

GENERAL INSTRUCTIONS

Before completing any forms, please review the general instructions for definitions, applicability and other information necessary to understand, complete, assemble and submit the Renewable Operating Permit Application. Copies of the Michigan Air Pollution Control Rules or Operational Memoranda may be obtained by contacting a District Office as identified in Appendix A or the Air Quality Division (AQD) internet site at <http://www.deq.state.mi.us/aqd>.

RENEWABLE OPERATING PERMIT PROGRAM OVERVIEW

AUTHORITY

Renewable Operating (RO) Permits are required pursuant to Title V of the amendments to the federal Clean Air Act of 1990 (CAA) and Section 324.5506 [M.S.A. 13a.5506] of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended (Act 451). The permit application forms are designed to collect information in accordance with these requirements.

The Rules cited in this document are derived from the Michigan Air Pollution Control Rules, R 336.1101 - R 336.2706 of the Michigan Administrative Code (MAC). It is important to note that the citations provided (e.g., Rule 210, Rule 212, etc.) are abbreviated versions of the rule numbers as they appear in the MAC. For example, Rule 210 and Rule 212 will appear in the MAC and Air Pollution Control Rules as R 336.1210 and R 336.1212. For more information about regulatory citations and how to obtain laws and rules on the Internet, refer to Appendix C of the *Michigan Manufacturers' Guide to Environmental and Safety and Health Regulations*. See Appendix B – Internet Sites for web site location.

ADMINISTRATIVE COMPLETENESS

The RO Permit application forms are designed to collect all information necessary for an administratively complete initial, modification or renewal application as required by Section 5506 of Act 451. The date of receipt of the application submittal pursuant to Rule 210 is determined by the day the application is received at the appropriate AQD or Wayne County office. The AQD will determine administrative completeness for an RO Permit application using manual and electronic screening. If the RO Permit application is submitted in paper form only, the AQD will make the administrative completeness determination within 60 days. If Permit Application Submittal System (PASS) software is used to electronically submit the RO Permit application along with the paper application, the AQD will make the administrative completeness determination within 15 days. See definitions for description of PASS.

CERTIFICATIONS

The responsible official, as defined in Rule 118(j), must certify that based on information and belief formed after reasonable inquiry, the statements and information in all submittals are true, accurate and complete. In accordance with the CAA, federal Credible Evidence Rule (62 FR 8314, February 24, 1997) and United States Environmental Protection Agency's (USEPA) White Paper Number 2 (Lydia Wegman to Regional Air Directors, March 5, 1996), the application must include information on all observed, documented, or known instances of noncompliance. Rule 210(2) specifies that a certification is required when submitting an initial or renewal application, supplemental information, as well as for applications to amend or modify an issued RO Permit. Knowingly certifying wrong information is grounds for enforcement action. A Certification form (C-001) is used to identify the responsible official(s) and certify submittals.

APPLICATION SHIELD

Rule 210(1) defines an application shield as, "the ability to operate the process and process equipment at a stationary source while a timely and administratively complete application is being reviewed and acted upon by the department." An application is considered timely pursuant to Rule 210(4)-(7) and it is considered administratively complete pursuant to Rule 210(2). Failure to provide a timely response to information requests may result in loss of the application shield. Loss of the application shield is grounds for enforcement action pursuant to Rule 210(1).

CONTACT INFORMATION

All inquiries, information requests and submittals for RO Permit applications should be directed to the appropriate District Offices of the AQD or Wayne County Air Quality Management Division as identified in Appendix A. For additional assistance, see the AQD and Environmental Assistance Division (EAD) Internet sites at <http://www.deq.state.mi.us/aqd> and <http://www.deq.state.mi.us/ead/eosect/caap/> or call EAD at 1-800-662-9278.

APPLICABILITY

The RO Permit program applies to stationary sources as described in Rule 211. This document provides instructions for completing an RO Permit Application for initial submittals, modifications and renewals. This document does not address how to determine Rule 201 and Rule 210 applicability. Refer to *Michigan Guide to Air Use Permits to Install* and *Guide Book for Determining Applicability* for guidance on these determinations. Additionally, this document does not address how to determine Rule 215 or Rule 216 applicability for changes at a source after an RO Permit is issued. Refer to *Revised Operational Memorandum No. 2 - Changes at a Stationary Source after RO Permit Issuance* for information on the provisions of Rule 215 and Rule 216. These documents are available upon request. See Appendix B – Internet Sites for AQD and EAD web site locations or call EAD at 1-800-662-9278 for additional information.

- *Initial Application*
After it is determined that a source is subject to the RO Permit program, an initial application must be submitted in accordance with Rule 210. Parts 1 and 2 of these instructions address initial application requirements.
- *Amendments, Modifications and Notifications of Change*
After an RO Permit is issued, future changes at the source must eventually be incorporated into the RO Permit. The procedures for processing the changes to an existing RO Permit depend entirely on the nature of the change, as specified in Rules 215 and 216. The Change Notification & Amendment/Modification Application form (M-001) is used to provide notification of Rule 215 changes and to submit applications for Rule 216 amendments and modifications after the RO Permit is issued. The specific procedures for using this form and for completing notifications and/or applications are provided in Part 3 of these instructions.
- *Renewals*
Rule 213(7) specifies that each RO Permit shall be issued for a fixed term of not more than 5 years. Rule 210(7) specifies that an administratively complete application for renewal of an RO Permit shall be considered timely if it is received by the AQD not more than 18 months, but not less than 6 months, before the expiration date of the current RO Permit. An application for renewal of an RO Permit must meet the same criteria as an application for an initial RO Permit as specified in Rule 210(2). Parts 1 and 2 of these instructions address renewal application requirements.

FORMS OVERVIEW

These forms must be used for all RO Permit application actions including initial applications, notifications of change, amendments, modifications and renewals. The forms are labeled "Renewable Operating Permit Application." The forms are located in Parts 2 and 3 of this packet and contain the forms (one of each type) and detailed instructions for each form. If additional forms are needed to report all the required data, make photocopies. The detailed instructions for each form are provided with the form to which they apply. Each numbered question is identified in bold type with instructions following. Examples are given in parenthesis. Some instructions are also provided on the forms themselves. The following is a brief description of each form and a summary of the original RO Permit application forms that it replaced.

- S-001 replaces the original S-001, S-002 (part)
- SI-001 replaces the remainder of the original S-002
- S-002 replaces the original S-003
- C-001 replaces the original S-004
- EU-001 replaces the original DV-001
- EU-002 replaces part of the original G-001
- EU-003 replaces the original G-001
- FG-001 replaces the original G-002
- AR-001 and AR-002 replaces the original AR-001, AR-002, and AR-003
- MS-001, MS-002, and MS-003 replace the original MS-001, MS-002, MS-003, MS-004, MS-005, MS-006, MS-007 and MS-008
- AI-001 replaces the original AI-001, CP-001, CP-002 and CI-001
- M-001 is an entirely new form
- A-101 from the Michigan Air Emission Reporting System (MAERS) is used in place of the original MI-001, MI-002, MI-003 and MF-001
- E-101 from the Michigan Air Emission Reporting System (MAERS) is used in place of the original MF-002
- SV-101 from the Michigan Air Emission Reporting System (MAERS) is used in place of the original SV-001

Refer to the detailed instructions for specific information, examples and a description of the applicability and use of each form.

Source (S-001): This form is used for basic source information and can be completed independent of the rest of the application. Information contained in this form includes company name, location of the source and owner information. Required attachments (e.g., building layouts, site plans, etc.) must be included in the application. See definition of Additional Information form.

Contact/Responsible Official (S-002): This form is used for information concerning the contact and responsible official for the application and permit. If there is more than one contact or responsible official for the source, or a contact or responsible official for each section, information must be completed for each contact or responsible official.

Certification (C-001): This form is used as a certification for all RO Permit application actions and notifications of change, amendments or modifications to an RO Permit.

Exempt Emission Unit (EU-001): This form is used to identify exempt equipment pursuant to Rule 212(4). Rule 212(4) requires the source to provide a description of the exempt emission unit, including control equipment. See EU-001 instructions for additional details regarding exempt emission units with existing permits.

Emission Units For Rules 281(h), 287(c) or 290 (EU-002): This form is used to identify emission units, describe all process equipment and list control devices for emission units that meet the requirements of the listed rules.

Emission Unit (EU-003): This form is used to identify emission units, describe all process equipment and list control devices and stacks with applicable requirements which belong to the emission unit.

Flexible Group (FG-001): This form is used to identify groups of emission units with common or identical applicable requirements.

Applicable Requirements (AR-001 and AR-002): These forms are used to identify applicable requirements (see Rule 101(o)) and requirements established in an RO Permit pursuant to Rule 213.

Monitoring Systems (MS-001, MS-002 and MS-003): These forms are used to identify monitoring and recordkeeping information, testing and sampling information, and reporting information that is used to show compliance with each applicable requirement that requires a compliance demonstration. Monitoring systems may be existing or proposed. Some method of compliance demonstration must be identified for every emission limit, material limit, and operational restriction. Therefore, if there is no existing monitoring system, the source must propose a compliance demonstration method.

Section Identification (SI-001): This form is used for Section information if the permit is sectioned. This form provides identification for each Section of a sectioned permit, and lists all of the emission units, flexible groups, contact(s) and responsible official(s) associated with the Section. See Sectioned RO Permits heading on page 8 for further details.

Additional Information (AI-001): This form is used to submit information or attachments to supplement the specific information requested in the application including confidential information, compliance plans, progress reports and process flow diagrams. A narrative description and any other information that the applicant feels is necessary to supplement the specific information requested may also be included. Additional information is not limited to text and may include calculations, design parameters, tables or small diagrams. Attachments such as drawings, graphs, manufacturer's literature, demonstrations or protocols may also be necessary to supplement or clarify the information on a form. Any attachments specifically required for an individual form are identified on the form, or in the instructions for that form. Attachments must be labeled with the Additional Information ID. If the information or attachment is more than one page in length, label each page to show the relationship between pages. Additional information or attachments must be provided using an AI-001. See the instructions for AI-001 for details.

Change Notification or Amendment/Modification Application (M-001): This form is used to identify any changes after RO Permit issuance. Pursuant to Rule 215, this form provides a notification of change. Pursuant to Rule 216, this form provides application for administrative amendments, minor modifications, or significant modifications. See Part 3 of the Instructions for further information.

CREATING OPERATOR IDs

By definition, an Operator's ID consists of a pre-established ID prefix and up to 14 additional alphanumeric characters. Operator IDs should be simple, self-descriptive and unique. The ID should help identify the information to which it pertains. For example, an Operator's Emission Unit ID for a boiler may be **EUBOILER** and an Operator's Flexible Group ID for a group of similar boilers may be **FGBOILERS**. Similarly, an Operator's Applicable Requirement ID may be **AR1EL001**. An example of an Operator's Monitoring System ID for a continuous emissions monitor system (CEMS) for carbon monoxide (CO) is **MSCEMSCO** and an example of an Operator's ID for Additional Information is **AIBOILERINFO#1**.

Additionally, if an RO Permit is sectioned, it should include a consistent suffix to each Operator's ID that specifies the section to which it pertains. For example, if an RO Permit has two sections and each section contains a paint booth, the Operator's Emission Unit IDs might be **EUPAINTBOOTH1S1** and **EUPAINTBOOTH1S2**. In this case, "S1" would refer to section one in the RO Permit and "S2" would refer to section two in the RO Permit.

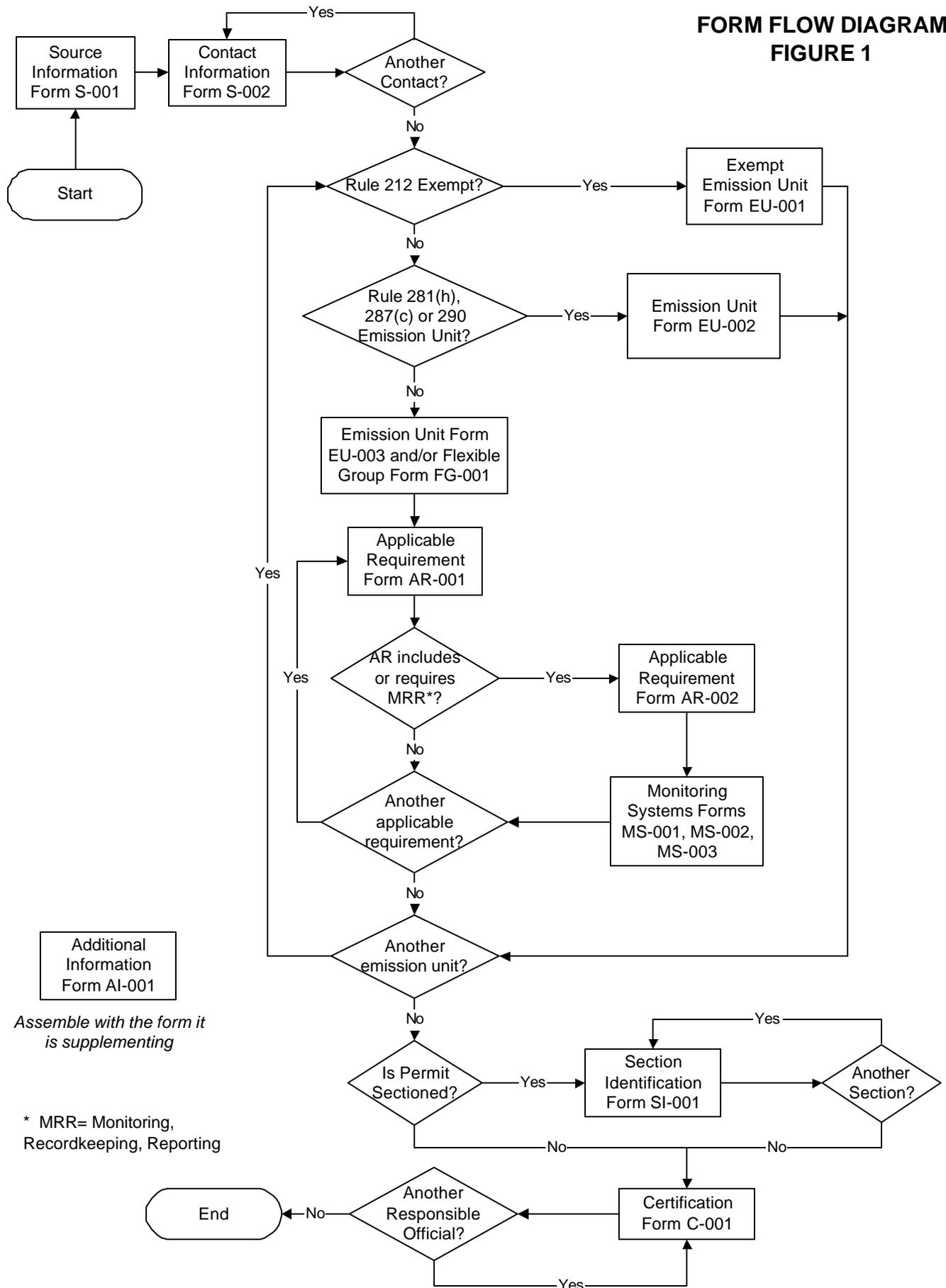
Operator's IDs can be established through a New Source Review (NSR) or RO Permit application or Michigan Air Emissions Reporting System (MAERS). Each emission unit, flexible group, and stack at a stationary source should only have one unique Operator's ID that is consistent between NSR Permits, RO Permits, and MAERS. Changes to an existing Operator's ID will only be made through an NSR or RO Permit application.

FORM RELATIONSHIP AND APPLICATION ASSEMBLY

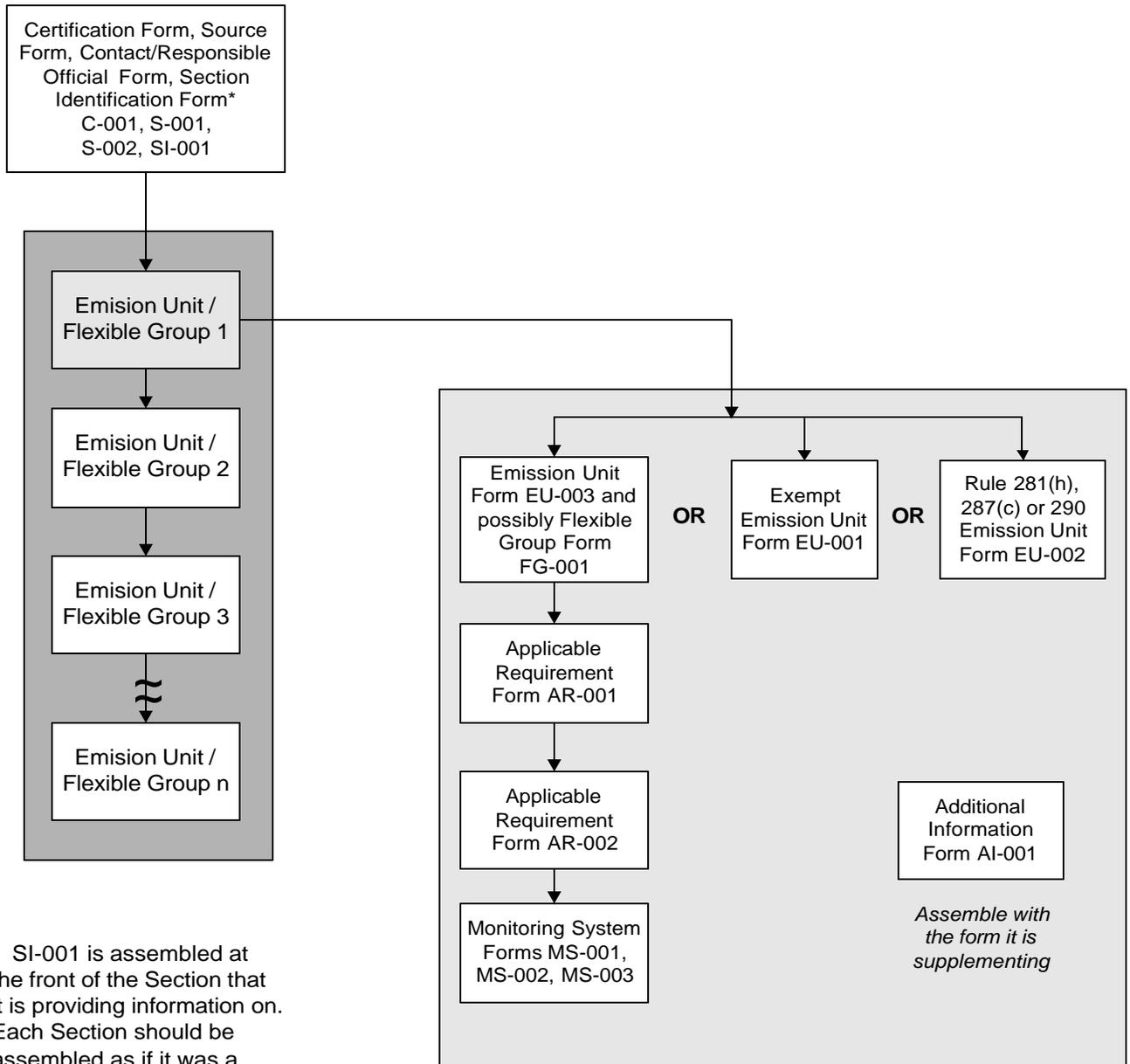
Form Relationships and Application Assembly for Amendments, Modifications and Notifications of Change are discussed in Part 3 of the instructions.

The Form Flow Diagram (Figure 1) was designed to show the connection between the different form types. It also represents a recommended form flow for completing the application. The RO Permit program is based on applicable requirements; therefore all of the forms may not be required for a complete application. The Application Assembly Diagram (Figure 2) and the detailed instructions for each form provide an explanation of how the forms are related.

**FORM FLOW DIAGRAM
FIGURE 1**



**APPLICATION ASSEMBLY DIAGRAM
FIGURE 2**



* SI-001 is assembled at the front of the Section that it is providing information on. Each Section should be assembled as if it was a separate permit application, following the flows on this figure.

SECTIONED RO PERMITS

An RO Permit application contains one section by default. It is not necessary to section the permit beyond this default. The sectioning option is provided to allow a source to further divide the RO Permit application by physical locations or different management organizations (i.e. responsible officials) within the stationary source.

An RO Permit may be sectioned to simplify certification requirements for a stationary source that has more than one responsible official. This is because each responsible official must certify compliance with all applicable requirements, including the General Requirements. As stated in the RO Permit detailed instructions, multiple sections may be created for a stationary source with multiple physical locations or multiple responsible officials. Sections should not be created for separating emission units, flexible groups, or buildings within a stationary source.

The following examples should clarify the sectioning concept.

- A chemical plant has 100 different buildings. Production is divided into three separate areas: pharmaceuticals, adhesives and pesticides. These three areas contain 400 different emission unit/process groups. For sectioning, the source could create three sections, one for each production area.
- An automotive assembly plant and a powerhouse have 700 emission unit/process groups. For sectioning, the source could create two sections, one for the assembly plant and one for the powerhouse.
- A gas processing plant and a gas sweetening plant located on adjacent properties with different owners. For sectioning, the source could create two sections, one for the gas processing plant and one for the gas sweetening plant.
- A landfill and a landfill gas processing plant located on adjacent properties with different owners. For sectioning, the source could create two sections, one for the landfill and one for the landfill gas processing plant.

APPLICATION SUBMITTAL

ELECTRONIC SUBMITTAL

The RO Permit Application may be generated and submitted electronically by using the PASS software. Contact the District Office as identified in Appendix A or the AQD Internet site at <http://www.deq.state.mi.us/aqd> for a list of acceptable electronic submittal methods. Although the RO Permit Application is submitted electronically, a paper copy of the application forms must also be submitted. The PASS software allows the company to print the application forms. The RO Permit application package must be assembled in accordance with the Application Assembly Diagram (Figure 2). All submittals should be made to the appropriate AQD District Office. Use Appendix C to locate the county name in which the source is physically located and determine the appropriate AQD District Office.

PAPER SUBMITTAL

All information must be printed out from the PASS software or hand-printed clearly in ink or typed. Photocopies of the original blank application forms may be made in order to prepare a complete paper submittal. The RO Permit application package must be assembled in accordance with the Application Assembly Diagram (Figure 2). All submittals should be made to the appropriate AQD District Office. Use Appendix C to locate the county name in which the source is physically located and determine the appropriate AQD District Office.

DEFINITIONS

Administrative Amendments: Defined in Rule 216(1). See *Revised Operational Memorandum No. 2 - Changes at a Stationary Source after RO Permit Issuance* or AQD guidance documents for details regarding administrative amendments of RO Permits.

Applicable Requirement: Defined in Rule 101(o).

Best Available Control Technology (BACT): An emission limitation based on the maximum degree of emission reductions that can be achieved through the application of available production methods, systems and techniques. Energy costs, environmental and economic impacts, and other factors are also taken into consideration.

Clean Air Act (CAA): Amendments to the federal Clean Air Act were signed into law on November 15, 1990. The main points of the amendments include attainment deadlines for non-attainment areas for National Ambient Air Quality Standard (NAAQS) pollutants, guidelines for reduction of motor vehicle emissions, and air toxics that utilize Maximum Achievable Control Technology (MACT) standards. Likewise, plans for reducing acid rain precursors, sulfur oxides (SO_x) and nitrogen oxides (NO_x), are outlined. The operating permit program is introduced in Title V, stating that every major pollution source must have an operating permit, renewed every five years, that specifies its compliance requirements. The remaining parts of the Act include enforcement, climatic protection through the phase-out of chlorofluorocarbons (CFCs) and other stratospheric ozone damaging chemicals, and the final part which provides for research programs and monitoring activities.

Code of Federal Regulations (CFR): Regulations published by the executive departments and agencies of the federal government. Title 40 of the CFR contains all of the federal rules and regulations relating to protection of the environment.

Confidential Information: Specific information identified as confidential in the application which will not be made available to the general public. Information which may be kept confidential is limited. An AI-001 must be completed for all confidential information. See *Operational Memorandum No. 10 – Procedures for Handling of Confidential Materials and Freedom of Information Requests for Confidential Materials* for details on what may be kept confidential. Additional instructions concerning confidential information can be found in the instructions for AI-001.

Emission Unit: A device or a group of devices that operate together with a dependency between devices. An emission unit contains one or more process devices and zero or more control devices and related stacks. See *Operational Memorandum No. 6 – Procedures for Determining Emission Units* for additional guidance on determining emission units.

Exempt Emission Unit: A device or a group of devices that operate together with a dependency between devices that are exempt from Rule 210 pursuant to Rule 212. See Rule 212 for a complete list of emission units that are exempt from Rule 210. Also refer to the detailed instructions for EU-001.

Form Type: An alphanumeric identifier created by the AQD to identify each form (e.g., S-001, EU-001, AR-001).

Grandfathered: The Michigan Air Pollution Control Rules became effective on August 15, 1967. Therefore, any emission unit constructed after August 15, 1967, would be subject to the regulatory requirements enacted on that date. Emission units installed, modified or reconstructed before August 15, 1967 are not required to apply for a permit to install pursuant to Rule 201. For example, an emission unit installed in January 1965 would be grandfathered from Rule 201 if it was not modified or reconstructed after August 15, 1967. In general, an emission unit is considered to be grandfathered if it was installed,

modified or reconstructed prior to the promulgation date of an applicable requirement, unless the applicable requirement applies to existing emission units.

Hazardous Air Pollutants (HAPs): Air pollutants that are not covered by ambient air quality standards but which, as defined in the CAA, may reasonably be expected to cause or contribute to irreversible illness or death. The HAPs are defined in Section 112(b) of the CAA and listed in 40 CFR Part 63, Subpart C. A complete list of HAPs can be viewed at the USEPA web site. See Appendix B – Internet Sites for web site location.

ID Prefix: A code created by the AQD for specific types of IDs. The prefix becomes part of the ID and must be included whenever the ID is used. The following is a list of the ID prefixes:

MS – Monitoring Systems	SV – Stack and Vent	EU - Emission Unit (including exempt EU)
FG – Flexible Group	AR – Applicable Requirement	AI - Additional Information

Maximum Achievable Control Technology (MACT): An emission limitation that is equivalent to or more stringent than an emission limitation achieved, in practice, by the best controlled similar affected source. The emission limitation shall reflect the maximum degree of reduction in emissions that the permitting authority determines is achievable by the constructed or reconstructed major source. See the USEPA Unified Air Toxics Website listed in Appendix B – Internet Sites. See also *Operational Memorandum No. 15 – Procedures for Processing Permit Applications Subject to Federal Clean Air Act Section 112(g)* for additional details regarding case-by-case MACT determinations. The MACT standards are published as National Emission Standard for Hazardous Air Pollutants (NESHAP) in 40 CFR Part 63.

Major Source: Defined in 40 CFR Part 70 – State Operating Permit Programs (70.2 Definitions).

Minor Modification: Defined in Rule 216(2). See *Revised Operational Memorandum No. 2 - Changes at a Stationary Source after RO Permit Issuance* or AQD guidance documents for details regarding minor modifications of RO Permits.

Modification: Making a physical or operational change in an existing emission unit which will increase the amount of any air contaminant not already allowed to be emitted under the conditions of a current permit or order. Also, a modification cannot result in the emission of any toxic air contaminant into the outer air not previously emitted. An increase in the hours of operation or an increase in the production rate up to the maximum capacity of the process or process equipment shall not be considered to be a change in the method of operation. The exception to this is if the process equipment is subject to enforceable permit conditions or enforceable orders which limit the production rate or the hours of operation; or both, to a level below the proposed increase.

National Ambient Air Quality Standards (NAAQS): Air quality standards established by the USEPA that apply to outside air throughout the country. The NAAQS set standards for six pollutants known as the criteria air pollutants to protect human health and welfare. The criteria air pollutants include: ozone (O₃), carbon monoxide (CO), total suspended particulate matter (PM), sulfur dioxide (SO₂), Lead (Pb), and nitrogen dioxide (NO₂).

National Emission Standard for Hazardous Air Pollutants (NESHAP): Emission standards set by the USEPA for air contaminants not covered by the NAAQS that may cause an increase in death or serious irreversible or incapacitating illness. The NESHAP regulations are promulgated in 40 CFR Parts 61 and 63. The NESHAP regulations promulgated prior to the CAA were published in 40 CFR Part 61. The NESHAP regulations promulgated as a result of the CAA are published in 40 CFR Part 63.

New Source Review (NSR) Permit: A Permit to Install, required by Rule 201, which authorizes the construction, installation, relocation or alteration of any process, fuel-burning, refuse-burning or control equipment in accordance with approved plans and specifications.

New Source Performance Standards (NSPS): Uniform national USEPA air emissions standards that limit the amount of pollution allowed from specific new sources or from existing sources that have been modified or reconstructed. The purpose of NSPS is for new sources of emissions to emit less pollution than their predecessors. The NSPS regulations are promulgated in 40 CFR Part 60.

Notification of Change: Defined in Rule 215. See *Revised Operational Memorandum No. 2 - Changes at a Stationary Source after RO Permit Issuance* for details regarding Notice of Change for RO Permits.

Operator's ID: A unique ID created by the source to identify and reference information in the application. The Operator's ID consists of a pre-established ID Prefix (e.g., EU, FG, AR, MS and AI) and up to 14 additional alphanumeric characters. Please see the section *Creating Operator IDs*.

Parametric Monitoring: A system that tracks process operating data and/or control data and uses the data as indicators for emissions. Parameters that may be measured include: vapor pressure, pressure drop, air flow, liquid flow, temperature, viscosity, pH, breakthrough, horsepower, water to fuel ratio, pounds of pollutant per time period, pounds of VOC per gallon applied coating solids, or visible emissions. Predictive Emission Monitoring Systems (PEMS) and Recordkeeping are parametric monitoring systems.

Periodic Monitoring: Monitoring, recordkeeping, testing or reporting requirements that are sufficient for making a compliance determination for an emission limit and/or restrictions.

Permit Application Submittal System (PASS): The RO Permit application may be generated and submitted electronically by using the PASS software. This software also allows the source to perform a preliminary electronic completeness check prior to submittal. The AQD is required to provide an administrative completeness determination and notification within 15 days of receipt of the submittal, pursuant to Rule 210(2)(a)(i)(B), when the PASS software is used by the applicant. This software is available upon request. See Appendix A for contact information.

Potential to Emit (PTE): The maximum capacity of a stationary source to emit an air contaminant under its current physical and operational design. Any physical or operational limit on the capacity of the stationary source to emit an air contaminant (e.g., air pollution control equipment, restrictions on hours of operation, the type or amount of material combusted, stored or processed) shall be treated as part of its design only if such limit, or the effect it would have on emissions, is legally enforceable.

Prevention of Significant Deterioration (PSD): A program that was established in Title I of the CAA and is used in the development of permits for new or modified sources in an area that is already in attainment. The intent of PSD is to prevent an attainment area from becoming a nonattainment area.

Reasonably Achievable Control Technology (RACT): The lowest emissions limit that a particular source is capable of meeting by the application of control technology that is both reasonably available, as well as technologically and economically feasible. The RACT is usually applied to existing sources in nonattainment areas.

Reconstruction: The replacement of components of an existing emission unit so that the fixed capital cost of the new components is more than 50 percent of the fixed capital cost that would be required to construct a comparable new emission unit and so that it is technologically and economically feasible to meet the applicable requirement.

Regulated Air Contaminant: Any dust, fume, gas, mist, odor, smoke, vapor, or any combination thereof that is sanctioned under the Michigan Natural Resources and Environmental Protection Act or the Michigan Air Pollution Control Rules.

Responsible Official: Defined in Rule 118(j).

Significant Modification: Defined in Rule 216(3). See *Revised Operational Memorandum No. 2 - Changes at a Stationary Source after RO Permit Issuance* for details regarding significant modifications of RO Permits.

Source Classification Code (SCC): An eight-character code that provides a detailed description of the processes associated with an emission unit. Refer to the electronic SCC table on the Internet at <http://www.deq.state.mi.us/aqd>. This table is also available upon request by contacting the AQD District Office for your area. See Appendix A for contact information.

Source Wide Requirement: Any applicable requirement that applies to the entire stationary source. For example, a synthetic minor HAP emission limit and associated recordkeeping that applies to the entire stationary source.

State Registration Number (SRN): The alphanumeric identifier assigned to a stationary source by the AQD. The SRNs are unique to a source and are comprised of a letter followed by four digits (e.g., A1497). If a source does not have an SRN, leave the SRN blank on all application forms. An SRN will be assigned during the RO Permit application review. However, a source must have an SRN to use the PASS software.

Stationary Source: Defined in Rule 119(q). See *Operational Memorandum No. 11 – Stationary Source Determinations* for details regarding stationary source determinations.

Title I Refers to Title I of the CAA of 1990, which protects ambient air quality. Title I includes regulations pertaining to PSD, NSPS, NESHAP and NSR.

Title V: Refers to Title V of the CAA Amendments of 1990, which established the requirements for the RO Permit program.

Toxic Air Contaminant (TAC): Defined in Rule 120(f).

Underlying Applicable Requirement: The regulatory foundation on which an applicable requirement is based. For example, if an NSR permit contains a condition that limits the sulfur content in fuel oil, the permit condition is an applicable requirement. The underlying basis for creating this condition is Rule 401; therefore, Rule 401 is the underlying applicable requirement.

Appendix B – Internet Sites

Air Quality Division (AQD)	http://www.michigan.gov/deq/0,1607,7-135-3310---,00.html
AQD Rule 212 Support Tables	http://www.deq.state.mi.us/aps/downloads/rop/ROPbackground/ROP_bkgnd_support_R212.shtml
Environmental Sciences & Services Division (ESSD)	http://www.michigan.gov/deq/0,1607,7-135-3307---,00.html
Michigan Manufacturer's Guide to Environmental and Safety and Health Regulations	http://www.michigan.gov/deq/0,1607,7-135-3307_3668_4148-15820--.,00.html
United States Environmental Protection Agency (USEPA)	http://www.epa.gov/
USEPA HAP List	http://www.epa.gov/oar/caa/caa112.txt
USEPA Unified Air Toxics Website	http://www.epa.gov/ttn/atw/eparules.html
Federal Acid Rain Program (40 CFR Part 72)	http://www.epa.gov/airmarkets/arp/
USEPA Ozone Depletion Home Page	http://www.epa.gov/ozone/
USEPA Technical Guidance Document: Compliance Assurance Monitoring (CAM) (40 CFR Part 64)	http://www.epa.gov/ttn/emc/cam.html
USEPA White Paper No. 2	http://www.epa.gov/ttn/oarpg/t5wp.html

**APPENDIX C
COUNTY NAMES**

Alcona	Lake
Alger	Lapeer
Allegan	Leelanau
Alpena	Lenawee
Antrim	Livingston
Arenac	Luce
Baraga	Mackinac
Barry	Macomb
Bay	Manistee
Benzie	Marquette
Berrien	Mason
Branch	Mecosta
Calhoun	Menominee
Cass	Midland
Charlevoix	Missaukee
Cheboygan	Monroe
Chippewa	Montcalm
Clare	Montmorency
Clinton	Muskegon
Crawford	Newaygo
Delta	Oakland
Dickinson	Oceana
Eaton	Ogemaw
Emmet	Ontonagon
Genesee	Osceola
Gladwin	Oscoda
Gogebic	Otsego
Grand Traverse	Ottawa
Gratiot	Presque Isle
Hillsdale	Roscommon
Houghton	Saginaw
Huron	Saint Clair
Ingham	Saint Joseph
Ionia	Sanilac
Iosco	Schoolcraft
Iron	Shiawassee
Isabella	Tuscola
Jackson	Van Buren
Kalamazoo	Washtenaw
Kalkaska	Wayne
Kent	Wexford
Keweenaw	

APPENDIX D

STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES

SIC CODE CLASSIFICATION

AGRICULTURAL PRODUCTION CROPS

0111 Wheat
 0112 Rice
 0115 Corn
 0116 Soybeans
 0119 Cash grains, nec
Field Crops, Except Cash Grains
 0131 Cotton
 0132 Tobacco
 0133 Sugarcane and sugar beets
 0134 Irish potatoes
 0139 Field crops, except cash grains, nec

Vegetables and Melons

0161 Vegetables and melons

Fruits and Tree Nuts

0171 Berry crops
 0172 Grapes
 0173 Tree nuts
 0174 Citrus fruits
 0175 Deciduous tree fruits
 0179 Fruits and tree nuts, nec

Horticultural Specialties

0181 Ornamental nursery products
 0182 Food crops grown under cover
 0189 Horticultural specialties, nec (1977)

General Farms, Primarily Crop

0191 General farms, primarily crop

AGRICULTURAL PRODUCTION LIVESTOCK

Livestock, Except Dairy and Poultry

0211 Beef cattle feedlots
 0212 Beef cattle, except feedlots
 0213 Hogs
 0214 Sheep and goats
 0219 General livestock, nec
 0241 Dairy farms

Poultry and Eggs

0251 Broiler, fryer, and roaster chickens
 0252 Chicken eggs
 0253 Turkeys and turkey eggs
 0254 Poultry hatcheries
 0259 Poultry and eggs, nec

Animal Specialties

0271 Fur-bearing animals and rabbits
 0272 Horses and other equines
 0273 Animal aquaculture
 0279 Animal specialties, nec

General Farms, Primarily Animal

0291 General farms, primarily animal

SIC CODE CLASSIFICATION

AGRICULTURAL SERVICES

0711 Soil preparation services
Crop Services
 0721 Crop planting and protecting
 0722 Crop harvesting
 0723 Crop preparation services for market
 0724 Cotton ginning
 0729 General crop services (1977)

Veterinary Services

0741 Veterinary services for livestock
 0742 Veterinary services, specialties

Animal Services, Except Veterinary

0751 Livestock services, exc. veterinary
 0752 Animal specialty services

Farm Labor and Management Services

0761 Farm labor contractors
 0762 Farm management services

Landscape and Horticultural Services

0781 Landscape counseling and planning
 0782 Lawn and garden services
 0783 Ornamental shrub and tree services

FORESTRY

0811 Timber tracts
 0821 Forest nurseries & seed gathering (1977)

Forest Products

0831 Forest products
 0843 Extraction of pine gum (1977)
 0849 Gathering of forest products (1977)
 0851 Forestry services

FISHING, HUNTING, AND TRAPPING

Commercial Fishing

0912 Finfish
 0913 Shellfish
 0919 Miscellaneous marine products
 0921 Fish hatcheries and preserves
 0971 Hunting, trapping, game propagation

METAL MINING

1011 Iron ores
 1021 Copper ores
 1031 Lead and zinc ores
 1041 Gold ores
 1044 Silver ores
 1051 Bauxite and other aluminum ore (1977)
 1061 Ferroalloy ores, except vanadium

Metal Mining Services

1081 Metal mining services

Miscellaneous Metal Ores

1092 Mercury ores (1977)
 1094 Uranium-radium-vanadium ores
 1099 Metal ores, nec

SIC CODE CLASSIFICATION

1111 Anthracite (1977)
 1112 Anthracite mining services (1977)
COAL MINING
 1211 Bituminous coal and lignite (1977)
 1213 Bituminous & lignite mine services (1977)

Bituminous Coal and Lignite Mining

1221 Bituminous coal and lignite surface
 1222 Bituminous coal underground
 1231 Anthracite mining
 1241 Coal mining services

OIL AND GAS EXTRACTION

1311 Crude petroleum and natural gas
 1321 Natural gas liquids

Oil and Gas Field Services

1381 Drilling oil and gas wells
 1382 Oil and gas exploration services
 1389 Oil and gas field services, nec

NONMETALLIC MINERALS, EXCEPT FUELS

1411 Dimension stone
Crushed and Broken Stone
 1422 Crushed and broken limestone
 1423 Crushed and broken granite
 1429 Crushed and broken stone, nec

Sand and Gravel

1442 Construction sand and gravel
 1446 Industrial sand

Clay, Ceramic, & Refractory Minerals

1452 Bentonite (1977)
 1453 Fire clay (1977)
 1454 Fullers earth (1977)
 1455 Kaolin and ball clay
 1459 Clay and related minerals, nec
Chemical and Fertilizer Minerals

1472 Barite (1977)
 1473 Fluorspar (1977)
 1474 Potash, soda, and borate minerals
 1475 Phosphate rock
 1476 Rock salt (1977)
 1477 Sulfur (1977)
 1479 Chemical and fertilizer mining, nec
 1481 Nonmetallic minerals services

Miscellaneous Nonmetallic Minerals

1492 Gypsum (1977)
 1496 Talc soapstone & pyrophyllite (1977)
 1499 Miscellaneous nonmetallic minerals

GENERAL BUILDING CONTRACTORS

Residential Building Construction

1521 Single-family housing construction
 1522 Residential construction, nec
 1531 Operative builders

APPENDIX D- SIC Codes Continued

SIC CODE CLASSIFICATION

Nonresidential Building Construction

- 1541 Industrial buildings and warehouses
- 1542 Nonresidential construction, nec

HEAVY CONSTRUCTION, EX. BUILDING

- 1611 Highway and street construction

Heavy Construction, Except Highway

- 1622 Bridge, tunnel, & elevated highway
- 1623 Water, sewer, and utility lines
- 1629 Heavy construction, nec

SPECIAL TRADE CONTRACTORS

- 1711 Plumbing, heating, air-conditioning
- 1721 Painting and paper hanging
- 1731 Electrical work

Masonry, Stonework, and Plastering

- 1741 Masonry and other stonework
- 1742 Plastering, drywall, and insulation
- 1743 Terrazzo, tile, marble, mosaic work

Carpentry and Floor Work

- 1751 Carpentry work
- 1752 Floor laying and floor work, nec
- 1761 Roofing, siding, and sheet metal work
- 1771 Concrete work
- 1781 Water well drilling

Misc. Special Trade Contractors

- 1791 Structural steel erection
- 1793 Glass and glazing work
- 1794 Excavation work
- 1795 Wrecking and demolition work
- 1796 Installing building equipment, nec
- 1799 Special trade contractors, nec

FOOD AND KINDRED PRODUCTS

Meat Products

- 2011 Meat packing plants
- 2013 Sausages and other prepared meats
- 2015 Poultry slaughtering and processing
- 2016 Poultry dressing plants (1977)
- 2017 Poultry and egg processing (1977)

Dairy Products

- 2021 Creamery butter
- 2022 Cheese, natural and processed
- 2023 Dry, condensed, evaporated products
- 2024 Ice cream and frozen desserts
- 2026 Fluid milk

Preserved Fruits and Vegetables

- 2032 Canned specialties
- 2033 Canned fruits and vegetables
- 2034 Dehydrated fruits, vegetables, soups
- 2035 Pickles, sauces, and salad dressings
- 2037 Frozen fruits and vegetables
- 2038 Frozen specialties, nec

SIC CODE CLASSIFICATION

Grain Mill Products

- 2041 Flour and other grain mill products
- 2043 Cereal breakfast foods
- 2044 Rice milling
- 2045 Prepared flour mixes and doughs
- 2046 Wet corn milling
- 2047 Dog and cat food
- 2048 Prepared feeds, nec

Bakery Products

- 2051 Bread, cake, and related products
- 2052 Cookies and crackers
- 2053 Frozen bakery products, except bread

Sugar and Confectionery Products

- 2061 Raw cane sugar
- 2062 Cane sugar refining
- 2063 Beet sugar
- 2064 Candy & other confectionery products
- 2066 Chocolate and cocoa products
- 2067 Chewing gum
- 2068 Salted and roasted nuts and seeds

Fats and Oils

- 2074 Cottonseed oil mills
- 2075 Soybean oil mills
- 2076 Vegetable oil mills, nec
- 2077 Animal and marine fats and oils
- 2079 Edible fats and oils, nec

Beverages

- 2082 Malt beverages
- 2083 Malt
- 2084 Wines, brandy, and brandy spirits
- 2085 Distilled and blended liquors
- 2086 Bottled and canned soft drinks
- 2087 Flavoring extracts and syrups, nec

Misc. Food and Kindred Products

- 2091 Canned and cured fish and seafoods
- 2092 Fresh or frozen prepared fish
- 2095 Roasted coffee
- 2096 Potato chips and similar snacks
- 2097 Manufactured ice
- 2098 Macaroni and spaghetti
- 2099 Food preparations, nec

TOBACCO PRODUCTS

- 2111 Cigarettes
- 2121 Cigars
- 2131 Chewing and smoking tobacco
- 2141 Tobacco stemming and redrying

TEXTILE MILL PRODUCTS

- 2211 Broadwoven fabric mills, cotton
- 2221 Broadwoven fabric mills, manmade
- 2231 Broadwoven fabric mills, wool
- 2241 Narrow fabric mills

SIC CODE CLASSIFICATION

Knitting Mills

- 2251 Women's hosiery, except socks
- 2252 Hosiery, nec
- 2253 Knit outerwear mills
- 2254 Knit underwear mills
- 2257 Weft knit fabric mills
- 2258 Lace & warp knit fabric mills
- 2259 Knitting mills, nec

Textile Finishing, Except Wool

- 2261 Finishing plants, cotton
- 2262 Finishing plants, manmade
- 2269 Finishing plants, nec

Carpets and Rugs

- 2271 Woven carpets and rugs (1977)
- 2272 Tufted carpets and rugs (1977)
- 2273 Carpets and rugs
- 2279 Carpets and rugs, nec (1977)

Yarn and Thread Mills

- 2281 Yarn spinning mills
- 2282 Throwing and winding mills
- 2283 Wool yarn mills (1977)
- 2284 Thread mills

Miscellaneous Textile Goods

- 2291 Felt goods exc woven felt/hats (1977)
- 2292 Lace goods (1977)
- 2293 Padding & upholstery filling (1977)
- 2294 Processed textile waste (1977)
- 2295 Coated fabrics, not rubberized
- 2296 Tire cord and fabrics
- 2297 Nonwoven fabrics
- 2298 Cordage and twine
- 2299 Textile goods, nec

APPAREL AND OTHER TEXTILE PRODUCTS

- 2311 Men's and boys' suits and coats

Men's and Boys' Furnishings

- 2321 Men's and boys' shirts
- 2322 Men's & boys' underwear + nightwear
- 2323 Men's and boys' neckwear
- 2325 Men's and boys' trousers and slacks
- 2326 Men's and boys' work clothing
- 2327 Men & boys separate trousers (1977)
- 2328 Men and boys work clothing (1977)
- 2329 Men's and boys' clothing, nec

Women's and Misses' Outerwear

- 2331 Women's & misses' blouses & shirts
- 2335 Women's, junior's, & misses' dresses
- 2337 Women's and misses' suits and coats
- 2339 Women's and misses' outerwear, nec

Women's and Children's Undergarments

- 2341 Women's and children's underwear
- 2342 Bras, girdles, and allied garments

APPENDIX D - SIC Codes Continued

SIC CODE CLASSIFICATION

Hats, Caps, and Millinery
 2351 Millinery (1977)
 2352 Hats & caps exc millinery (1977)
 2353 Hats, caps, and millinery

Girls' and Children's Outerwear
 2361 Girls' & children's dresses, blouses
 2363 Childrens coats and suits (1977)
 2369 Girls' and children's outerwear, nec
 2371 Fur goods

Miscellaneous Apparel and Accessories
 2381 Fabric dress and work gloves
 2384 Robes and dressing gowns
 2385 Waterproof outerwear
 2386 Leather and sheep-lined clothing
 2387 Apparel belts
 2389 Apparel and accessories, nec

Misc. Fabricated Textile Products
 2391 Curtains and draperies
 2392 Housefurnishings, nec
 2393 Textile bags
 2394 Canvas and related products
 2395 Pleating and stitching
 2396 Automotive and apparel trimmings
 2397 Schiffli machine embroideries
 2399 Fabricated textile products, nec

LUMBER AND WOOD PRODUCTS
 2411 Logging

Sawmills and Planing Mills
 2421 Sawmills and planing mills, general
 2426 Hardwood dimension & flooring mills
 2429 Special product sawmills, nec

Millwork, Plywood & Structural Members
 2431 Millwork
 2434 Wood kitchen cabinets
 2435 Hardwood veneer and plywood
 2436 Softwood veneer and plywood
 2439 Structural wood members, nec

Wood Containers
 2441 Nailed wood boxes and shook
 2448 Wood pallets and skids
 2449 Wood containers, nec

Wood Buildings and Mobile Homes
 2451 Mobile homes
 2452 Prefabricated wood buildings

Miscellaneous Wood Products
 2491 Wood preserving
 2492 Particleboard (1977)
 2493 Reconstituted wood products
 2499 Wood products, nec

FURNITURE AND FIXTURES

Household Furniture
 2511 Wood household furniture
 2512 Upholstered household furniture

SIC CODE CLASSIFICATION

2514 Metal household furniture
 2515 Mattresses and bedsprings
 2517 Wood TV and radio cabinets
 2519 Household furniture, nec

Office Furniture
 2521 Wood office furniture
 2522 Office furniture, except wood
 2531 Public building & related furniture

Partitions and Fixtures
 2541 Wood partitions and fixtures
 2542 Partitions and fixtures, except wood

Miscellaneous Furniture and Fixtures
 2591 Drapery hardware & blinds & shades
 2599 Furniture and fixtures, nec

PAPER AND ALLIED PRODUCTS
 2611 Pulp mills
 2621 Paper mills

Paperboard Mills
 2631 Paperboard mills
 2641 Paper coating and glazing (1977)
 2642 Envelopes (1977)
 2643 Bags, except textile bags (1977)
 2645 Die-cut paper and board (1977)
 2646 Pressed and molded pulp goods (1977)
 2647 Sanitary paper products (1977)
 2648 Stationery products (1977)
 2649 Converted paper products, nec (1977)

Paperboard Containers and Boxes
 2651 Folding paperboard boxes (1977)
 2652 Setup paperboard boxes
 2653 Corrugated and solid fiber boxes
 2654 Sanitary food containers (1977)
 2655 Fiber cans, drums & similar products
 2656 Sanitary food containers
 2657 Folding paperboard boxes
 2661 Building paper and board mills (1977)

Misc. Converted Paper Products
 2671 Paper coated & laminated, packaging
 2672 Paper coated and laminated, nec
 2673 Bags: plastics, laminated, & coated
 2674 Bags: uncoated paper & multiwall
 2675 Die-cut paper and board
 2676 Sanitary paper products
 2677 Envelopes
 2678 Stationery products
 2679 Converted paper products, nec

PRINTING AND PUBLISHING
 2711 Newspapers
 2721 Periodicals

Books
 2731 Book publishing
 2732 Book printing
 2741 Miscellaneous publishing

SIC CODE CLASSIFICATION

Commercial Printing
 2751 Commercial printing letterpress (1977)
 2752 Commercial printing, lithographic
 2753 Engraving and plate printing (1977)
 2754 Commercial printing, gravure
 2759 Commercial printing, nec
 2761 Manifold business forms
 2771 Greeting cards

Blankbooks and Bookbinding
 2782 Blankbooks and looseleaf binders
 2789 Bookbinding and related work

Printing Trade Services
 2791 Typesetting
 2793 Photoengraving (1977)
 2794 Electrotyping and stereotyping (1977)
 2795 Lithographic platemaking services (1977)
 2796 Platemaking services

CHEMICALS AND ALLIED PRODUCTS

Industrial Inorganic Chemicals
 2812 Alkalies and chlorine
 2813 Industrial gases
 2816 Inorganic pigments
 2819 Industrial inorganic chemicals, nec

Plastics Materials and Synthetics
 2821 Plastics materials and resins
 2822 Synthetic rubber
 2823 Cellulosic manmade fibers
 2824 Organic fibers, noncellulosic

Drugs
 2831 Biological products (1977)
 2833 Medicinals and botanicals
 2834 Pharmaceutical preparations
 2835 Diagnostic substances
 2836 Biological products exc. diagnostic

Soap, Cleaners, and Toilet Goods
 2841 Soap and other detergents
 2842 Polishes and sanitation goods
 2843 Surface active agents
 2844 Toilet preparations
 2851 Paints and allied products

Industrial Organic Chemicals
 2861 Gum and wood chemicals
 2865 Cyclic crudes and intermediates
 2869 Industrial organic chemicals, nec

Agricultural Chemicals
 2873 Nitrogenous fertilizers
 2874 Phosphatic fertilizers
 2875 Fertilizers, mixing only
 2879 Agricultural chemicals, nec

Miscellaneous Chemical Products
 2891 Adhesives and sealants
 2892 Explosives
 2893 Printing ink

APPENDIX D - SIC Codes Continued

SIC CODE CLASSIFICATION

2895 Carbon black
 2899 Chemical preparations, nec
PETROLEUM AND COAL PRODUCTS
 2911 Petroleum refining
Asphalt Paving and Roofing Materials
 2951 Asphalt paving mixtures and blocks
 2952 Asphalt felts and coatings
Misc. Petroleum and Coal Products
 2992 Lubricating oils and greases
 2999 Petroleum and coal products, nec
RUBBER AND MISC. PLASTICS PRODUCTS
 3011 Tires and inner tubes
Rubber and Plastics Footwear
 3021 Rubber and plastics footwear
 3031 Reclaimed rubber (1977)
 3041 Rubber and plastics hose and belting (1977)
Hose & Belting & Gaskets & Packing
 3052 Rubber & plastics hose & belting
 3053 Gaskets, packing and sealing devices
Fabricated Rubber Products, NEC
 3061 Mechanical rubber goods
 3069 Fabricated rubber products, nec
 3079 Miscellaneous plastics products (1977)
Miscellaneous Plastics Products, NEC
 3081 Unsupported plastics film & sheet
 3082 Unsupported plastics profile shapes
 3083 Laminated plastics plate & sheet
 3084 Plastics pipe
 3085 Plastics bottles
 3086 Plastics foam products
 3087 Custom compound purchased resins
 3088 Plastics plumbing fixtures
 3089 Plastics products, nec
LEATHER AND LEATHER PRODUCTS
 3111 Leather tanning and finishing
 3131 Footwear cut stock
Footwear, Except Rubber
 3142 House slippers
 3143 Men's footwear, except athletic
 3144 Women's footwear, except athletic
 3149 Footwear, except rubber, nec
 3151 Leather gloves and mittens
 3161 Luggage
Handbags and Personal Leather Goods
 3171 Women's handbags and purses
 3172 Personal leather goods, nec
 3199 Leather goods, nec
STONE, CLAY, AND GLASS PRODUCTS
 3211 Flat glass
Glass and Glassware, Pressed or Blown
 3221 Glass containers
 3229 Pressed and blown glass, nec

SIC CODE CLASSIFICATION

3231 Products of purchased glass
 3241 Cement, hydraulic
Structural Clay Products
 3251 Brick and structural clay tile
 3253 Ceramic wall and floor tile
 3255 Clay refractories
 3259 Structural clay products, nec
Pottery and Related Products
 3261 Vitreous plumbing fixtures
 3262 Vitreous china table & kitchenware
 3263 Semivitreous table & kitchenware
 3264 Porcelain electrical supplies
 3269 Pottery products, nec
Concrete, Gypsum, and Plaster Products
 3271 Concrete block and brick
 3272 Concrete products, nec
 3273 Ready-mixed concrete
 3274 Lime
 3275 Gypsum products
 3281 Cut stone and stone products
Misc. Nonmetallic Mineral Products
 3291 Abrasive products
 3292 Asbestos products
 3293 Gaskets/packing/sealing device (1977)
 3295 Minerals, ground or treated
 3296 Mineral wool
 3297 Nonclay refractories
 3299 Nonmetallic mineral products, nec
PRIMARY METAL INDUSTRIES
Blast Furnace and Basic Steel Products
 3312 Blast furnaces and steel mills
 3313 Electrometallurgical products
 3315 Steel wire and related products
 3316 Cold finishing of steel shapes
 3317 Steel pipe and tubes
Iron and Steel Foundries
 3321 Gray and ductile iron foundries
 3322 Malleable iron foundries
 3324 Steel investment foundries
 3325 Steel foundries, nec
Primary Nonferrous Metals
 3331 Primary copper
 3332 Primary lead (1977)
 3333 Primary zinc (1977)
 3334 Primary aluminum
 3339 Primary nonferrous metals, nec
 3341 Secondary nonferrous metals
Nonferrous Rolling and Drawing
 3351 Copper rolling and drawing
 3353 Aluminum sheet, plate, and foil
 3354 Aluminum extruded products
 3355 Aluminum rolling and drawing, nec

SIC CODE CLASSIFICATION

3356 Nonferrous rolling and drawing, nec
 3357 Nonferrous wire-drawing & insulating
Nonferrous Foundries (Castings)
 3361 Aluminum foundries (1977)
 3362 Brass bronze & copper foundry (1977)
 3363 Aluminum die-castings
 3364 Nonferrous die-casting exc. aluminum
 3365 Aluminum foundries
 3366 Copper foundries
 3369 Nonferrous foundries, nec
Miscellaneous Primary Metal Products
 3398 Metal heat treating
 3399 Primary metal products, nec
FABRICATED METAL PRODUCTS
Metal Cans and Shipping Containers
 3411 Metal cans
 3412 Metal barrels, drums, and pails
Cutlery, Handtools, and Hardware
 3421 Cutlery
 3423 Hand and edge tools, nec
 3425 Saw blades and handsaws
 3429 Hardware, nec
Plumbing and Heating, Except Electric
 3431 Metal sanitary ware
 3432 Plumbing fixture fittings and trim
 3433 Heating equipment, except electric
Fabricated Structural Metal Products
 3441 Fabricated structural metal
 3442 Metal doors, sash, and trim
 3443 Fabricated plate work (boiler shops)
 3444 Sheet metalwork
 3446 Architectural metal work
 3448 Prefabricated metal buildings
 3449 Miscellaneous metal work
Screw Machine Products, Bolts, Etc.
 3451 Screw machine products
 3452 Bolts, nuts, rivets, and washers
Metal Forgings and Stampings
 3462 Iron and steel forgings
 3463 Nonferrous forgings
 3465 Automotive stampings
 3466 Crowns and closures
 3469 Metal stampings, nec
Metal Services, NEC
 3471 Plating and polishing
 3479 Metal coating and allied services
Ordnance and Accessories, NEC
 3482 Small arms ammunition
 3483 Ammunition, exc. for small arms, nec
 3484 Small arms
 3489 Ordnance and accessories, nec

APPENDIX D - SIC Codes Continued

SIC CODE CLASSIFICATION

Misc. Fabricated Metal Products

- 3491 Industrial valves
- 3492 Fluid power valves & hose fittings
- 3493 Steel springs, except wire
- 3494 Valves and pipe fittings, nec
- 3495 Wire springs
- 3496 Misc. fabricated wire products
- 3497 Metal foil and leaf
- 3498 Fabricated pipe and fittings
- 3499 Fabricated metal products, nec

INDUSTRIAL MACHINERY AND EQUIPMENT

Engines and Turbines

- 3511 Turbines and turbine generator sets
- 3519 Internal combustion engines, nec

Farm and Garden Machinery

- 3523 Farm machinery and equipment
- 3524 Lawn and garden equipment

Construction and Related Machinery

- 3531 Construction machinery
- 3532 Mining machinery
- 3533 Oil and gas field machinery
- 3534 Elevators and moving stairways
- 3535 Conveyors and conveying equipment
- 3536 Hoists, cranes, and monorails
- 3537 Industrial trucks and tractors

Metalworking Machinery

- 3541 Machine tools, metal cutting types
- 3542 Machine tools, metal forming types
- 3543 Industrial patterns
- 3544 Special dies, tools, jigs & fixtures
- 3545 Machine tool accessories
- 3546 Power-driven handtools
- 3547 Rolling mill machinery
- 3548 Welding apparatus
- 3549 Metalworking machinery, nec

Special Industry Machinery

- 3552 Textile machinery
- 3553 Woodworking machinery
- 3554 Paper industries machinery
- 3555 Printing trades machinery
- 3556 Food products machinery
- 3559 Special industry machinery, nec

General Industrial Machinery

- 3561 Pumps and pumping equipment
- 3562 Ball and roller bearings
- 3563 Air and gas compressors
- 3564 Blowers and fans
- 3565 Packaging machinery
- 3566 Speed changers, drives, and gears
- 3567 Industrial furnaces and ovens
- 3568 Power transmission equipment, nec
- 3569 General industrial machinery, nec

SIC CODE CLASSIFICATION

Computer and Office Equipment

- 3571 Electronic computers
- 3572 Computer storage devices
- 3573 Electronic computing equipment (1977)
- 3574 Calculating & accounting machines (1977)
- 3575 Computer terminals
- 3576 Scales & balances exc lab (1977)
- 3577 Computer peripheral equipment, nec
- 3578 Calculating and accounting equipment
- 3579 Office machines, nec

Refrigeration and Service Machinery

- 3581 Automatic vending machines
- 3582 Commercial laundry equipment
- 3585 Refrigeration and heating equipment
- 3586 Measuring and dispensing pumps
- 3589 Service industry machinery, nec

Industrial Machinery, NEC

- 3592 Carburetors, pistons, rings, valves
- 3593 Fluid power cylinders & actuators
- 3594 Fluid power pumps and motors
- 3596 Scales and balances, exc. laboratory
- 3599 Industrial machinery, nec

ELECTRONIC & OTHER ELECTRIC EQUIPMENT

Electric Distribution Equipment

- 3612 Transformers, except electronic
- 3613 Switchgear and switchboard apparatus

Electrical Industrial Apparatus

- 3621 Motors and generators
- 3622 Industrial controls (1977)
- 3623 Welding apparatus, electric (1977)
- 3624 Carbon and graphite products
- 3625 Relays and industrial controls
- 3629 Electrical industrial apparatus, nec

Household Appliances

- 3631 Household cooking equipment
- 3632 Household refrigerators and freezers
- 3633 Household laundry equipment
- 3634 Electric housewares and fans
- 3635 Household vacuum cleaners
- 3636 Sewing machines (1977)
- 3639 Household appliances, nec

Electric Lighting and Wiring Equipment

- 3641 Electric lamps
- 3643 Current-carrying wiring devices
- 3644 Noncurrent-carrying wiring devices
- 3645 Residential lighting fixtures
- 3646 Commercial lighting fixtures
- 3647 Vehicular lighting equipment
- 3648 Lighting equipment, nec

Household Audio and Video Equipment

- 3651 Household audio and video equipment
- 3652 Prerecorded records and tapes

SIC CODE CLASSIFICATION

Communications Equipment

- 3661 Telephone and telegraph apparatus
- 3662 Radio/tv communication equipment (1977)
- 3663 Radio & TV communications equipment
- 3669 Communications equipment, nec

Electronic Components and Accessories

- 3671 Electron tubes
- 3672 Printed circuit boards
- 3673 Electron tubes, transmitting (1977)
- 3674 Semiconductors and related devices
- 3675 Electronic capacitors
- 3676 Electronic resistors
- 3677 Electronic coils and transformers
- 3678 Electronic connectors
- 3679 Electronic components, nec

Misc. Electrical Equipment & Supplies

- 3691 Storage batteries
- 3692 Primary batteries, dry and wet
- 3693 X-ray apparatus and tubes (1977)
- 3694 Engine electrical equipment
- 3695 Magnetic and optical recording media
- 3699 Electrical equipment & supplies, nec

TRANSPORTATION EQUIPMENT

Motor Vehicles and Equipment

- 3711 Motor vehicles and car bodies
- 3713 Truck and bus bodies
- 3714 Motor vehicle parts and accessories
- 3715 Truck trailers
- 3716 Motor homes

Aircraft and Parts

- 3721 Aircraft
- 3724 Aircraft engines and engine parts
- 3728 Aircraft parts and equipment, nec

Ship and Boat Building and Repairing

- 3731 Ship building and repairing
- 3732 Boat building and repairing
- 3743 Railroad equipment
- 3751 Motorcycles, bicycles, and parts

Guided Missiles, Space Vehicles, Parts

- 3761 Guided missiles and space vehicles
- 3764 Space propulsion units and parts
- 3769 Space vehicle equipment, nec

Miscellaneous Transportation Equipment

- 3792 Travel trailers and campers
- 3795 Tanks and tank components
- 3799 Transportation equipment, nec

INSTRUMENTS AND RELATED PRODUCTS

Search and Navigation Equipment

- 3811 Engineering & scientific instruments (1977)
- 3812 Search and navigation equipment

Measuring and Controlling Devices

- 3821 Laboratory apparatus and furniture

APPENDIX D - SIC Codes Continued

SIC CODE CLASSIFICATION

3822 Environmental controls
 3823 Process control instruments
 3824 Fluid meters and counting devices
 3825 Instruments to measure electricity
 3826 Analytical instruments
 3827 Optical instruments and lenses
 3829 Measuring & controlling devices, nec
 3832 Optical instruments and lenses (1977)

Medical Instruments and Supplies

3841 Surgical and medical instruments
 3842 Surgical appliances and supplies
 3843 Dental equipment and supplies
 3844 X-ray apparatus and tubes
 3845 Electromedical equipment
 3851 Ophthalmic goods
 3861 Photographic equipment and supplies
 3873 Watches, clocks, watchcases & parts

MISCELLANEOUS MANUFACTURING INDUSTRIES

Jewelry, Silverware, and Plated Ware

3911 Jewelry, precious metal
 3914 Silverware and plated ware
 3915 Jewelers' materials & lapidary work
 3931 Musical instruments

Toys and Sporting Goods

3942 Dolls and stuffed toys
 3944 Games, toys, and children's vehicles
 3949 Sporting and athletic goods, nec

Pens, Pencils, Office, & Art Supplies

3951 Pens and mechanical pencils
 3952 Lead pencils and art goods
 3953 Marking devices
 3955 Carbon paper and inked ribbons

Costume Jewelry and Notions

3961 Costume jewelry
 3962 Artificial flowers (1977)
 3963 Buttons (1977)
 3964 Needles, pins, and fasteners (1977)
 3965 Fasteners, buttons, needles, & pins

Miscellaneous Manufactures

3991 Brooms and brushes
 3993 Signs and advertising specialties
 3995 Burial caskets
 3996 Hard surface floor coverings, nec
 3999 Manufacturing industries, nec

RAILROAD TRANSPORTATION

Railroads

4011 Railroads, line-haul operating
 4013 Switching and terminal services
 4041 Railway express service (1977)

LOCAL AND INTERURBAN PASSENGER TRANSIT

Local and Suburban Transportation

4111 Local and suburban transit
 4119 Local passenger transportation, nec

SIC CODE CLASSIFICATION

4121 Taxicabs
 4131 Intercity & rural bus transportation
Bus Charter Service
 4141 Local bus charter service
 4142 Bus charter service, except local
 4151 School buses

BUS TERMINAL FACILITIES

4172 Bus service facilities (1977)
 4173 Bus terminal and service facilities

TRUCKING AND WAREHOUSING

Trucking & Courier Services, Ex. Air

4212 Local trucking, without storage
 4213 Trucking, except local
 4214 Local trucking with storage
 4215 Courier services, except by air

Public Warehousing and Storage

4221 Farm product warehousing and storage
 4222 Refrigerated warehousing and storage
 4224 Household goods warehousing (1977)
 4225 General warehousing and storage
 4226 Special warehousing and storage, nec
 4231 Trucking terminal facilities

U.S. POSTAL SERVICE

4311 U.S. Postal Service

WATER TRANSPORTATION

Deep Sea Foreign Trans. of Freight
 4411 Deep sea foreign transportation (1977)
 4412 Deep sea foreign trans. of freight
Deep Sea Domestic Trans. of Freight
 4421 Noncontiguous area transportation (1977)
 4422 Coastwise transportation (1977)
 4423 Intercoastal transportation (1977)
 4424 Deep sea domestic trans. of freight

Freight Trans. on the Great Lakes

4431 Great lakes transportation (1977)
 4432 Freight trans. on the Great Lakes

Water Transportation of Freight, NEC

4441 Transport on rivers & canals (1977)
 4449 Water transportation of freight, nec
 4452 Ferries (1977)
 4453 Lighterage (1977)
 4454 Towing and tugboat service (1977)
 4459 Local water transportation, nec (1977)
 4463 Marine cargo handling (1977)
 4464 Canal operation (1977)
 4469 Water transportation services (1977)

Water Transportation of Passengers

4481 Deep sea passenger trans., ex. ferry
 4482 Ferries
 4489 Water passenger transportation, nec

Water Transportation Services

4491 Marine cargo handling
 4492 Towing and tugboat service

SIC CODE CLASSIFICATION

4493 Marinas
 4499 Water transportation services, nec

TRANSPORTATION BY AIR

Air Transportation, Scheduled

4511 Certificated air transportation (1977)
 4512 Air transportation, scheduled
 4513 Air courier services

Air Transportation, Nonscheduled

4521 Noncertificated air transportation (1977)
 4522 Air transportation, nonscheduled
Airports, Flying Fields, & Services

4581 Airports, flying fields, & services
 4582 Airports and flying fields (1977)
 4583 Airport terminal services (1977)

PIPELINES, EXCEPT NATURAL GAS

Pipelines, Except Natural Gas

4612 Crude petroleum pipelines
 4613 Refined petroleum pipelines
 4619 Pipelines, nec

TRANSPORTATION SERVICES

4712 Freight forwarding (1977)

Passenger Transportation Arrangement

4722 Passenger transport arrangement (1977)
 4723 Freight transport arrangement (1977)
 4724 Travel agencies
 4725 Tour operators

4729 Passenger transport arrangement, nec
 4731 Freight transportation arrangement

Rental of Railroad Cars

4741 Rental of railroad cars
 4742 Railroad car rental with service (1977)
 4743 Railroad rental car w/o service (1977)

Miscellaneous Transportation Services

4782 Inspection & weighing services (1977)
 4783 Packing and crating
 4784 Fixed facilities for vehicles (1977)
 4785 Inspection & fixed facilities
 4789 Transportation services, nec

COMMUNICATION

Telephone Communication

4811 Telephone communication (1977)
 4812 Radiotelephone communications
 4813 Telephone communications, exc. radio

Telegraph & Other Communications

4821 Telegraph communication (1977)
 4822 Telegraph & other communications

Radio and Television Broadcasting

4832 Radio broadcasting stations
 4833 Television broadcasting stations
 4841 Cable and other pay TV services
 4899 Communication services, nec

ELECTRIC, GAS, AND SANITARY SERVICES

4911 Electric services

APPENDIX D - SIC Codes Continued

SIC CODE CLASSIFICATION

Gas Production and Distribution
 4922 Natural gas transmission
 4923 Gas transmission and distribution
 4924 Natural gas distribution
 4925 Gas production and/or distribution

Combination Utility Services
 4931 Electric and other services combined
 4932 Gas and other services combined
 4939 Combination utilities, nec
 4941 Water supply

Sanitary Services
 4952 Sewerage systems
 4953 Refuse systems
 4959 Sanitary services, nec
 4961 Steam and air-conditioning supply
 4971 Irrigation systems

WHOLESALE TRADE DURABLE GOODS

Motor Vehicles, Parts, and Supplies
 5012 Automobiles and other motor vehicles
 5013 Motor vehicle supplies and new parts
 5014 Tires and tubes
 5015 Motor vehicle parts, used

Furniture and Homefurnishings
 5021 Furniture
 5023 Homefurnishings

Lumber and Construction Materials
 5031 Lumber, plywood, and millwork
 5032 Brick, stone, & related materials
 5033 Roofing, siding, & insulation
 5039 Construction materials, nec

Professional & Commercial Equipment
 5041 Sporting & recreational goods (1977)
 5042 Toys & hobby goods and supplies (1977)
 5043 Photographic equipment and supplies
 5044 Office equipment
 5045 Computers, peripherals & software
 5046 Commercial equipment, nec
 5047 Medical and hospital equipment
 5048 Ophthalmic goods
 5049 Professional equipment, nec

Metals and Minerals, Except Petroleum
 5051 Metals service centers and offices
 5052 Coal and other minerals and ores

Electrical Goods
 5063 Electrical apparatus and equipment
 5064 Electrical appliances, TV & radios
 5065 Electronic parts and equipment

Hardware, Plumbing & Heating Equipment
 5072 Hardware
 5074 Plumbing & hydronic heating supplies

SIC CODE CLASSIFICATION

5075 Warm air heating & air-conditioning
 5078 Refrigeration equipment and supplies

Machinery, Equipment, and Supplies
 5081 Commercial machines & equipment (1977)
 5082 Construction and mining machinery
 5083 Farm and garden machinery
 5084 Industrial machinery and equipment
 5085 Industrial supplies
 5086 Professional equipment and supplies (1977)
 5087 Service establishment equipment
 5088 Transportation equipment & supplies

Miscellaneous Durable Goods
 5091 Sporting & recreational goods
 5092 Toys and hobby goods and supplies
 5093 Scrap and waste materials
 5094 Jewelry & precious stones
 5099 Durable goods, nec

WHOLESALE TRADE NONDURABLE GOODS

Paper and Paper Products
 5111 Printing and writing paper
 5112 Stationery and office supplies
 5113 Industrial & personal service paper
 5122 Drugs, proprietaries, and sundries

Apparel, Piece Goods, and Notions
 5131 Piece goods & notions
 5133 Piece goods (1977)
 5134 Notions and other dry goods (1977)
 5136 Men's and boys' clothing
 5137 Women's and children's clothing
 5139 Footwear

Groceries and Related Products
 5141 Groceries, general line
 5142 Packaged frozen foods
 5143 Dairy products, exc. dried or canned
 5144 Poultry and poultry products
 5145 Confectionery
 5146 Fish and seafoods
 5147 Meats and meat products
 5148 Fresh fruits and vegetables
 5149 Groceries and related products, nec

Farm-Product Raw Materials
 5152 Cotton (1977)
 5153 Grain and field beans
 5154 Livestock
 5159 Farm-product raw materials, nec

Chemicals and Allied Products
 5161 Chemicals and allied products (1977)
 5162 Plastics materials & basic shapes
 5169 Chemicals & allied products, nec

Petroleum and Petroleum Products

SIC CODE CLASSIFICATION

5171 Petroleum bulk stations & terminals
 5172 Petroleum products, nec

Beer, Wine, and Distilled Beverages
 5181 Beer and ale
 5182 Wine and distilled beverages

Misc. Nondurable Goods
 5191 Farm supplies
 5192 Books, periodicals, & newspapers
 5193 Flowers & florists' supplies
 5194 Tobacco and tobacco products
 5198 Paints, varnishes, and supplies
 5199 Nondurable goods, nec

BUILDING MATERIALS & GARDEN SUPPLIES
 5211 Lumber and other building materials
 5231 Paint, glass, and wallpaper stores
 5251 Hardware stores
 5261 Retail nurseries and garden stores
 5271 Mobile home dealers

GENERAL MERCHANDISE STORES
 5311 Department stores
 5331 Variety stores
 5399 Misc. general merchandise stores
 5411 Grocery stores

Meat and Fish Markets
 5421 Meat and fish markets
 5422 Freezer and locker meat provisions (1977)
 5423 Meat and fish (seafood) market (1977)
 5431 Fruit and vegetable markets
 5441 Candy, nut, and confectionery stores
 5451 Dairy products stores

Retail Bakeries
 5461 Retail bakeries
 5462 Retail bakeries-baking and selling (1977)
 5463 Retail bakeries-selling only (1977)
 5499 Miscellaneous food stores

AUTOMOTIVE DEALERS & SERVICE STATIONS
 5511 New and used car dealers
 5521 Used car dealers
 5531 Auto and home supply stores
 5541 Gasoline service stations
 5551 Boat dealers
 5561 Recreational vehicle dealers
 5571 Motorcycle dealers
 5599 Automotive dealers, nec

APPAREL AND ACCESSORY STORES
 5611 Men's & boys' clothing stores
 5621 Women's clothing stores

Women's Accessory & Specialty Stores
 5631 Women's accessory and specialty stores
 5632 Women's accessory & specialty stores

APPENDIX D - SIC Codes Continued

<u>SIC CODE</u>	<u>CLASSIFICATION</u>	<u>SIC CODE</u>	<u>CLASSIFICATION</u>	<u>SIC CODE</u>	<u>CLASSIFICATION</u>
	<u>FOOD STORES</u>				
5641	Children's and infants' wear stores	5999	Miscellaneous retail stores, nec	6146	Installment sales finance companies (1977)
5651	Family clothing stores		<u>DEPOSITORY INSTITUTIONS</u>	6149	Misc. personal credit institutions (1977)
5661	Shoe stores		Central Reserve Depository		Business Credit Institutions
5681	Furriers and fur shops (1977)	6011	Federal reserve banks	6153	Short-term business credit
5699	Misc. apparel & accessory stores	6019	Central reserve depository, nec	6159	Misc. business credit institutions
	<u>FURNITURE AND HOMEFURNISHINGS STORES</u>		Commercial Banks		Mortgage Bankers and Brokers
	Furniture and Homefurnishings Stores	6021	National commercial banks	6162	Mortgage bankers and correspondents
5712	Furniture stores	6022	State commercial banks	6163	Loan brokers
5713	Floor covering stores	6023	State banks, not fed. reserve, (1977)		<u>SECURITY AND COMMODITY BROKERS</u>
5714	Drapery and upholstery stores	6024	State banks, not fed res., not (1977)	6211	Security brokers and dealers
5719	Misc. homefurnishings stores	6025	National banks, federal reserv (1977)	6221	Commodity contracts brokers, dealers
5722	Household appliance stores	6026	National banks, not fed. res., (1977)	6231	Security and commodity exchanges
	Radio, Television, & Computer Stores	6027	National banks, not FDIC (1977)		Security and Commodity Services
5731	Radio, TV, & electronic stores	6028	Private banks, not incorp., no (1977)	6281	Security and commodity service (1977)
5732	Radio and television stores (1977)	6029	Commercial banks, nec	6282	Investment advice
5733	Music stores (1977)		Savings Institutions	6289	Security & commodity services, nec
5734	Computer and software stores	6032	Mutual savings banks, federal (1977)	6311	Life insurance
5735	Record & prerecorded tape stores	6033	Mutual savings banks, nec (1977)		Medical Service and Health Insurance
5736	Musical instrument stores	6034	Mutual savings banks, not FDIC (1977)	6321	Accident and health insurance
	<u>EATING AND DRINKING PLACES</u>	6035	Federal savings institutions	6324	Hospital and medical service plans
5812	Eating places	6036	Savings institutions, except federal	6331	Fire, marine, and casualty insurance
5813	Drinking places	6042	Nondeposit trusts, federal res (1977)	6351	Surety insurance
	<u>MISCELLANEOUS RETAIL</u>	6044	Nondeposit trusts, not FDIC (1977)	6361	Title insurance
5912	Drug stores and proprietary stores	6052	Foreign exchange establishment (1977)		<u>INSURANCE CARRIERS</u>
5921	Liquor stores	6054	Safe deposit companies (1977)	6371	Pension, health, and welfare funds
	Used Merchandise Stores	6055	Clearinghouse associations (1977)	6399	Insurance carriers, nec
5931	Used merchandise stores (1977)	6056	Corporations for banking abroad (1977)		<u>INSURANCE AGENTS, BROKERS, & SERVICE</u>
5932	Used merchandise stores	6059	Functions related to banking, (1977)	6411	Insurance agents, brokers, & service
	Miscellaneous Shopping Goods Stores		Credit Unions		<u>REAL ESTATE</u>
5941	Sporting goods and bicycle shops	6061	Federal credit unions		Real Estate Operators and Lessors
5942	Book stores	6062	State credit unions	6512	Nonresidential building operators
5943	Stationery stores		Foreign Bank & Branches + Agencies	6513	Apartment building operators
5944	Jewelry stores	6081	Foreign bank & branches & agencies	6514	Dwelling operators, exc. apartments
5945	Hobby, toy, and game shops	6082	Foreign trade & international banks	6515	Mobile home site operators
5946	Camera & photographic supply stores		Functions Closely Related to Banking	6517	Railroad property lessors
5947	Gift, novelty, and souvenir shops	6091	Nondeposit trust facilities	6519	Real property lessors, nec
5948	Luggage and leather goods stores	6099	Functions related to deposit banking	6531	Real estate agents and managers
5949	Sewing, needlework, and piece goods		<u>NONDEPOSITORY INSTITUTIONS</u>	6541	Title abstract offices
	Nonstore Retailers		Federal & Fed.-Sponsored Credit		Subdividers and Developers
5961	Catalog and mail-order houses	6111	Federal & fed.-sponsored credit	6552	Subdividers and developers, nec
5962	Merchandising machine operators	6112	Rediscounting, not for agriculture (1977)	6553	Cemetery subdividers and developers
5963	Direct selling establishments	6113	Rediscounting, for agriculture (1977)	6611	Combined real estate, insurance (1977)
	Fuel Dealers	6122	Federal savings & loan associations (1977)		<u>HOLDING AND OTHER INVESTMENT OFFICES</u>
5982	Fuel and ice dealers, nec (1977)	6123	State associations, insured (1977)		Holding Offices
5983	Fuel oil dealers	6124	State associations, noninsured (1977)	6711	Holding offices (1977)
5984	Liquefied petroleum gas dealers	6125	State associations, noninsured (1977)	6712	Bank holding companies
5989	Fuel dealers, nec	6131	Agricultural credit institutions (1977)	6719	Holding companies, nec
	Retail Stores, NEC		Personal Credit Institutions		Investment Offices
5992	Florists	6141	Personal credit institutions	6722	Management investment, open-end
5993	Tobacco stores and stands	6142	Federal credit unions (1977)	6723	Management investment, closed-end (1977)
5994	News dealers and newsstands	6143	State credit unions (1977)	6724	Unit investment trusts (1977)
5995	Optical goods stores	6144	Nondeposit industrial loan companies (1977)	6725	Face-amount certificate offices (1977)
		6145	Licensed small loan lenders (1977)	6726	Investment offices, nec

APPENDIX D - SIC Codes Continued

SIC CODE CLASSIFICATION

Trusts
 6732 Educational, religious, etc. trusts
 6733 Trusts, nec

Miscellaneous Investing
 6792 Oil royalty traders
 6793 Commodity traders (1977)
 6794 Patent owners and lessors
 6798 Real estate investment trusts
 6799 Investors, nec

HOTELS AND OTHER LODGING PLACES
 7011 Hotels and motels
 7021 Rooming and boarding houses

Camps and Recreational Vehicle Parks
 7032 Sporting and recreational camps
 7033 Trailer parks and campsites
 7041 Membership-basis organization hotels

PERSONAL SERVICES

Laundry, Cleaning, & Garment Services
 7211 Power laundries, family & commercial
 7212 Garment pressing & cleaners' agents
 7213 Linen supply
 7214 Diaper service (1977)
 7215 Coin-operated laundries and cleaning
 7216 Drycleaning plants, except rug
 7217 Carpet and upholstery cleaning
 7218 Industrial launderers
 7219 Laundry and garment services, nec
 7221 Photographic studios, portrait
 7231 Beauty shops
 7241 Barber shops
 7251 Shoe repair and shoeshine parlors
 7261 Funeral service and crematories

Miscellaneous Personal Services
 7291 Tax return preparation services
 7299 Miscellaneous personal services, nec

BUSINESS SERVICES

Advertising
 7311 Advertising agencies
 7312 Outdoor advertising services
 7313 Radio, TV, publisher representatives
 7319 Advertising, nec

Credit Reporting and Collection
 7321 Credit reporting and collection (1977)
 7322 Adjustment & collection services
 7323 Credit reporting services

Mailing, Reproduction, Stenographic
 7331 Direct mail advertising services
 7332 Blueprinting and photocopying (1977)
 7333 Commercial photography and art (1977)
 7334 Photocopying & duplicating services
 7335 Commercial photography
 7336 Commercial art and graphic design
 7338 Secretarial & court reporting

SIC CODE CLASSIFICATION

7339 Stenographic and reproduction, nec (1977)

Services to Buildings
 7341 Window cleaning (1977)
 7342 Disinfecting & pest control services
 7349 Building maintenance services, nec

Misc. Equipment Rental & Leasing
 7351 News syndicates (1977)
 7352 Medical equipment rental
 7353 Heavy construction equipment rental
 7359 Equipment rental & leasing, nec

Personnel Supply Services
 7361 Employment agencies
 7362 Temporary help supply services (1977)
 7363 Help supply services
 7369 Personnel supply services, nec (1977)

Computer and Data Processing Services
 7371 Computer programming services
 7372 Prepackaged software
 7373 Computer integrated systems design
 7374 Data processing and preparation
 7375 Information retrieval services
 7376 Computer facilities management
 7377 Computer rental & leasing
 7378 Computer maintenance & repair
 7379 Computer related services, nec

Miscellaneous Business Services
 7381 Detective & armored car services
 7382 Security systems services
 7383 News syndicates
 7384 Photofinishing laboratories
 7389 Business services, nec
 7391 Research & development laboratories (1977)
 7392 Management and public relations (1977)
 7393 Detective and protective services (1977)
 7394 Equipment rental and leasing (1977)
 7395 Photofinishing laboratories (1977)
 7396 Trading stamp services (1977)
 7397 Commercial testing laboratories (1977)
 7399 Business services, nec (1977)

AUTO REPAIR, SERVICES, AND PARKING

Automotive Rentals, No Drivers
 7512 Passenger car rental and leasing (1977)
 7513 Truck rental and leasing, no drivers
 7514 Passenger car rental
 7515 Passenger car leasing
 7519 Utility trailer rental

Automobile Parking
 7521 Automobile parking
 7523 Parking lots (1977)
 7525 Parking structures (1977)

Automotive Repair Shops
 7531 Top and body repair shops (1977)
 7532 Top & body repair & paint shops

SIC CODE CLASSIFICATION

7533 Auto exhaust system repair shops
 7534 Tire retreading and repair shops
 7535 Paint shops (1977)
 7536 Automotive glass replacement shops
 7537 Automotive transmission repair shops
 7538 General automotive repair shops
 7539 Automotive repair shops, nec

Automotive Services, Except Repair
 7542 Carwashes
 7549 Automotive services, nec

MISCELLANEOUS REPAIR SERVICES

Electrical Repair Shops
 7622 Radio and television repair
 7623 Refrigeration service and repair
 7629 Electrical repair shops, nec
 7631 Watch, clock, and jewelry repair
 7641 Reupholstery and furniture repair

Miscellaneous Repair Shops
 7692 Welding repair
 7694 Armature rewinding shops
 7699 Repair services, nec

MOTION PICTURES

Motion Picture Production & Services
 7812 Motion picture & video production
 7813 Motion picture production, except TV (1977)
 7814 Motion picture production for TV (1977)
 7819 Services allied to motion pictures

Motion Picture Distribution & Services
 7822 Motion picture and tape distribution
 7823 Motion picture film exchanges (1977)
 7824 Film or tape distribution for TV (1977)
 7829 Motion picture distribution services

Motion Picture Theaters
 7832 Motion picture theaters, ex drive-in
 7833 Drive-in motion picture theaters
 7841 Video tape rental

AMUSEMENT & RECREATION SERVICES

7911 Dance studios, schools, and halls
 Producers, Orchestras, Entertainers
 7922 Theatrical producers and services
 7929 Entertainers & entertainment groups

Bowling Centers
 7932 Billiard and pool establishments (1977)
 7933 Bowling centers

Commercial Sports
 7941 Sports clubs, managers, & promoters
 7948 Racing, including track operation

Misc. Amusement, Recreation Services
 7991 Physical fitness facilities
 7992 Public golf courses
 7993 Coin-operated amusement devices
 7996 Amusement parks
 7997 Membership sports & recreation clubs

APPENDIX D - SIC Codes Continued

<u>SIC CODE</u>	<u>CLASSIFICATION</u>	<u>SIC CODE</u>	<u>CLASSIFICATION</u>	<u>SIC CODE</u>	<u>CLASSIFICATION</u>
7999	Amusement and recreation, nec				
	<u>HEALTH SERVICES</u>		<u>MUSEUMS, BOTANICAL, ZOOLOGICAL GARDENS</u>		<u>ADMINISTRATION OF HUMAN RESOURCES</u>
8011	Offices & clinics of medical doctors	8411	Museums and art galleries (1977)	9411	Admin. of educational programs
8021	Offices and clinics of dentists	8412	Museums and art galleries	9431	Admin. of public health programs
8031	Offices of osteopathic physicians	8422	Botanical and zoological gardens	9441	Admin. of social & manpower programs
	Offices of Other Health Practitioners		<u>MEMBERSHIP ORGANIZATIONS</u>	9451	Administration of veterans' affairs
8041	Offices and clinics of chiropractors	8611	Business associations		<u>ENVIRONMENTAL QUALITY AND HOUSING</u>
8042	Offices and clinics of optometrists	8621	Professional organizations		Environmental Quality
8043	Offices and clinics of podiatrists	8631	Labor organizations	9511	Air, water, & solid waste management
8049	Offices of health practitioners, nec	8641	Civic and social associations	9512	Land, mineral, wildlife conservation
	Nursing and Personal Care Facilities	8651	Political organizations		Housing and Urban Development
8051	Skilled nursing care facilities	8661	Religious organizations	9531	Housing programs
8052	Intermediate care facilities	8699	Membership organizations, nec	9532	Urban and community development
8059	Nursing and personal care, nec		<u>ENGINEERING & MANAGEMENT SERVICES</u>		<u>ADMINISTRATION OF ECONOMIC PROGRAMS</u>
	Hospitals		Engineering & Architectural Services	9611	Admin. of general economic programs
8062	General medical & surgical hospitals	8711	Engineering services	9621	Regulation, admin. of transportation
8063	Psychiatric hospitals	8712	Architectural services	9631	Regulation, admin. of utilities
8069	Specialty hospitals exc. psychiatric	8713	Surveying services	9641	Regulation of agricultural marketing
	Medical and Dental Laboratories	8721	Accounting, auditing, & bookkeeping	9651	Regulation misc. commercial sectors
8071	Medical laboratories		Research and Testing Services	9661	Space research and technology
8072	Dental laboratories	8731	Commercial physical research		<u>NATIONAL SECURITY AND INTL. AFFAIRS</u>
	Home Health Care Services	8732	Commercial non physical research	9711	National security
8081	Outpatient care facilities (1977)	8733	Noncommercial research organizations	9721	International affairs
8082	Home health care services	8734	Testing laboratories		<u>NONCLASSIFIABLE ESTABLISHMENTS</u>
	Health and Allied Services, NEC		Management and Public Relations	9999	Nonclassifiable establishments
8091	Health and allied services, nec (1977)	8741	Management services		
8092	Kidney dialysis centers	8742	Management consulting services		
8093	Specialty outpatient clinics, nec	8743	Public relations services		
8099	Health and allied services, nec	8744	Facilities support services		
	<u>LEGAL SERVICES</u>	8748	Business consulting, nec		
8111	Legal services		<u>PRIVATE HOUSEHOLDS</u>		
	<u>EDUCATIONAL SERVICES</u>	8811	Private households		
8211	Elementary and secondary schools		<u>SERVICES, NEC</u>		
	Colleges and Universities	8911	Engineering & architectural services (1977)		
8221	Colleges and universities	8922	Noncommercial research organizations (1977)		
8222	Junior colleges	8931	Accounting, auditing & bookkeeping (1977)		
8231	Libraries	8999	Services, nec		
	Vocational Schools		<u>EXECUTIVE, LEGISLATIVE, AND GENERAL</u>		
8241	Correspondence schools (1977)	9111	Executive offices		
8243	Data processing schools	9121	Legislative bodies		
8244	Business and secretarial schools	9131	Executive and legislative combined		
8249	Vocational schools, nec	9199	General government, nec		
8299	Schools & educational services, nec		<u>JUSTICE, PUBLIC ORDER, AND SAFETY</u>		
	<u>SOCIAL SERVICES</u>	9211	Courts		
	Individual and Family Services		Public Order and Safety		
8321	Individual and family services (1977)	9221	Police protection		
8322	Individual and family services	9222	Legal counsel and prosecution		
8331	Job training and related services	9223	Correctional institutions		
8351	Child day care services	9224	Fire protection		
8361	Residential care	9229	Public order and safety, nec		
8399	Social services, nec		<u>FINANCE, TAXATION, & MONETARY POLICY</u>		
		9311	Finance, taxation, & monetary policy		

**APPENDIX E
CONTROL DEVICE CODES**

CONTROL DEVICE NAME	CONTROL DEVICE CODE
Activated Carbon Adsorption	ADSORB,CARBON
Activated Clay Adsorption	ADSORB,CLAY
Afterburner	AFTERBURNER
Afterburner, Catalytic with Heat Exchanger	AFTER,CAT,HEAT
Afterburner, Catalytic without Heat Exchanger	AFTER,CAT,NO HT
Afterburner, Direct Flame with Heat Exchanger	AFTER,FLM,HEAT
Afterburner, Direct Flame without Heat Exchanger	AFTER,FLM,NO HT
Ammonia Injection	INJCTN,AMMONIA
Andre - Cardboard Binks Filter (Accordion)	FLTR,ACCORDIAN
Any Control Device	CONTROL
Baffle	BAFFLE
Baghouse	BAGHOUSE
Boiler at Landfill	LANDFILL BOILER
Carbon Injection	INJCTN,CARBON
Catalytic Converter	AFTER,CAT CONV
Catalytic Incinerator	AFTER,CAT INCIN
Catalytic Oxidation - Flue Gas Desulfurization	CAT OXID,FGD
Catalytic Oxidizer	CATALYTIC OXIDR
Catalytic Reducer (e.g. NO _x reduction catalyst)	REDUC CATALYST
Centrifugal Collector - High Efficiency	CYCLONE,HGH,EFF
Centrifugal Collector - Low Efficiency	CYCLONE,LOW,EFF
Centrifugal Collector - Medium Efficiency	CYCLONE,MED,EFF
Condenser	CONDENSER
Condenser, Barometric	CONDENS,BAROMET
Condenser, Refrigerated	CONDENS,REFRIG
Condenser, Tube and Shell	CONDENS,TUB&SHL
Condensing Filter	FLTR,CONDENSE
Conservation Vent	CONSERV VENT
Crossflow Packed Bed Absorber	ABSORB,GAS,XFLO
Cyclone, Multiple w/ Fly Ash Reinjection	CYCLONE,MULT,W/
Cyclone, Multiple w/o Fly Ash Reinjection	CYCLONE,MULT,WO
Cyclone, Single	CYCLONE,SINGLE
Demister	DEMISTER
Dry Limestone Injection	INJCTN,LIME,DRY
Dry Sorbent Injection	INJCTN,DRY SORB
Dynamic Separator (Dry)	DYNAMIC SEP,DRY
Dynamic Separator (Wet)	DYNAMIC SEP,WET
Electrified Filter Bed	FLTR,BED,ELECT
Electrostatic Precipitator	ESP
Electrostatic Precipitator - High Efficiency	ESP,HIGH
Electrostatic Precipitator - Low Efficiency	ESP,LOW
Electrostatic Precipitator - Medium Efficiency	ESP,MEDIUM

APPENDIX E - Control Device Codes Continued

CONTROL DEVICE NAME	CONTROL DEVICE CODE
Fiberglass Filter w/ Cardboard Frame	FLTR,FG,W/ CF
Fiberglass Filter w/o Cardboard Frame	FLTR,FG,W/O CF
Filter, Annular Ring	FLTR,ANNULAR
Filter, Fabric	FLTR,FABRIC
Filter, Mat or Panel	FILTER
Filter,Fabric - High Temperature	FLTR,FAB,HI,TMP
Filter,Fabric - Low Temperature	FLTR,FAB,LO,TMP
Filter,Fabric - Medium Temperature	FLTR,FAB,MD,TMP
Flare	FLARE
Floating Bed Scrubber	SCRUBR,FLOAT
Flue Gas Recirculation	FLUE GAS RECIRC
Fluid Bed Dry Scrubber	SCRUBR,FL DRY
Freeboard Refrigeration Device	FREEBRD REFRIG
Gravel Bed Filter	FLTR,GRAVEL
Gravity Collector - High Efficiency	GRAVITY COL,HGH
Gravity Collector - Low Efficiency	GRAVITY COL,LOW
Gravity Collector - Medium Efficiency	GRAVITY COL,MED
High volume air filter	HVAF
High-Efficiency Particulate Air Filter (HEPA)	HEPA
High-Efficiency Particulate Air Filter (HEPA)	HEPA
Knock Out Box	KNOCK OUT BOX
Low NOX Burners	LOW NOX BURNERS
Mechanical Collector, w/ Fly Ash Reinjection	COLLECT,W FLY
Mechanical Collector, w/o Fly Ash Reinjection	COLLECT,W/O FLY
Metal Fabric Filter Screen (Cotton Gins)	METAL SCREEN
Mist Eliminator, High Velocity	MIST ELIM,HIGH
Mist Eliminator, Medium Velocity	MIST ELIM,MED
Molecular Sieve	MOLECULAR SIEVE
Multicyclone	CYCLONE,MULT
NSCR (Non-Selective Catalytic Reduction)	NSCR
Packed-Gas Absorption Column	ABSORB,GAS,PA
Paper Filter (Not Accordion)	FLTR,PAP NO ACC
Process Change	PROCESS CHANGE
Process Enclosed	ENCLOSURE
Quench Tower	QUENCH TOWER
Roll Media - Fiberglass Tack Filter (Tacky 1 Side)	FLTR,FG,TACKY
Rotoclone	ROTOCLONE
SCR (Selective Catalytic Reduction)	SCR
Scrubber, Alkaline Fly Ash	SCRUBR,ALK ASH
Scrubber, Ammonia	SCRUBR,NH3
Scrubber, Caustic	SCRUBR,CAUSTIC
Scrubber, Citrate Process	SCRUBR,CITRATE
Scrubber, Dry	SCRUBR,DRY
Scrubber, Dual Alkali	SCRUBR,DUAL ALK
Scrubber, Fluid Bed Dry	SCRUBR,DRYFLUID

APPENDIX E - Control Device Codes Continued

CONTROL DEVICE NAME	CONTROL DEVICE CODE
Scrubber, General	SCRUBR,GENERAL
Scrubber, High Pressure	SCRUBR,HGH PRES
Scrubber, Impingement Plate	SCRUBR,IMPING
Scrubber, Impingement Type Wet	SCRUBR,WET IMPG
Scrubber, Lime Slurry	SCRUBR,LIME
Scrubber, Low Pressure	SCRUBR,LOW PRES
Scrubber, Magnesium Oxide	SCRUBR,MG OX
Scrubber, Packed	SCRUBR,PACKED
Scrubber, Packed Bed - High Efficiency	SCRUBR,PACK,HI
Scrubber, Sodium Carbonate	SCRUBR,SOD CARB
Scrubber, Sodium-Alkali	SCRUBR,SOD ALK
Scrubber, Spray	SCRUBR,SPRAY
Scrubber, Undefined	SCRUBBER
Scrubber, Venturi	SCRUBR,VENTURI
Scrubber, Wellman-Lord/Sodium Sulfite	SCRUBR,WELLMAN
Scrubber, Wet	SCRUBR,WET
Scrubber, Wet - High Efficiency	SCRUBR,WET,HIGH
Scrubber, Wet - Low Efficiency	SCRUBR,WET,LOW
Scrubber, Wet - Medium Efficiency	SCRUBR,WET,MED
Single Wet Cap	SINGLE WET CAP
Split Paper + Polyester Paint Arrestor	ARRESTR,PAP+PNT
Spray Dryer	SPRAY DRYER
Spray Screen	SPRAY SCREEN
Spray Tower	SPRAY TOWER
Steam or Water Injection	INJCTN,STM/WTR
Submerged Filling	SUBMRGD FILLING
Sulfuric Acid Plant - Contact Process	SULF ACID,CNTCT
Tangential Overfire Air	TNGTL OVERFIRE
Thermal Oxidizer	THERMAL OXIDIZR
Tray-Type Gas Absorption Column	ABSORB,GAS,TRAY
Underground Tank	UNDRGRND TANK
Vapor Recovery System	VAPOR RECOV SYS
Vapor Recovery Unit	VAPOR RECOV UNT
Water Curtain	WATER CURTAIN
Wet Cyclone Separator	CYCLONE,WET
Wet Electrostatic Precipitator	ESP,WET
Wet Suppression	SUPPRESSION,WET
AFS control code 133	Z_AFS_133
AFS control code 147	Z_AFS_147
AFS control code 148	Z_AFS_148
AFS control code 149	Z_AFS_149
AFS control code 150	Z_AFS_150
AFS control code 151	Z_AFS_151
AFS control code 152	Z_AFS_152
AFS control code 153	Z_AFS_153
AFS control code 154	Z_AFS_154