

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.

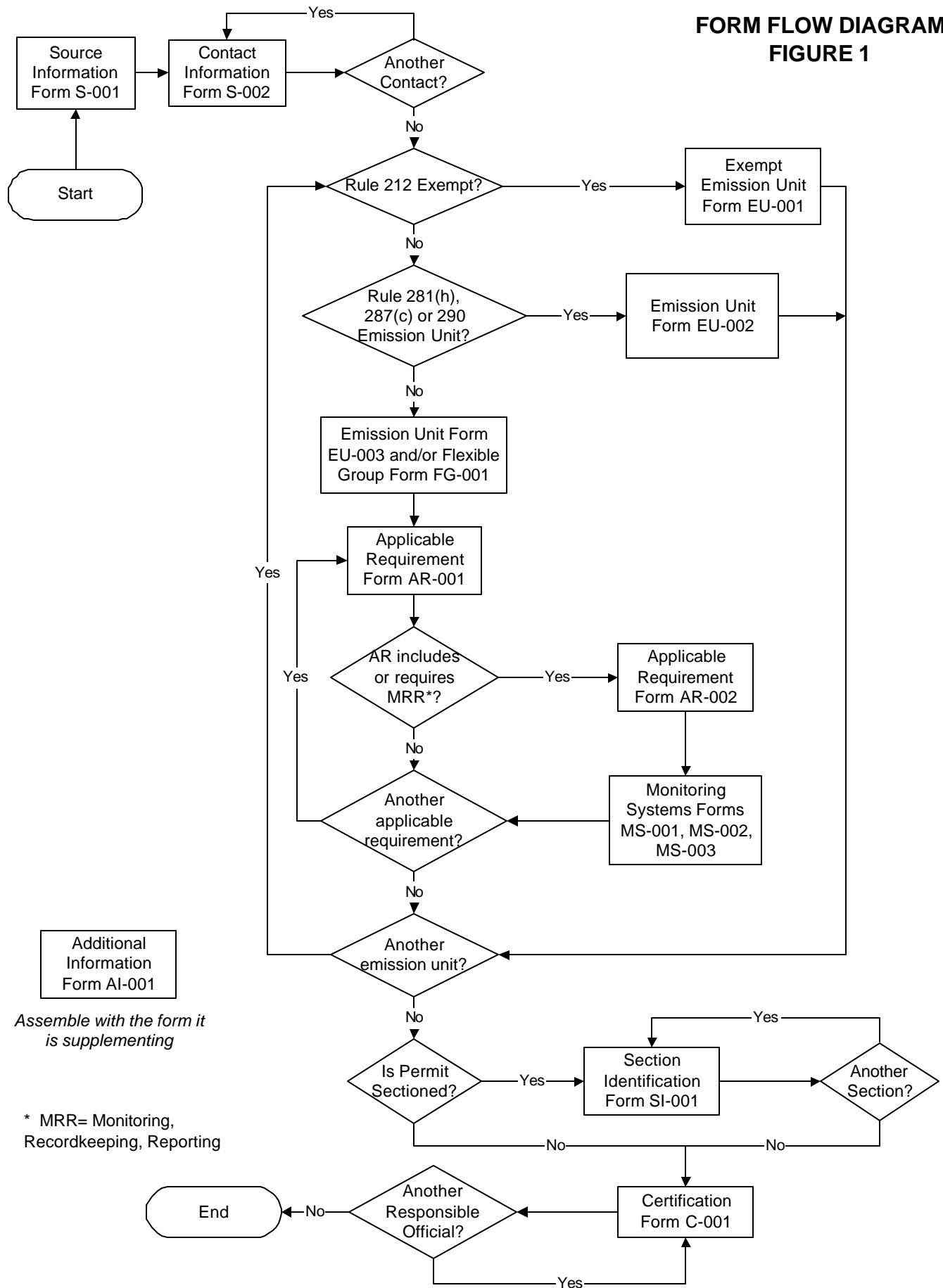
Operator's IDs can be established through a New Source Review (NSR) or RO Permit application or Michigan Air Emissions Reporting System (MAERS). Each emission unit, flexible group, and stack at a stationary source should only have one unique Operator's ID that is consistent between NSR Permits, RO Permits,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

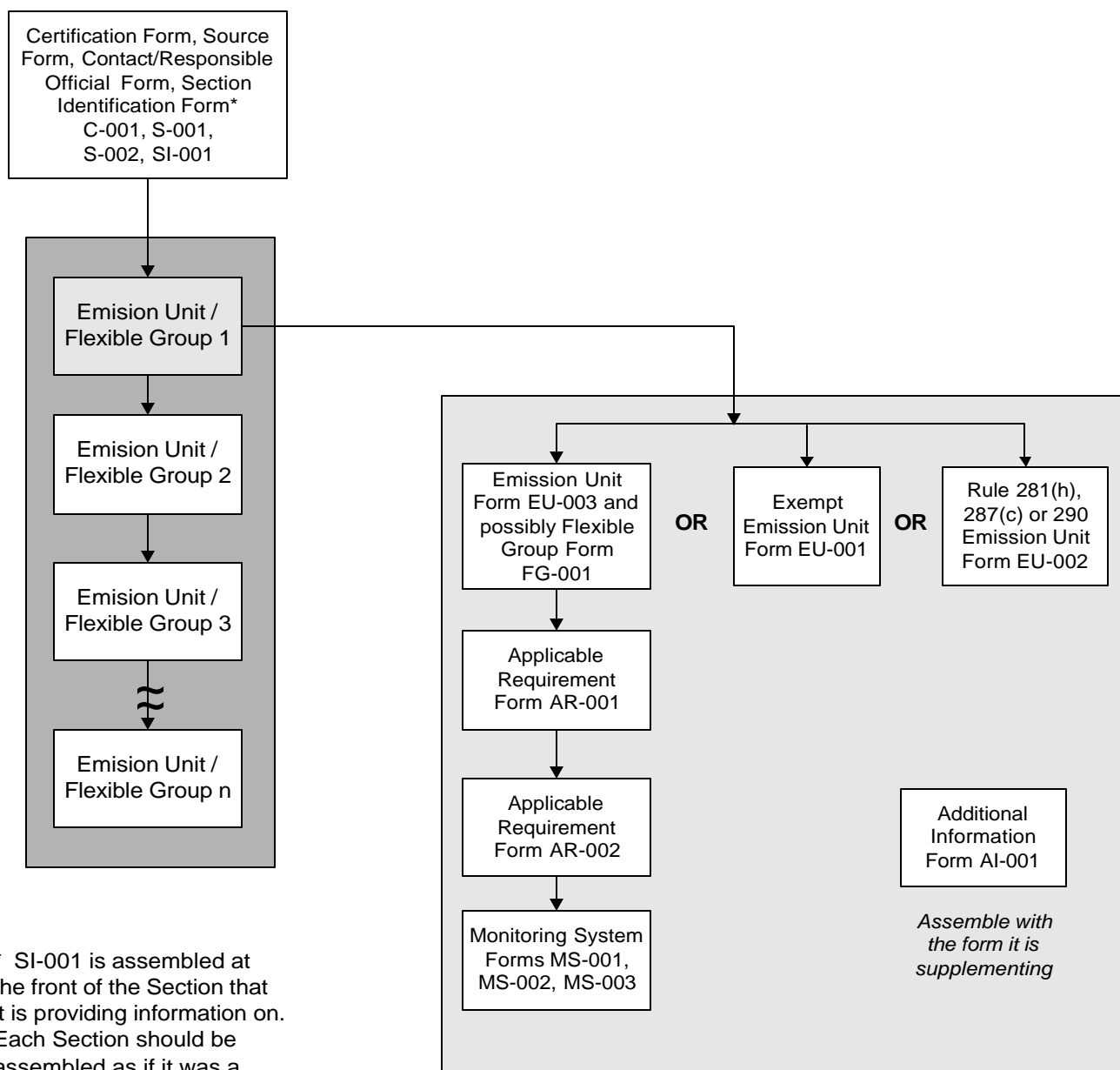
Form Relationships and Application Assembly for Amendments, Modifications and Notifications of Change are discussed in Part 3 of the instructions.

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



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
<u>LUMBER AND WOOD PRODUCTS</u>
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
<u>FURNITURE AND FIXTURES</u>
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
<u>PAPER AND ALLIED PRODUCTS</u>
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
<u>PRINTING AND PUBLISHING</u>
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
<u>CHEMICALS AND ALLIED PRODUCTS</u>
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

SIC CODE CLASSIFICATION

FOOD STORES

5641 Children's and infants' wear stores
5651 Family clothing stores
5661 Shoe stores
5681 Furriers and fur shops (1977)
5699 Misc. apparel & accessory stores

FURNITURE AND HOMEFURNISHINGS STORES

Furniture and Homefurnishings Stores

5712 Furniture stores
5713 Floor covering stores
5714 Drapery and upholstery stores
5719 Misc. homefurnishings stores
5722 Household appliance stores

Radio, Television, & Computer Stores

5731 Radio, TV, & electronic stores
5732 Radio and television stores (1977)
5733 Music stores (1977)
5734 Computer and software stores
5735 Record & prerecorded tape stores
5736 Musical instrument stores

EATING AND DRINKING PLACES

5812 Eating places
5813 Drinking places

MISCELLANEOUS RETAIL

5912 Drug stores and proprietary stores
5921 Liquor stores

Used Merchandise Stores

5931 Used merchandise stores (1977)
5932 Used merchandise stores

Miscellaneous Shopping Goods Stores

5941 Sporting goods and bicycle shops
5942 Book stores
5943 Stationery stores
5944 Jewelry stores
5945 Hobby, toy, and game shops
5946 Camera & photographic supply stores
5947 Gift, novelty, and souvenir shops
5948 Luggage and leather goods stores
5949 Sewing, needlework, and piece goods

Nonstore Retailers

5961 Catalog and mail-order houses
5962 Merchandising machine operators
5963 Direct selling establishments

Fuel Dealers

5982 Fuel and ice dealers, nec (1977)
5983 Fuel oil dealers
5984 Liquefied petroleum gas dealers
5989 Fuel dealers, nec

Retail Stores, NEC

5992 Florists
5993 Tobacco stores and stands
5994 News dealers and newsstands
5995 Optical goods stores

SIC CODE CLASSIFICATION

5999 Miscellaneous retail stores, nec

DEPOSITORY INSTITUTIONS

Central Reserve Depository

6011 Federal reserve banks
6019 Central reserve depository, nec

Commercial Banks

6021 National commercial banks
6022 State commercial banks
6023 State banks, not fed. reserve, (1977)
6024 State banks, not fed res., not (1977)
6025 National banks, federal reserv (1977)
6026 National banks, not fed. res., (1977)
6027 National banks, not FDIC (1977)
6028 Private banks, not incorp., no (1977)
6029 Commercial banks, nec

Savings Institutions

6032 Mutual savings banks, federal (1977)
6033 Mutual savings banks, nec (1977)
6034 Mutual savings banks, not FDIC (1977)
6035 Federal savings institutions
6036 Savings institutions, except federal
6042 Nondeposit trusts, federal res (1977)
6044 Nondeposit trusts, not FDIC (1977)
6052 Foreign exchange establishment (1977)
6054 Safe deposit companies (1977)
6055 Clearinghouse associations (1977)
6056 Corporations for banking abroad (1977)
6059 Functions related to banking, (1977)

Credit Unions

6061 Federal credit unions
6062 State credit unions

Foreign Bank & Branches + Agencies

6081 Foreign bank & branches & agencies
6082 Foreign trade & international banks

Functions Closely Related to Banking

6091 Nondeposit trust facilities
6099 Functions related to deposit banking

NONDEPOSITORY INSTITUTIONS

Federal & Fed.-Sponsored Credit

6111 Federal & fed.-sponsored credit
6112 Rediscounting, not for agriculture (1977)
6113 Rediscounting, for agriculture (1977)
6122 Federal savings & loan associations (1977)
6123 State associations, insured (1977)
6124 State associations, noninsured (1977)
6125 State associations, noninsured (1977)
6131 Agricultural credit institutions (1977)

Personal Credit Institutions

6141 Personal credit institutions
6142 Federal credit unions (1977)
6143 State credit unions (1977)
6144 Nondeposit industrial loan companies (1977)
6145 Licensed small loan lenders (1977)

SIC CODE CLASSIFICATION

6146 Installment sales finance companies (1977)

6149 Misc. personal credit institutions (1977)

Business Credit Institutions

6153 Short-term business credit
6159 Misc. business credit institutions

Mortgage Bankers and Brokers

6162 Mortgage bankers and correspondents
6163 Loan brokers

SECURITY AND COMMODITY BROKERS

6211 Security brokers and dealers
6221 Commodity contracts brokers, dealers
6231 Security and commodity exchanges

Security and Commodity Services

6281 Security and commodity service (1977)
6282 Investment advice
6289 Security & commodity services, nec
6311 Life insurance

Medical Service and Health Insurance

6321 Accident and health insurance
6324 Hospital and medical service plans
6331 Fire, marine, and casualty insurance
6351 Surety insurance
6361 Title insurance

INSURANCE CARRIERS

6371 Pension, health, and welfare funds
6399 Insurance carriers, nec

INSURANCE AGENTS, BROKERS, & SERVICE

6411 Insurance agents, brokers, & service

REAL ESTATE

Real Estate Operators and Lessors

6512 Nonresidential building operators
6513 Apartment building operators
6514 Dwelling operators, exc. apartments
6515 Mobile home site operators
6517 Railroad property lessors
6519 Real property lessors, nec
6531 Real estate agents and managers
6541 Title abstract offices

Subdividers and Developers

6552 Subdividers and developers, nec
6553 Cemetery subdividers and developers
6611 Combined real estate, insurance (1977)

HOLDING AND OTHER INVESTMENT OFFICES

Holding Offices

6711 Holding offices (1977)
6712 Bank holding companies
6719 Holding companies, nec

Investment Offices

6722 Management investment, open-end
6723 Management investment, closed-end (1977)
6724 Unit investment trusts (1977)
6725 Face-amount certificate offices (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

SIC CODE CLASSIFICATION

7999 Amusement and recreation, nec

HEALTH SERVICES

8011 Offices & clinics of medical doctors

8021 Offices and clinics of dentists

8031 Offices of osteopathic physicians

Offices of Other Health Practitioners

8041 Offices and clinics of chiropractors

8042 Offices and clinics of optometrists

8043 Offices and clinics of podiatrists

8049 Offices of health practitioners, nec

Nursing and Personal Care Facilities

8051 Skilled nursing care facilities

8052 Intermediate care facilities

8059 Nursing and personal care, nec

Hospitals

8062 General medical & surgical hospitals

8063 Psychiatric hospitals

8069 Specialty hospitals exc. psychiatric

Medical and Dental Laboratories

8071 Medical laboratories

8072 Dental laboratories

Home Health Care Services

8081 Outpatient care facilities (1977)

8082 Home health care services

Health and Allied Services, NEC

8091 Health and allied services, nec (1977)

8092 Kidney dialysis centers

8093 Specialty outpatient clinics, nec

8099 Health and allied services, nec

LEGAL SERVICES

8111 Legal services

EDUCATIONAL SERVICES

8211 Elementary and secondary schools

Colleges and Universities

8221 Colleges and universities

8222 Junior colleges

8231 Libraries

Vocational Schools

8241 Correspondence schools (1977)

8243 Data processing schools

8244 Business and secretarial schools

8249 Vocational schools, nec

8299 Schools & educational services, nec

SOCIAL SERVICES

Individual and Family Services

8321 Individual and family services (1977)

8322 Individual and family services

8331 Job training and related services

8351 Child day care services

8361 Residential care

8399 Social services, nec

SIC CODE CLASSIFICATION

MUSEUMS, BOTANICAL, ZOOLOGICAL GARDENS

Museums and Art Galleries

8411 Museums and art galleries (1977)

8412 Museums and art galleries

8422 Botanical and zoological gardens

MEMBERSHIP ORGANIZATIONS

8611 Business associations

8621 Professional organizations

8631 Labor organizations

8641 Civic and social associations

8651 Political organizations

8661 Religious organizations

8699 Membership organizations, nec

ENGINEERING & MANAGEMENT SERVICES

Engineering & Architectural Services

8711 Engineering services

8712 Architectural services

8713 Surveying services

8721 Accounting, auditing, & bookkeeping

Research and Testing Services

8731 Commercial physical research

8732 Commercial non physical research

8733 Noncommercial research organizations

8734 Testing laboratories

Management and Public Relations

8741 Management services

8742 Management consulting services

8743 Public relations services

8744 Facilities support services

8748 Business consulting, nec

PRIVATE HOUSEHOLDS

8811 Private households

SERVICES, NEC

8911 Engineering & architectural services (1977)

8922 Noncommercial research organizations (1977)

8931 Accounting, auditing & bookkeeping (1977)

8999 Services, nec

EXECUTIVE, LEGISLATIVE, AND GENERAL

9111 Executive offices

9121 Legislative bodies

9131 Executive and legislative combined

9199 General government, nec

JUSTICE, PUBLIC ORDER, AND SAFETY

9211 Courts

Public Order and Safety

9221 Police protection

9222 Legal counsel and prosecution

9223 Correctional institutions

9224 Fire protection

9229 Public order and safety, nec

FINANCE, TAXATION, & MONETARY POLICY

9311 Finance, taxation, & monetary policy

SIC CODE CLASSIFICATION

ADMINISTRATION OF HUMAN RESOURCES

9411 Admin. of educational programs

9431 Admin. of public health programs

9441 Admin. of social & manpower programs

9451 Administration of veterans' affairs

ENVIRONMENTAL QUALITY AND HOUSING

Environmental Quality

9511 Air, water, & solid waste management

9512 Land, mineral, wildlife conservation

Housing and Urban Development

9531 Housing programs

9532 Urban and community development

ADMINISTRATION OF ECONOMIC PROGRAMS

9611 Admin. of general economic programs

9621 Regulation, admin. of transportation

9631 Regulation, admin. of utilities

9641 Regulation of agricultural marketing

9651 Regulation misc. commercial sectors

9661 Space research and technology

NATIONAL SECURITY AND INTL. AFFAIRS

9711 National security

9721 International affairs

NONCLASSIFIABLE ESTABLISHMENTS

9999 Nonclassifiable establishments

APPENDIX E

CONTROL DEVICE CODES

<u>CONTROL DEVICE NAME</u>	<u>CONTROL DEVICE CODE</u>
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