration in Table A or B of s. NR 445.07 so that the ambient air concentration off the source property is less than the concentration allowed under column (g) of the table.

(c) Limiting the quantity, concentration or duration of non-exempt, potential to emit emissions of each hazardous air contaminant with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, so as not to cause an ambient air concentration off the source property that results in an inhalation impact greater than  $1 \times 10^{-6}$ . The inhalation impact is determined by the following equation:

$$\text{inhalation impact} = (\text{inhalation impact concentration}_{\text{annual average}}) \times (\text{unit risk factor})$$

where:

inhalation impact concentration<sub>annual average</sub> is the annual average concentration of a contaminant in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

unit risk factor for the contaminant is the unit risk factor value established by either EPA or the California air resources board and is expressed in reciprocal micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )<sup>-1</sup>

(d) Altering the release height or dispersion characteristics of each hazardous air contaminant in Table A, B or C of s. NR 445.07 such that the alteration results in the source's ability to meet par. (a), (b) or (c) or sub. (3)(a)1. or (b)1.

(e) Limiting the concentration of each hazardous air contaminant that has a standard expressed as an ambient air concentration in Table A or B of s. NR 445.07 in the stack to less than the concentration allowed under column (g) of the table for that contaminant.

(f) Limiting emissions of the hazardous air contaminant through application of the control requirement identified in column (i) of Table A, B or C of s. NR 445.07. The control requirement shall be first applied to the emissions unit at the facility that emits the greatest actual annual amount of the hazardous air contaminant. If application of the control requirement to this emissions unit does not reduce facility emissions of the hazardous air contaminant to a level less than the rate listed in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 for the contaminant, the control requirement shall be applied to other emissions units at the facility that emit progressively smaller amounts of the contaminant until emissions from the facility are below the emission rate listed in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 for the contaminant or until the control requirement has been applied to all emissions units at the facility that emit at least 10% of the rate listed in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 for the contaminant. If application of the control requirement to these emissions units does not result in the reduction of at least 50% of the potential emissions of the contaminant from the facility, the department may require application of the control requirement on a reasonable array of smaller emissions units that emit the contaminant.

**Note:** The term "control requirement" is used to represent the applicable level of emission reduction required for the hazardous air contaminant under review, in other words LAER or BACT. These reduction options include lower emitting processes or practices, material substitution, add-on controls, or any combination of the options.

**(3) ALTERNATIVE METHODS OF COMPLIANCE.** (a) The owner or operator of a source may use the following alternative method of complying with any control requirements in s. NR 445.07(1)(c), (2) or (3) by doing both of the following:

1. Limiting the quantity, concentration or duration of potential to emit emissions of one or more hazardous hazardous air contaminants with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board so as not to cause an ambient air concentration off the source property that results in a cumulative inhalation impact from all of the contaminants greater than  $1 \times 10^{-5}$ . The cumulative inhalation impact is determined by the following equation:

$$\text{cumulative inhalation impact} = \sum_{i=1}^n (\text{inhalation impact}_{\text{annual average}})_i \times (\text{unit risk factor})_i$$

where:

$\text{inhalation impact}_{\text{annual average}}$  is the annual average concentration in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) of each contaminant

unit risk factor for the contaminant is the unit risk factor value established by either EPA or the California air resources board and is expressed in reciprocal micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )<sup>-1</sup>

$i$  is a subscript denoting an individual hazardous air contaminant

$n$  is the number of different hazardous air contaminants with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, including those exempt under s. NR 445.07(5), that are emitted at the facility.

2. For each hazardous air contaminant with a control requirement in column (i) of Table A, B or C of s. NR 445.07 not having a unit risk factor established by either the EPA or the California air resources board, limiting potential to emit emissions of the contaminant from the facility, including those exempt under s. NR 445.07(5), to less than the relevant threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07.

(b) The owner or operator of a source may use the following alternative method of complying with any control requirements in s. NR 445.07(4) by doing both of the following:

1. Limiting the quantity, concentration or duration of potential to emit emissions of one or more hazardous air contaminants with a control requirement in column (i) of Table A, B or C of s. NR 445.07 having a unit risk factor established by either the EPA or the California air resources board, including those exempt under s. NR 445.07(5), so as not to cause a cumulative multipathway impact off the source property from all of the contaminants greater than  $1 \times 10^{-5}$ .

2. For each hazardous air contaminant with a control requirement in column (i) of Table A, B or C of s. NR 445.07 not having a unit risk factor established by either the EPA or the California air resources board, limiting potential to emit emissions of the contaminant from the facility, including those exempt under s. NR 445.07(5), to less than the relevant threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07.

**Note:** Unit risk factors for carcinogens can be obtained from the US EPA at the following website: <http://www.epa.gov/iris>. The US EPA unit risk factors should be consulted first. If no agreed upon unit risk factor is listed by the US EPA, then unit risk factors developed by the State of California should be consulted. The State of California's Air Resources Board and Office of Environmental and Health Hazard Assessment unit risk factors for carcinogens can be obtained from the following website: <http://www.arb.ca.gov/toxics/healthval/healthval.htm>.

(4) **ENFORCEABLE LIMITATIONS.** Any limitation elected under this section shall be placed in a permit or general or special order.

(5) **DETERMINATION OF HAZARDOUS AIR CONTAMINANT EMISSIONS AND CONCENTRATIONS.** For the purpose of determining emissions and concentrations of hazardous air contaminants under this subchapter, the owner or operator of a source:

(a) May rely on information on an approved material safety data sheet if the approved material safety data sheet lists a hazardous air contaminant listed in Table A, B or C of s. NR 445.07 and for each hazardous air contaminant with a standard expressed as an ambient air concentration in column (g) of Table A, B or C constitutes 1% (10,000 parts per million) or more of the material, or for each hazardous air contaminant with a standard expressed as a control requirement in column (i) of Table A, B or C constitutes 0.1% (1,000 parts per million) or more of the material. If an approved material safety data sheet for a material does not list a hazardous air contaminant in Table A, B or C of s. NR 445.07 at or above the amounts listed in this paragraph, the material will be presumed not to result in emissions of a hazardous air contaminant unless a hazardous air contaminant is formed in processing the material.

(b) May rely upon mass balance or other use, consumption and analytical methodologies for calculating potential or theoretical emissions. However, the department may require that a stack test be conducted to affirm the accuracy of emission estimations.

(c) Is not required to consider emissions resulting directly from naturally occurring constituents in windblown soil.

(d) May rely on information generated by either the EPA screening or refined dispersion model to demonstrate either of the following:

1. Concentrations of each hazardous air contaminant will not exceed the ambient standard in column (g) of Table A or B of s. NR 445.07.

2. The source meets the provisions of sub. (2)(c), (3)(a)1. or (b)1.

Note: Contact the Environmental Studies Section of the Bureau of Air Management, 608-266-7718 for additional information regarding procedures and protocols associated with US EPA screening and air dispersion models.

**(6) COMPLIANCE DEADLINES, RECORDKEEPING AND REPORTING REQUIREMENTS.** (a) The owner or operator of a source subject to an emission limitation or control requirement in s. NR 445.07 and constructed or last modified on or after the effective date of this section... [revisor inserts date] shall achieve compliance upon startup of the source.

(b) The owner or operator of a source constructed or last modified prior to the effective date of this section... [revisor inserts date] with non-exempt, potential to emit emissions of a hazardous air contaminant less than or equal to the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 shall maintain records in accordance with s. NR 439.04(1) and (2) starting no later than the last day of the thirty-sixth calendar month after the effective date of this section... [revisor inserts date].

(c) The owner or operator of a source constructed or last modified prior to the effective date of this section... [revisor inserts date] with non-exempt, potential to emit emissions of a hazardous air contaminant greater than the applicable threshold in column (c), (d), (e) or (f) of Table A, B or C of s. NR 445.07 or subject to s. NR 445.07(4) shall:

1. Submit information adequate to describe how applicable control requirements in s. NR 445.07(1)(c), (2), (3) or (4) or 445.09(3) will be met no later than the last day of the eighteenth calendar month after the effective date of this section... [revisor inserts date] in accordance with procedure in sub. (7)(a).
2. Achieve compliance with applicable emission limitations and control requirements no later than the last day of the thirty-sixth calendar month after the effective date of this section... [revisor inserts date].
3. Submit the required information in accordance with sub. (7).

**(7) COMPLIANCE DEMONSTRATION AND NOTIFICATION REQUIREMENTS.** The owner or operator of any source required to achieve compliance in accordance with the schedule in sub. (6)(c) shall demonstrate compliance by doing the following as applicable:

(a) Submit the information required under sub. (6)(c)1. on the application form required for an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

(b) For all sources, submit all of the following information to the department:

1. The hazardous air contaminants in Table A, B and C of s. NR 445.07 the facility is capable of emitting in an amount greater than the threshold value listed for the contaminant in the applicable table.
2. The emission limitation applicable to each hazardous air contaminant identified under subd. 1.
3. The method or combination of methods used for achieving compliance under sub. (2) or (3) with the applicable standard for each hazardous air contaminant.
4. A description of the records that will be kept on site to verify continuous compliance for each hazardous air contaminant with its applicable standard.
5. A signed and dated statement by the responsible official stating that the information is accurate to the best of his or her knowledge and belief, and that all of the requirements of this subchapter have been met.

**Note:** Application forms for par. (a) may be obtained from, and submitted to, the regional offices and service centers of the department or:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: Operation Permits.

The address for submittal of information under par. (b) is:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Compliance Notifications.

**(8) DEPARTMENT REVIEW.** The department shall review information submitted to comply with sub. (6)(c)1. to determine whether to approve, conditionally approve or disapprove the source's method to meet applicable control requirements.

**(9) EXTENSIONS TO COMPLIANCE SCHEDULE.** The department may, at the request of the owner or operator of a source, grant an extension of any applicable compliance deadline in sub. (6)(b) or (c)1. or 2. or s. NR 445.09(4)(a) or (b) for a period not to exceed 180 calendar days.

**(10) SUBSEQUENT REQUIREMENTS.** (a) Notwithstanding the compliance deadline in sub. (6)(c)2., a source needing department approval under sub. (8) shall achieve final compliance with applicable control requirements by the later of the last day of the:

1. Thirty-sixth calendar month after the effective date of this section... [revisor inserts date].

2. Eighteenth calendar month after the department's approval under sub. (8).

(b) The owner or operator of a source that achieved compliance with requirements in subch. II by installing emission control equipment may not be required to install additional control equipment to achieve compliance with this subchapter for a period of 10 years after the installation of the control equipment or the useful life of the control equipment as determined by the department, whichever is less. For the purposes of this paragraph, increasing stack height, other dilution measures or material reformulation may not be construed as installation of emission control equipment. Material reformulation that requires substantial capital expenditures for process equipment that was carried out with prior department approval and that results in a reduction of emissions of hazardous air contaminants that is sufficient to comply with the limitations of this chapter may be construed as installation of emission control equipment under this paragraph.

**NR 445.09 Fuel, control and compliance requirements for compression ignition internal combustion engines combusting fuel oil.** (1) **APPLICABILITY.** This section applies to any compression ignition internal combustion engine that is capable of combusting fuel oil, except for any of the following:

(a) An engine with rated brake power less than 100 horsepower.

(b) An engine used to provide an essential service.

(c) An engine used to power an emergency electric generator exempt under s. NR 406.04(1)(w) or 407.03(1)(u).

(d) An engine manufactured after the effective date of this section... [revisor inserts date] installed to provide substitute power during maintenance or repair of a CI engine subject to sub. (3)(a), provided the substitute engine has a power rating equal to or less than the existing engine, operates less than 10 consecutive days per substitution and meets the fuel requirement in sub. (2).

(2) **FUEL REQUIREMENTS.** Beginning no later than July 15, 2006, the owner or operator of a CI engine shall only combust fuel oil with a sulfur content no greater than the sulfur content that is allowed for on-road use at the time the fuel was purchased, when firing the engine with fuel oil.

**Note:** Federal Diesel Fuel Programs and Regulations can be found at: <http://www.epa.gov/otaq/regs/fuels/diesel/diesel.htm#regs>. As of the effective date of this section... [revisor inserts date], federal requirements state that beginning July 15, 2006, the sulfur content of diesel fuel at the terminal level will be 15 ppm or less.



(3) CONTROL REQUIREMENTS. (a) The owner or operator of a CI engine that stays, or that is intended to stay, in a single location for any 12 consecutive month period, and that combusts or intends to combust 10,000 gallons or more of fuel oil during that period of time, shall do one of the following as appropriate:

1. For an engine manufactured or last rebuilt prior to January 1, 1995, install, operate and maintain a control device that achieves at least 85% overall control of particulate matter emissions or a certified control device that has an overall level of particulate matter emission control that is great enough to ensure that one of the following emission rates is achieved:

a. 0.10 grams per brake horsepower-hour for engines rated from 100 to 750 horsepower.

b. 0.03 grams per brake horsepower-hour engines rated at greater than 750 horsepower.

2. For an engine manufactured or last rebuilt on or after January 1, 1995 and prior to July 1, 2006, install, operate and maintain a certified control device that has an overall level of control that is great enough to ensure that the applicable emission rate in subd. 1.a. or b. is achieved.

3. For an engine manufactured or last rebuilt on or after July 1, 2006 and prior to July 1, 2010, either control particulate matter emissions to a level that is the best available control technology or install, operate and maintain a certified control device that has an overall level of particulate matter emission control that is great enough to ensure that an emission rate of 0.03 grams per brake horsepower-hour is achieved.

4. For an engine manufactured or last rebuilt on or after July 1, 2010, either control particulate matter emissions to a level that is the best available control technology or install, operate and maintain a certified control device that has an overall level of particulate matter emission control that is great enough to ensure that an emission rate of 0.01 grams per brake horsepower-hour is achieved.

Note: Upon request the department will provide information on the availability of control technology to meet the requirements in this paragraph. Contact the Environmental Studies Section of the Bureau of Air Management, 608-266-7718, for additional information.

(b) Paragraph (a) notwithstanding, the department may approve the use of an alternative or equivalent control method to any certified control device specified in par. (a)1., 2., 3. or 4.

(c) The owner or operator of a facility that conducts any testing involving the operation of an engine or group of engines subject to this section where the engine or engines combust, in the aggregate, 40,000 gallons or more of fuel oil in any 12 consecutive month period shall control particulate matter emissions from the facility from the engine or engines subject to this section to a level that is the best available control technology.

**(4) COMPLIANCE DEMONSTRATION, NOTIFICATION REQUIREMENTS AND SCHEDULE.** (a) An owner or operator complying with an emission rate requirement in sub. (3)(a)1. or 2. shall submit all of the following information in writing to the department no later than the last day of the thirty-sixth calendar month after the effective date of this section... [revisor inserts date]. A copy of the information shall also be maintained at the location where the engine is operated.

1. Company name, contact name, phone number and address of the owner or operator of the engine.
2. The location of the engine.
3. The name of the engine manufacturer.
4. The make, model and serial number of the engine.
5. The date the engine was manufactured or last rebuilt.
6. The maximum rated horsepower of the engine.
7. The date the control device was first put into operation.
8. The name of the control device manufacturer.
9. The product or model name of the control device.
10. The manufacturer's performance warranty for the control device expressed as a particulate matter emission rate in grams per brake horsepower-hour.
11. The test method used by the manufacturer to determine the particulate matter emission rate in the manufacturer's performance warranty for the control device.
12. The certifying agency for the control device.

(b) In addition to meeting par. (a)1. to 9., an owner or operator complying with the 85% control requirement in sub. (3)(a)1. shall submit no later than the end of the last day of the thirty-sixth calendar month after the effective date of this section... [revisor inserts date] the results of an emission test conducted to demonstrate compliance with the requirement. A copy of the test results shall also be maintained at the location where the engine is operated.

(c) An owner or operator complying with an emission rate requirement in sub. (3)(a)3. or 4. shall submit all of the information in par. (a)1. to 12. in writing to the department no later than 10 calendar days after startup. A copy of the information shall also be maintained at the location where the engine is operated.

(d) An owner or operator complying with the best available control technology requirement in sub. (3)(a)3. or 4., or a facility constructed or last modified after the effective date of this section... [revisor inserts date] subject to sub. (3)(c), shall submit information describing how the best available control technology requirement will be met in a permit application in accordance with s. NR 406.03. Compliance with the best available control technology requirement shall be demonstrated in accordance with the permit.

**Note:** NR 406.03 requires that owners or operators receive a construction permit prior to commencing operation of the source.

(e) The owner or operator of a facility constructed or last modified before the effective date of this section... [revisor inserts date] subject to sub. (3)(c) shall do both of the following:

1. Meet the schedule in s. NR 445.08(6)(c)1. and 2.
2. Submit information describing how the best available control technology requirement will be met on the application forms required for an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

(f) Any submission made under this subsection shall be signed by the responsible official designated by the owner or operator of source for this purpose, with a dated statement that the information submitted is accurate to the best of the responsible official's knowledge and belief and that all of the requirements of this section have been met.

**Note:** The address for submission of information to under pars. (a), (b) and (c) is:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707

Attention: Compression Ignition Engine Notification.

Application forms for pars. (d) and (e) may be obtained from, and submitted to:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707

Attention: Construction Permit (or) Attention: Operation Permit (as appropriate).

**(5) TEST METHODS AND PROCEDURES.** (a) An owner or operator choosing to comply with the 85% control requirement of sub. (3)(a)1. shall, for each engine, comply with the requirements of ss. NR 439.06 and 439.07. The particulate matter emission reduction across a control device is determined by the following equation:

$$\% \text{ reduction} = 100 \times (\text{baseline emissions} - \text{controlled emissions}) / (\text{baseline emissions})$$

(b) Testing under par. (a) shall be conducted prior to initial notification under sub. (4)(b). Subsequent testing and notification shall be conducted whenever the particulate matter emission control device used to achieve the 85% emission reduction is replaced. The department shall be notified of the results of subsequent tests in writing no later than 60 calendar days after the completion of the test.

(6) RECORDKEEPING. In addition to meeting the recordkeeping requirements of s. NR 439.04(1) and (2), an owner or operator shall:

(a) Keep records of maintenance performed on any particulate matter emission control device used to comply with sub. (3).

(b) For any engine that stays or that is intended to stay in a single location for any 12 consecutive month period, keep the following records:

1. The amount of fuel oil combusted on a monthly basis for any engine not using a certified control device.
2. The power rating and days of operation of any CI engine used to substitute power under sub. (1)(d).
3. The cost of rebuilding any CI engine on a monthly basis.

**NR 445.10 Control and compliance requirements for the handling and storage of coal. (1)**

APPLICABILITY. This section applies to the owner or operator of any stationary source that handles or stores 1,000 tons or more of coal in any 12 consecutive month period.

(2) REQUIREMENTS FOR OUTDOOR FUGITIVE COAL DUST EMISSIONS. No later than the last day of the thirty-sixth calendar month after the effective date of this section...[revisor inserts date], the owner or operator of a source that handles coal or maintains a coal storage pile shall achieve compliance with this section by doing all of the following:

(a) Having the ability to control, in a timely manner, outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property.

**Note:** Examples of measures that would meet the ability to control requirement include active measures such as the application of water or chemical dust suppressants, passive measures such as the use of enclosed delivery or handling systems or solid fencing, or access to third-parties to provide dust suppression, as appropriate. The intent of this section is to allow facilities that suppress dust using water to manage the amount of water applied to avoid potential boiler, handling, or other operational problems, as long as there is sufficient dust control so as not to cause excessive outdoor fugitive coal dust emissions.

(b) Developing and implementing a plan to control outdoor fugitive coal dust emissions in an effort to prevent emissions off the source property. The plan shall include all of the following:

1. Identification of all sources of outdoor fugitive coal dust emissions from coal handling and coal storage piles on the source property.

2. A description of the measures that can be taken to control, in a timely manner, outdoor fugitive coal dust emissions from all sources identified under subd. 1. under the following conditions:

a. Routine operations.

b. Periods of high activity.

c. Periods of increased probability of outdoor fugitive dust emissions.

d. When equipment used to control outdoor fugitive coal dust emissions malfunctions.

**Note:** Suppliers of coal may want to consult with users in development of the plan to ensure that use of the controls provided for in par. (a) does not result in operational problems at a source combusting coal.

Examples of periods of high activity include periods when the daily handling of coal is much greater than usual, such as when unloading a large number of coal shipments at the close of the shipping season. Examples of periods of increased probability of fugitive coal dust emissions include periods or a combination of periods of drought, freezing weather, or forecasts of high winds exceeding 25 miles per hour.

(c) Keeping records of actions taken to control outdoor fugitive coal dust emissions in accordance with s. NR 439.04(2).

(d) Keeping a copy of the plan and records of all actions taken at the facility for inspection upon request.

**(3) REQUIREMENTS FOR NON-FUGITIVE COAL DUST EMISSIONS TO THE AMBIENT AIR.** No later than the last day of the thirty-sixth calendar month after the effective date of this section ... [revisor inserts date], the owner or operator subject to this section shall, for any non-fugitive source of coal dust emissions exhausted through a fabric filter to the ambient air, do one of the following:

(a) Limit visible emissions from each source to 10% opacity.

(b) Limit the quantity, concentration or duration of potential to emit emissions of respirable coal dust from all sources so that ambient air concentration off the source property is less than  $21.6 \mu\text{g}/\text{m}^3$  for any 24 hour averaging period. The owner or operator may rely on information generated by either the EPA screening or refined dispersion model to demonstrate meeting the concentration in this paragraph.

(4) COMPLIANCE CERTIFICATION. No later than the last day of the thirty-sixth calendar month after the effective date of this section ... [revisor inserts date], the owner or operator of a source subject to this section shall certify the source's compliance status. An owner or operator of a source that has requirements at least as stringent as the requirements in sub. (2) or (3) in a permit or order may so state in his or her certification.

**Note:** This is a one-time certification. Certification forms may be obtained from, and submitted to:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Certification form for handling and storage of coal.

**NR 445.11 Compliance requirements for sources of incidental emissions.** (1) The owner or operator of a facility described by a standard industrial classification code listed in Table D, as described in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05(1), or that has actual annual emissions of less than 5 tons of particulate matter and less than 3 tons of volatile organic compounds, shall meet the requirements of subs. (2) to (4) if any of the following apply:

(a) The facility includes operation of one or more of the following processes:

1. A compression ignition internal combustion engine with rated brake power greater than 100 horsepower used as a power source.
2. Any expected source of chlorinated dioxins, furans or PCBs.
3. Sludge incineration.
4. Chrome electroplating.
5. Gasoline dispensing.
6. Manufacture or treatment of a pesticide, rodenticide, insecticide, herbicide or a fungicide resulting in an emission of a hazardous air contaminant listed in Table B of s. NR 445.07.
7. Manufacture or treatment of a pharmaceutical resulting in an emission of a hazardous air contaminant listed in Table C of s. NR 445.07.
8. Solid, hazardous or medical waste incineration.

(b) The presence of one or more of the substances in Table E at the facility is indicated by one of the following:

1. The substance is listed on an approved material safety data sheet or is otherwise brought into the facility.
2. The substance is reasonably expected to be created at the facility through a combustion process or manufacturing process, or through the treatment of raw materials or waste.

(2)(a) The owner or operator of a process identified under sub. (1)(a)1. shall meet the applicable requirements in s. NR 445.09 for that process.

(b) The owner or operator of a process identified under sub. (1)(a)2. to 5. shall meet the applicable requirements in s. NR 445.07(1) for any hazardous air contaminants listed in Table A of s. NR 445.07 for that process.

**Note:** The department will develop a list of the hazardous air contaminants it has determined to be potentially emitted from the processes listed in sub. (1)(a)2. to 5. This list may be obtained by calling the Environmental Studies Section of the Bureau of Air Management at 608-266-7718.

(c) The owner or operator of a process identified under sub. (1)(a)6. shall meet the applicable requirements in s. NR 445.07(2) for any hazardous air contaminants listed in Table B of s. NR 445.07 for that process.

(d) The owner or operator of a process identified under sub. (1)(a)7. shall meet the applicable requirements in s. NR 445.07(3) for any hazardous air contaminants listed in Table C of s. NR 445.07 for that process.

(e) The owner or operator of a process identified under sub. (1)(a)8. shall meet the applicable requirements in s. NR 445.07(4) for that process.

(3) The owner or operator of a facility meeting the criteria in sub. (1)(b) shall meet the applicable requirements in s. NR 445.07(1) for any hazardous air contaminants listed in Table A of s. NR 445.07.

(4) The owner or operator subject to sub. (2) or (3) shall do both of the following:

- (a) Achieve compliance using the procedures allowed under s. NR 445.08(2), (3)(a) or (b) or 445.09(4).
- (b) Meet the applicable compliance schedule under s. NR 445.08(6).

**Note:** Owners and operators of sources affected by this section should refer to chs. NR 406, 407 and 438 to determine whether there are applicable requirements in those chapters for hazardous air contaminants identified under this section.

**Table D**  
**Standard Industrial Classifications for Sources of Incidental Emissions of Hazardous Air Contaminants**

| <b>2-Digit SIC Code or Range</b> | <b>SIC Title</b>  |
|----------------------------------|---|
| 01-09                            | Agriculture, Forestry and Fishing   |
| 15                               | General Building Contractors  |
| 17                               | Special Trade Contractors   |
| 40-45, 47                        | Transportation  |
| 48                               | Communications  |
| 50-51                            | Wholesale Trade, except the following: Coal and Other Minerals and Ores (5052); Scrap and Waste Materials (5093); Chemicals and Allied Products (516); Petroleum and Petroleum Products (517)   |
| 52-59                            | Retail Trade  |
| 60-69                            | Finance, Insurance and Real Estate  |
| 70-89                            | Services, except the following: Laundry, Cleaning and Garment Services (721); Business Services, not elsewhere classified (7389); Automotive Repair Shops (753); Miscellaneous Repair Shops (769); General Medical and Surgical Hospitals (8062); Colleges, Universities and Professional Schools (822); Research, Development and Testing Services (873) |

**Note:** Conversion tables to match 1987 SIC codes to 1997 NAICS codes can be found at <http://www.census.gov/epcd/www/dmaics.htm>.



**Table E**  
**Substances Of Concern for Sources of Incidental Emissions of Hazardous Air Contaminants**

| Substance   | CAS Number |
|---|------------|
| Acetaldehyde  | 75-07-0    |
| Acrolein  | 107-02-8   |
| Acrylamide  | 79-06-1    |
| Acrylic acid  | 79-10-7    |
| Acrylonitrile   | 107-13-1   |
| Ammonia   | 7664-41-7  |
| Arsenic, elemental and inorganic compounds, as As                       | 7440-38-2  |
| Arsine  | 7784-42-1  |
| Benzene   | 71-43-2    |
| Benzo(a)pyrene  | 50-32-8    |
| Beryllium and beryllium compounds, as Be                                | 7440-41-7  |
| Bromine   | 7726-95-6  |
| Bromine pentafluoride   | 7789-30-2  |
| 1,3-Butadiene   | 106-99-0   |
| Cadmium and cadmium compounds, as Cd                                    | 7440-43-9  |
| Carbon tetrachloride  | 56-23-5    |
| Chlorine  | 7782-50-5  |
| Chlorine dioxide  | 10049-04-4 |
| Chlorine trifluoride  | 7790-91-2  |
| Chloroform  | 67-66-3    |
| Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr | 7440-47-3  |
| Chromium (VI): compounds and particulates                               | 7440-47-3  |
| Cobalt, elemental, and inorganic compounds, as Co                       | 7440-48-4  |
| Diborane  | 19287-45-7 |
| 1,2-Dibromoethane (Ethylene dibromide; EDB)                             | 106-93-4   |
| 1,2-Dichloroethane (Ethylene dichloride; EDC)                           | 107-06-2   |
| Diglycidyl ether (DGE)  | 2238-07-5  |
| Ethylene oxide  | 75-21-8    |
| Fluorine  | 7782-41-4  |
| Formaldehyde  | 50-00-0    |
| Hexachlorobenzene (HCB)   | 118-74-1   |
| Hexamethylene-1,6-diisocyanate (HDI)                                    | 822-06-0   |
| Hydrazine and hydrazine sulfate   | 302-01-2   |
| Hydrogen chloride (Hydrochloric acid; Muriatic acid)                    | 7647-01-0  |
| Hydrogen bromide  | 10035-10-6 |
| Hydrogen cyanide  | 74-90-8    |
| Hydrogen fluoride (Hydrofluoric acid)                                   | 7664-39-3  |
| Hydrogen peroxide   | 7722-84-1  |
| Hydrogen sulfide  | 7783-06-4  |
| Indium  | 7440-74-6  |
| Iodine  | 7553-56-2  |
| Isophorone diisocyanate   | 4098-71-9  |
| Lead Acetate, as Pb   | 301-04-2   |
| Lead Phosphate, as Pb   | 7446-27-7  |
| Maleic anhydride  | 108-31-6   |
| Manganese, elemental and inorganic compounds, as Mn                     | 7439-96-5  |
| Mercury, as Hg, alkyl compounds   | 7439-97-6  |
| Mercury, as Hg, aryl compounds  | 7439-97-6  |
| Mercury, as Hg, inorganic forms including metallic mercury              | 7439-97-6  |

| Substance   | CAS Number |
|---|------------|
| Methyl hydrazine  | 60-34-4    |
| Methyl isocyanate   | 624-83-9   |
| Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI) | 101-68-8   |
| Methylene chloride (Dichloromethane)                                | 75-09-2    |
| Nickel and compounds, as Ni   | 7440-02-0  |
| Nitric acid   | 7697-37-2  |
| Octachloronaphthalene   | 2234-13-1  |
| Oxalic acid   | 144-62-7   |
| Pentachloronaphthalene  | 1321-64-8  |
| Pentachlorophenol (PCP)   | 87-86-5    |
| Perchloroethylene (Tetrachloroethylene)                             | 127-18-4   |
| Phenylenediamine (mixtures and isomers)                             | 106-50-3   |
| Phosphine   | 7803-51-2  |
| Phosphoric acid   | 7664-38-2  |
| Phosphorus (yellow)   | 7723-14-0  |
| Phosphorus pentachloride  | 10026-13-8 |
| Platinum, soluble salts, as Pt                                      | 7440-06-4  |
| Propylene dichloride (1,2-Dichloropropane)                          | 78-87-5    |
| Rhodium, soluble compounds, as Rh                                   | 7440-16-6  |
| Selenium and compounds, as Se                                       | 7782-49-2  |
| Sulfuric acid   | 7664-93-9  |
| Tellurium and compounds, except hydrogen telluride, as Te           | 13494-80-9 |
| Tetrafluoroethylene   | 116-14-3   |
| Thallium, elemental and soluble compounds, as Tl                    | 7440-28-0  |
| Tin organic compounds, as Sn  | 7440-31-5  |
| 2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI)          | 584-84-9   |
| Trichloroethylene (Trichloroethene)                                 | 79-01-6    |
| Trimellitic anhydride   | 552-30-7   |
| Triorthocresyl phosphate  | 78-30-8    |
| Tungsten, as W, soluble compounds                                   | 7440-33-7  |
| Vinyl chloride  | 75-01-4    |
| n-Xylene-alpha, alpha'-diamine                                      | 1477-55-0  |

**NR 445.12 Variances. (1) CRITERIA FOR APPROVAL.** The owner or operator of a source subject to

this chapter may apply for and the department may approve a variance from any of the provisions identified in pars.

(a) and (b) if the applicant demonstrates to the satisfaction of the department that applicable provisions are met as follows:

(a) An applicant for a variance from the LAER control requirements in s. NR 445.07(1)(c), (2), (3) or (4)

shall demonstrate all of the following to the satisfaction of the department:

1. Compliance with the LAER control requirement for which the variance has been requested would be economically infeasible.

2. Residual emissions of the hazardous air contaminant in question would not cause significant harm to the

environment or public health.

3. The source's emissions would be controlled to a level that is the best available control technology.

(b) An applicant for a variance from the emission limitation of s. NR 445.07(1)(a) for a contaminant having an standard based on an annual time period shall demonstrate all of the following to the satisfaction of the department:

1. All direct or portable sources owned or operated in the state by the owner or operator of the air contaminant source for which a variance is requested are in, or are on a schedule for, compliance with all other applicable requirements of chs. NR 400 to 499.

2. The emission limitation from which variance is sought is technologically or economically infeasible to meet due to conditions or special circumstances at the source, including adverse environmental or energy impacts.

3. Residual emissions of the hazardous air contaminant in would not cause significant harm to public health.

4. Good faith efforts have been made to comply with s. NR 445.07(1)(a) and all reasonably available alternative operating procedures and interim control measures to minimize emissions of the hazardous air contaminant will be utilized during the duration of the variance.

(2) CONSULTATION. The department shall consult with the department of health and family services to determine that residual emissions would not cause significant harm under sub. (1)(a)2. or (b)3. prior to establishing an emission limitation in a permit or order under this section.

(3) APPLICATION FORMS. Application for a variance under this section shall be submitted on the application forms required for a construction permit, an operation permit, an amendment to an application, renewal of the operation permit, or for a significant revision under s. NR 407.13, as applicable.

Note: Application forms for sub. (3) may be obtained from, and submitted to, the regional and area offices of the department or:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Variance Applications.

(4) NOTICE AND HEARING. The department shall publish a notice of, and hold a public hearing on, any preliminary determination to approve a variance request under this section.

(5) ACTION ON APPLICATIONS. The department shall grant, conditionally grant or deny a variance request within 90 business days after the close of the public comment period on the request.

(6) REVIEW AND REVISION. The department shall review any variance granted under this section on a 5 year basis. Following its review and after notice and an opportunity for a public hearing and public comment, the department may modify, extend or rescind the variance.

**NR 445.13 Review of hazardous air contaminant requirements. (1) PERIODIC REPORTS. (a)** Beginning 3 years after the effective date of this section... [revisor inserts date] and no later than every 3 years thereafter, the department, in consultation with the department of health and family services, shall prepare a report for the natural resources board that reviews information related to listing, de-listing, and setting regulatory thresholds, standards and control requirements for hazardous air contaminants under this chapter.

(b) Beginning 6 years after the effective date of this section... [revisor inserts date] and no later than every 6 years thereafter, the department, in consultation with the department of health and family services, shall prepare a report for the natural resources board that includes all of the following:

1. A review of available information about the likely sources of emissions of and an assessment of whether the criteria set forth in sub. (2)(b) are likely to apply to the hazardous air contaminants identified under par. (a).
2. Recommendations on the need for rule modifications.
3. Recommendations on the need for special studies.

**(2) REVISION OF TABLE LISTS. (a)** The department shall determine that a substance is a hazardous air contaminant that may be listed in Table A, B or C of s. NR 445.07 if the substance can, due to inhalation, cause an adverse health effect and it meets one or more of the following conditions:

1. The substance is classified as a known carcinogen or reasonably anticipated to be carcinogenic by both the International Agency for Research on Cancer and the National Toxicology Program.
2. The substance has a threshold limit value established by the American Conference of Governmental Industrial Hygienists.
3. The substance has a reference concentration established by the United States environmental protection agency with an uncertainty factor of 300 or less.

(b) The department shall list in Table A, B or C of s. NR 445.07 a substance determined under par. (a) to be a hazardous air contaminant if it also determines that none of the following apply to the contaminant:

1. The only critical inhalation effect listed for the substance by the American Conference of Governmental Industrial Hygienists is asphyxiation.
2. The substance possesses an explosive nature requiring safety procedures that preclude ambient concentrations that would present toxicity concerns.
3. The substance has a threshold limit value of greater than or equal to 100 parts per million.
4. The substance has a threshold limit value of greater than or equal to 10 milligrams per cubic meter.

(c) The department may consider any of the following in determining whether to list a hazardous air contaminant in Table A, B or C of s. NR 445.07:

1. Other regulations that may provide adequate protection for public health or welfare.
2. That additional information is necessary to fully assess the need to list the hazardous air contaminant in Table A, B or C.

**(3) REEVALUATION OF LISTING DECISION.** The owner or operator of an affected source or other interested party may submit a written request to, and the department may, reevaluate a determination to list or not to list a substance as a hazardous air contaminant in this chapter. The request shall provide new or additional information for the department's consideration. In conducting a reevaluation, the department shall consider the criteria set forth in sub. (2)(b) and (c) and other information that it deems relevant.

**NR 445.14 Hazardous air contaminant studies.** (1) The department may conduct studies of individual substances or categories or sources of substances if it determines that unique complexities may warrant alternative approaches to those listed in this chapter, or if the department otherwise needs additional information to determine whether to list the contaminant in Table A, B or C of s. NR 445.07.

**Note:** Unique complexities may be the result of the nature of the emissions, the sources of emissions, the management of emissions or other factors. The studies will not include a re-evaluation of the classification of the substance as reported by the American Conference of Government Industrial Hygienists, the United States environmental protection agency, the International Agency for Research on Cancer, or the National Toxicology Program.

(2) The department staff shall, in consultation with affected industry, public health officials and other interested parties, undertake 2 separate studies of the emissions of amorphous and crystalline silica and wood dust.

The studies shall evaluate the sources and amounts of emissions and alternative strategies for minimizing public health risks. The department staff shall report progress on the studies to the natural resources board by 24 calendar months after the effective date of this section... [revisor inserts date].

SECTION 64. NR 445.15(2) and (3) are created to read:

NR 445.15(2)(a) If it is determined that emissions of a hazardous air contaminant from a facility do not comply with an applicable emission requirement for that contaminant, the owner or operator will not be out of compliance with respect to that contaminant if the owner or operator satisfies all of the following:

1. Exercised due diligence and followed the procedures and other provisions in this subchapter for identifying and quantifying hazardous air contaminants.

**Note:** Examples of procedures in this subchapter include stack thresholds, risk-based modeling and applicability criteria for sources of incidental emissions.

2. Based on the results of subd. 1., either concluded that no emission requirements applied to that contaminant or complied with all emission requirements that applied to that contaminant.

3. Within 21 calendar days of making the determination that a hazardous air contaminant does not comply with an applicable emission requirement for that contaminant, submits the determination in writing to the department.

4. By the later of the deadlines in s. NR 445.08(6) or 90 calendar days after making the determination of noncompliance, certifies that the facility meets provisions applicable for the hazardous air contaminant.

(b) After receipt of a written request, the department may, in writing, extend the deadline for achieving compliance with the deadline in par. (a)4.

**Note:** The address for submittal of information and requests for an extension from the deadline in par. (a)4. is:

Wisconsin Department of Natural Resources

Bureau of Air Management

PO Box 7921

Madison WI 53707-7921

Attention: NR 445 Safe Harbor Determinations.

(c) Notwithstanding par. (a), the department retains the authority to order the owner or operator to come into compliance with applicable requirements within a specific time period shorter than the 90 calendar days

whenever compliance in the shorter period of time is feasible and necessary to protect public health and the environment.

(3) The department shall review emissions reported under ch. NR 438 from sources of the contaminants listed in s. NR 410.04(2)(b)5. If the department determines that emissions are of such quantity, concentration or duration that a concentration greater than 2.4% of the contaminant's threshold limit value-time weighted average established by the American Conference of Governmental Industrial Hygienists, in the Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 2000, incorporated by reference in s. NR 484.11(2)(c), is expected to occur off of the source's property, it may establish a limitation in a permit or order that will ensure the source does not cause concentrations off of the source's property that exceed 2.4% of the threshold limit value-time weighted average for any consecutive 24-hour averaging period.

SECTION 65. NR 445.16 Note is created to read:

NR 445.16 Note: The owner or operator of a facility is responsible for determining whether a substance released (or spilled) is considered a hazardous substance as defined in s. 292.01(5), Stats., and whether that hazardous substance was released to the environment. Section NR 706.05(1)(a) contains language that assists in making such a determination. If the facility owner or operator determines that a release of a hazardous substance to the environment has occurred, the spills law, s. 292.11, Stats. and the rules contained in ch. NR 706 apply. Both ch. 292, Stats., and ch. NR 706 contain exemptions to the spill reporting requirements. In addition, s. NR 706.07(2)(b)1., 2., 3. and 4. contain language specifying when those exemptions do not apply, including impacts or threats to the environment, human health or safety. Other regulations, permits, and reporting requirements, including s. NR 439.03(4) and ch. NR 438, may also apply to the hazardous substance release.

SECTION 66. NR 446.02 (intro.) is amended to read:

**NR 446.02 Definitions.** (intro.) The definitions contained in ~~chs. ch.~~ NR 400 and ~~445~~ apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 67. NR 447.02 (intro.) is amended to read:

**NR 447.02 Definitions.** (intro.) The definitions contained in ~~chs. ch.~~ NR 400 and ~~445~~ apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 68. NR 448.02 (intro.) is amended to read:

**NR 448.02 Definitions.** (intro.) The definitions contained in chs. ch. NR 400 and 445 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 69. NR 448.02(1) is renumbered NR 448.02(1m)

SECTION 70. NR 448.02(1) is created to read:

NR 448.02(1) "Beryllium" means the element beryllium. Where weights or concentrations are specified, the weights or concentrations apply to beryllium only, excluding the weight or concentration of any associated elements.

SECTION 71. NR 449.02 (intro.) is amended to read:

**NR 449.02 Definitions.** (intro.) The definitions contained in chs. ch. NR 400 and 445 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

SECTION 72. NR 468.20(1)(b) Note is repealed.

SECTION 73. NR 484.04(23) is amended to read:

| CFR Appendix Referenced                        | Title        | Incorporated by Reference For                                 |
|--|--------------|---|
| NR 484.04<br>(23) 40 CFR part 61<br>Appendix B | Test Methods | NR 400.02(131)<br>NR 439<br>NR 445.02(9m)<br>NR 446 to NR 469 |

SECTION 74. NR 484.05(1) is amended to read:

| Document Reference                              | Document Title                                     | Incorporated by Reference For  |
|---|--|--|
| NR 484.05<br>(1) NTIS Order No. PB<br>87-100012 | Standard Industrial Classification Manual,<br>1987 | NR 400.02(74)<br>NR 400.02(86)<br>NR 400.02(91)<br>NR 400.02(149)<br>NR 405.02(8)<br>NR 407.02(4)(intro.)<br>NR 407.05(4)(b)<br>NR 408.02(5)<br>NR 410.02(4) |



NR 421.02(3)  
 NR 421.02(17)  
 NR 422.02(112)  
 NR 422.095(1)  
 NR 422.15(1)(intro.)  
 NR 438.02(1)  
NR 445.11(1)(intro.)  
 NR 465.02(51)

SECTION 75. NR 484.11(2)(b) is amended to read:

| Document Number        | Title  | Incorporated by Reference For  |
|------------------------|--|--|
| NR 484.11(2)           |  |  |
| (b) ISBN:0-936712-86-4 | 1990-1991 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices | NR 445.04(4)(a)1.<br>NR 445.04(4)(a)2.<br>NR 445.04(4)(b)<br>NR 445.04(4r)(b)4.<br>NR 445.05(4)(a)1.<br>NR 445.05(4)(a)2.<br>NR 445.05(4)(b)<br>NR 445.05(4r)(b)4.<br>NR 445.06(4) |

SECTION 76. NR 484.11(2)(c) is created to read:

| Document Number        | Title   | Incorporated by Reference For                                |
|------------------------|---|--|
| NR 484.11(2)           |   |  |
| (c) ISBN:1-882417-36-4 | 2000 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices | NR 445.07(1)(b)(intro.)<br>NR 445.07(5)(d)2.<br>NR 445.15(3) |

SECTION 77. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2)(intro.), Stats.

SECTION 78. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on April 22, 2003.

Dated at Madison, Wisconsin \_\_\_\_\_

STATE OF WISCONSIN  
 DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
 Scott Hassett, Secretary

(SEAL)

**ORDER OF  
THE STATE OF WISCONSIN NATURAL RESOURCES BOARD  
AMENDING RULES**

The Wisconsin Natural Resources Board adopts an order to amend NR 25.05(1)(gn) and 25.06(2)(c)1. relating to commercial fishing in Lake Michigan

FH-12-03

Analysis Prepared by the Department of Natural Resources

Statutory authority: ss. 29.041, 29.014(1), 29.519(1)(b) and 227.11(2)(a), Stats.  
Statutes interpreted: ss. 29.041, 29.014(1) and 29.519(1)(b), Stats.

The order affects Great Lakes commercial fishing rules.

SECTION 1 closes the season for commercial trawling for smelt on Green Bay until July 1, 2008.

SECTION 2 reduces the total annual allowable commercial harvest of smelt that may be taken from Green Bay from 351,993 pounds to 0 pounds until July 1, 2008.

SECTION 1. NR 25.05(1)(gn) is amended to read:

| Species    | A<br>Green Bay   | B<br>Lake Michigan   | C<br>Lake Superior |
|------------|--|--|--------------------|
| (gn) Smelt | At all times except trawls may not be used prior to July 1, 2008, and after that date may be used only from June 15 to September 30 and only from one hour after sunset to one hour before sunrise | At all times except trawls may be used only from Nov. 15 to April 20 | At all times       |

SECTION 2. NR 25.06(2)(c)1. is amended to read:

NR 25.06(2)(c)1. The total allowable commercial harvest of smelt in any license year may not exceed 1,000,000 pounds in Lake Michigan and Green Bay, of which no more than 351,993 0 pounds may be taken from Green Bay until July 1, 2008, after which no more than 351,993 pounds may be taken from Green Bay.

SECTION 3. EFFECTIVE DATE. The rule contained in SECTION 1 shall take effect on the first day of the month following publication in the Wisconsin administrative register, as provided in s. 227.22(2)(intro.), Stats. The rule contained in SECTION 2 of the order shall take effect on July 1, 2003.

SECTION 4. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on April 22, 2003.

Dated at Madison, Wisconsin \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Scott Hassett, Secretary

(SEAL)