

# Permit Index

<b>TABLE A: LIMITS AND OTHER REQUIREMENTS .....</b>	<b>8</b>
<b>A.1 TOTAL FACILITY REQUIREMENTS .....</b>	<b>8</b>
<b>A.2 DEGREASER/CLEANING MACHINES.....</b>	<b>26</b>
A.2.1 DEGREASERS/CLEANING MACHINES – PLACED IN OPERATION BEFORE JULY 9, 1969.....	26
A.2.2 DEGREASERS/CLEANING MACHINES – PLACED IN OPERATION ON OR AFTER JULY 9, 1969 .....	26
A.2.3 DEGREASERS/CLEANING MACHINES – SUBJECT TO NESHAP SUBP. T.....	27
<b>A.3 MATERIAL USAGE AND PROCESSING OPERATIONS (NON FIBERGLASSING) .....</b>	<b>43</b>
A.3.1 MINN. R. FOR MATERIAL USAGE AND PROCESSING OPERATIONS (NON FIBERGLASSING) – PLACED IN OPERATION BEFORE JULY 9, 1969.....	43
A.3.2 MINN. R. FOR MATERIAL USAGE AND PROCESSING OPERATIONS (NON FIBERGLASSING) – PLACED IN OPERATION ON OR AFTER JULY 9, 1969.....	43
A.3.3 NESHAP SUBP. HHHHHH .....	44
A.3.2 NESHAP SUBP. JJ.....	55
A.3.3 NESHAP SUBP. MMMM.....	59
A.3.4 NESHAP SUBP. NNNN .....	77
A.3.5 NESHAP SUBP. PPPP .....	91
A.3.6 NESHAP SUBP. QQQQ .....	109
A.3.7 NESHAP SUBP. RRRR .....	124
A.3.8 NSPS SUBP. EE .....	139
<b>A.4 FIBERGLASS OPERATIONS.....</b>	<b>143</b>
A.4.1 MINN. R. FOR FIBERGLASS OPERATIONS – PLACED IN OPERATION BEFORE JULY 9, 1969 .....	143
A.4.2 MINN. R. FOR FIBERGLASS OPERATIONS – PLACED IN OPERATION ON OR AFTER JULY 9, 1969 .....	143
A.4.3 NESHAP SUBP. WWWW .....	144
<b>A.5 ENGINES.....</b>	<b>170</b>
A.5.1 ENGINES – STATIONARY INTERNAL COMBUSTION ENGINES.....	170
A.5.2 STATIONARY INTERNAL COMBUSTION ENGINES SUBJECT TO NESHAP ZZZZ ONLY.....	171
A.5.3 ENGINES – STATIONARY CI ICE SUBJECT TO NESHAP ZZZZ AND NSPS IIII .....	196
A.5.4 STATIONARY SI ICE SUBJECT TO NESHAP ZZZZ AND NSPS JJJJ .....	222
<b>A.6 BOILERS.....</b>	<b>234</b>
A.6.1 NEW AND EXISTING BOILERS LOCATED WITHIN AQCR 131.....	234
A.6.2 NEW AND EXISTING BOILERS LOCATED WITHIN THE CITY OF DULUTH .....	234
A.6.3 NEW BOILERS, LOCATED OUTSIDE AQCR 131 AND OUTSIDE THE CITY OF DULUTH.....	235
A.6.4 EXISTING BOILERS, LOCATED OUTSIDE AQCR 131 AND OUTSIDE THE CITY OF DULUTH.....	235
A.6.5 BOILERS SUBJECT TO NESHAP SUBP. DDDDD .....	237
A.6.6 BOILERS SUBJECT TO NESHAP SUBP. JJJJJ .....	248
<b>A.7 STORAGE TANKS .....</b>	<b>254</b>
A.7.1 STORAGE TANKS – CONSTRUCTION 7/7/69 - 6/1/73, STORAGE CAPACITY 2000 - 65,000 GAL .....	254
A.7.2 STORAGE TANKS – CONSTRUCTION 7/7/69 - 6/1/73, STORAGE CAPACITY >65,000 GAL .....	254
A.7.3 OTHER STORAGE TANKS, STORAGE CAPACITY 2,000 – 40,000 GAL.....	255
A.7.4 STORAGE TANKS – STORAGE CAPACITY >40,000 GAL.....	255
A.7.5 STORAGE TANKS SUBJECT TO NSPS SUBP, Kb .....	256
<b>A.8 DIRECT HEATING EQUIPMENT: OVENS AND FURNACES .....</b>	<b>257</b>
A.8.1 NEW AND EXISTING DIRECT HEATING EQUIPMENT .....	257
<b>A.9 FABRIC FILTERS.....</b>	<b>258</b>
A.9.1 FABRIC FILTER SUBJECT TO 40 CFR PT. 64 (CAM) .....	258
A.9.2 FABRIC FILTERS NOT SUBJECT TO 40 CFR PT. 64 (CAM).....	260
<b>A.10 WALL/PANEL FILTERS .....</b>	<b>262</b>
A.10.1 WALL/PANEL FILTERS SUBJECT TO 40 CFR PT. 64 (CAM) .....	262

A.10.2 WALL/PANEL FILTERS NOT SUBJECT TO 40 CFR PT. 64 (CAM) .....	263
<b>A.11 THERMAL OXIDIZER.....</b>	<b>264</b>
A.11.1 THERMAL OXIDIZER SUBJECT TO 40 CFR PT. 64 (CAM) .....	264
A.11.2 THERMAL OXIDIZER NOT SUBJECT TO 40 CFR PT. 64 (CAM) .....	266
<b>A.12 CATALYTIC OXIDIZER .....</b>	<b>268</b>
A.12.1 CATALYTIC OXIDIZER SUBJECT TO 40 CFR PT. 64 (CAM) .....	268
A.12.2 CATALYTIC OXIDIZER NOT SUBJECT TO 40 CFR PT. 64 (CAM) .....	270
<b>TABLE B: SUBMITTALS .....</b>	<b>271</b>
B.1 SOURCE-SPECIFIC SUBMITTALS--ONE-TIME SUBMITTALS OR NOTIFICATIONS.....	272
B.2 SOURCE-SPECIFIC SUBMITTALS—INTERMITTANT SUBMITTALS OR NOTIFICATIONS .....	275
<b>TABLE C: COMPLIANCE SCHEDULE .....</b>	<b>280</b>
C.1 CLEANING MACHINES (DEGREASERS) SUBJECT TO NESHAP SUBP. T.....	280
C.2 SURFACE COATING OF MISC. METAL PARTS AND PRODUCTS SUBJECT TO NESHAP SUBP. MMMM .....	280
C.3 SURFACE COATING OF LARGE APPLIANCES SUBJECT TO NESHAP SUBP. NNNN .....	281
C.4 SURFACE COATING OF PLASTIC PARTS AND PRODUCTS SUBJECT TO NESHAP SUBP. PPPP .....	281
C.5 SURFACE COATING OF WOOD BUILDING PRODUCTS SUBJECT TO NESHAP SUBP. QQQQ.....	282
C.6 SURFACE COATING OF METAL FURNITURE SUBJECT TO NESHAP SUBP. RRRR.....	282
C.7 REINFORCED PLASTIC COMPOSITES PRODUCTION SUBJECT TO NESHAP SUBP. WWWWW .....	282
C.8 STATIONARY ICE NON-EMERGENCY SUBJECT TO NESHAP SUBP. ZZZZ.....	283
C.9 STATIONARY CI ICE COMPLYING USING DIESEL OXIDATION CATALYST SUBJECT TO NESHAP SUBP. ZZZZ.....	283
C.10 BOILERS SUBJECT TO NESHAP SUBP. DDDDD .....	283
C.11 BOILERS SUBJECT TO NESHAP SUBP. JJJJJ.....	283
C.12 PAINT STRIPPING AND MISCELLANEOUS SURFACE COATING OPERATIONS SUBJECT TO NESHAP SUBP. HHHHHH.....	284
C.13 SURFACE COATING OF METAL FURNITURE SUBJECT TO NSPS SUBP. EE .....	284
C.14 STATIONARY CI ICE SUBJECT TO NSPS 40 CFR PT. 60, SUBP. IIII.....	284
C.15 STATIONARY SI ICE SUBJECT TO NSPS SUBP. JJJJ .....	285
C.16 TANKS SUBJECT TO NESHAP SUBP. Kb.....	285
<b>PERMIT APPENDIX A: SOURCE-SPECIFIC CALCULATIONS.....</b>	<b>287</b>
<b>A.1. COMPLIANCE DEMONSTRATION FOR FACILITIES WITHOUT RECORDS .....</b>	<b>287</b>
<b>A.2. CALCULATIONS FOR COMBUSTION SOURCES .....</b>	<b>287</b>
A.2.1 NO <sub>x</sub> AND CO EMISSIONS LIMITS ≤ 25 TONS PER YEAR BASED ON A 12-MONTH ROLLING SUM. ....	287
<b>A.3. CALCULATIONS FOR MATERIAL USAGE AND PROCESSING OPERATIONS .....</b>	<b>291</b>
A.3.1 DEMONSTRATION OF COMPLIANCE WITH PERMIT LIMITS .....	291
A.3.2 MATERIAL CONTENT IDENTIFICATION .....	291
A.3.3 PM/PM <sub>10</sub> /PM <sub>2.5</sub> EMISSIONS BASED ON A 12-MONTH ROLLING SUM .....	292
A.3.4 VOC EMISSIONS BASED ON A 12-MONTH ROLLING SUM .....	296
A.3.5 HAP EMISSIONS BASED ON A 12-MONTH ROLLING SUM .....	298
<b>PERMIT APPENDIX B – GENERAL PROVISIONS INDEX.....</b>	<b>302</b>
<b>TABLE B1: WHICH GENERAL PROVISIONS APPLY TO EQUIPMENT SUBJECT TO THE NESHAPS IN THIS PERMIT? .....</b>	<b>303</b>
B.1.1 40 CFR PT. 63, SUBPS. T, MMMM, PPPP AND JJJJJ .....	303
B.1.2 40 CFR PT. 63, SUBPS. WWWWW, ZZZZ, DDDDD AND HHHHHH:.....	317
B.1.3 CONTINUED FOR 40 CFR PT. 63, SUBPS. NNNN, QQQQ, RRRR, AND JJ .....	329
<b>TABLE B2 – GENERAL PROVISIONS REQUIREMENTS.....</b>	<b>338</b>
<b>PERMIT APPENDIX C: 40 CFR PT. 63, NESHAP SUBP. T SUPPLEMENTARY INFORMATION .....</b>	<b>350</b>
TABLE T1: PERFORMANCE, MONITORING, RECORDKEEPING AND REQUIREMENT FOR CONTROL DEVICES.....	350
TABLE T2: CONTROL COMBINATION FOR BATCH VAPOR SOLVENT CLEANING MACHINES .....	354
TABLE T3: CONTROL COMBINATIONS FOR INLINE SOLVENT CLEANING MACHINES .....	354
TABLE T4: FACILITY-WIDE EMISSION LIMITS FOR FACILITIES WITH SOLVENT CLEANING MACHINES.....	355

EQUATION T1: WEIGHTED EMISSIONS .....	355
EQUATION T3: TOTAL HAP EMISSIONS FOR PREVIOUS 12 MONTHS .....	356
EQUATION T4: TOTAL FACILITY TOTAL HAP EMISSIONS FOR PREVIOUS 12 MONTHS.....	356
<b>PERMIT APPENDIX D FOR 40 CFR PT. 63, SUBP. MMMM .....</b>	<b>357</b>
D.1 EMISSION LIMITS – NEW AND EXISTING SOURCES.....	357
D.2 COMPLIANT MATERIAL OPTION REQUIREMENTS .....	359
D.3 EMISSION RATE WITHOUT ADD-ON CONTROLS OPTION REQUIREMENTS.....	360
<b>PERMIT APPENDIX E FOR 40 CFR PT. 63, SUBP. PPPP .....</b>	<b>366</b>
E.1 EMISSION LIMITS – NEW AND EXISTING SOURCES .....	366
E.2 COMPLIANT MATERIAL OPTION REQUIREMENTS .....	368
E.3 EMISSION RATE WITHOUT ADD-ON CONTROLS OPTION REQUIREMENTS .....	368
<b>PERMIT APPENDIX F: 40 CFR PT. 63, SUBP. WWWWWW SUPPLEMENTARY INFORMATION .....</b>	<b>374</b>
TABLE W1.....	374
W.1 EQUATION W1.....	377
W.2 EQUATION W2.....	377
W.3 EQUATION W3.....	378
W.4 EQUATION W4.....	378
W.5 EQUATION W5.....	379
TABLE W2: EMISSION FACTORS FOR OPEN MOLDING OF COMPOSITES.....	380
<b>PERMIT APPENDIX G FOR 40 CFR PT. 63, SUBP. NNNN.....</b>	<b>383</b>
G.1 COMPLIANT MATERIAL OPTION REQUIREMENTS .....	383
G.2 EMISSION RATE WITHOUT ADD-ON CONTROLS OPTION .....	384
<b>PERMIT APPENDIX H FOR 40 CFR PT. 63, SUBP. QQQQ .....</b>	<b>389</b>
H.1 VOLUME FRACTION CALCULATION .....	389
H.2 ORGANIC HAP CONTENT CALCULATION .....	389
H.4 ORGANIC HAP EMISSION CALCULATION.....	390
H.4 CALCULATION OF TOTAL VOLUME USED.....	392
H.5 CALCULATION OF ORGANIC HAP EMISSION RATE .....	392
H.6 MASS FRACTION DETERMINATION FOR SOLVENT BLENDS .....	393
<b>PERMIT APPENDIX I FOR 40 CFR PT. 63, SUBP. RRRR .....</b>	<b>395</b>
I.1 COMPLIANT MATERIAL OPTION REQUIREMENTS.....	395
I.2 EMISSION RATE WITHOUT ADD-ON CONTROLS COMPLIANCE OPTION .....	396
<b>PERMIT APPENDIX J FOR 40 CFR PT. 60, SUBP. EE .....</b>	<b>401</b>
J.1 CALCULATION OF MASS VOCs USED DURING EACH CALENDAR MONTH .....	401
J.2 CALCULATION OF THE TOTAL VOLUME OF COATING SOLIDS USED EACH CALENDAR MONTH .....	401
J.3 DETERMINATION OF TRANSFER EFFICIENCY.....	402
J.4 CALCULATION OF VOC'S CONSUMED PER VOLUME COATING SOLIDS APPLIED .....	403
<b>PERMIT APPENDIX K – INSIGNIFICANT ACTIVITIES AND APPLICABLE REQUIREMENTS.....</b>	<b>404</b>
K.1 INSIGNIFICANT ACTIVITIES AND APPLICABLE REQUIREMENTS .....	404
K.2 INSIGNIFICANT ACTIVITIES REQUIRED TO BE LISTED FOR PART 70 SOURCES .....	406
K.3 CONDITIONALLY INSIGNIFICANT ACTIVITIES .....	406

**NOTICE TO THE PERMITTEE:**

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

**PERMIT SHIELD:**

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit must be deemed compliance with specific provisions of the applicable requirements identified in the permit as the basis of each condition.

Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Table A contains the limits and other requirements with which your facility must comply. These limits are located in the first column of the table (What to do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices are included in your permit. Appendices that are included are listed at the end of Table A, under total facility requirements. Requirements in all appendices are enforceable conditions of this permit.