

**CROSSWALK BETWEEN
MAXIMUM ACHIEVABLE
CONTROL
TECHNOLOGY (MACT)
CODES AND EMISSION
ACTIVITY GROWTH
FACTORS**

**TECHNICAL
MEMORANDUM**

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CHAPTER I. INTRODUCTION

Credible emission growth factor projections are a vital input into a variety of regulatory analyses completed by the U.S. Environmental Protection Agency's (EPA) Office of Air Quality Planning and Standards (OAQPS). In order to produce these emission growth factors, EPA requires an accessible and flexible tool for translating forecasts of economic activity into projected air pollutant emissions growth. The Emissions Monitoring and Assurance Division (EMAD) developed the Economic Growth Analysis System (EGAS) to serve this purpose and to replace the use of Bureau of Economic Analysis (BEA) growth rates for the purpose of projecting emissions for regulatory support. Several versions of EGAS have been developed over the years; however, it is not clear whether the current version of the tool is adequate to meet the requirements for continued regulatory support work and other related efforts. The main purposes of this memorandum are to (1) identify a list of current valid codes used by EPA to inventory source categories associated with Maximum Achievable Control Technology (MACT) standard emission activities; (2) assign preliminary emission activity growth indicators to each valid MACT code; and (3) describe the process used to assign growth indicators to MACT codes.

CHAPTER II. PROPOSED CROSSWALK BETWEEN MACT CODES AND EMISSION ACTIVITY GROWTH INDICATORS

A. METHODOLOGY

1. Identify List of Valid MACT Codes

The first step necessary for developing a comprehensive crosswalk between MACT codes and emission activity growth indicators is to compile a complete list of valid MACT codes. The EPA provided Pechan with three sets of files containing these codes (Khursheed, 2004; Strum 2004). Pechan also obtained the latest list of official National Emission Inventory Input Format (NIF) MACT codes (EPA, 2004a). Pechan reviewed these MACT code lists to identify discrepancies between each list and provided a description of these discrepancies to EPA to request clarification as to which of the various sets of MACT codes should be included in the EGAS 5.0 MACT code crosswalk. Table II-1 presents the list of MACT codes to be included in EGAS 5.0, and identifies the EPA MACT file(s) which reports these codes.

2. Assign Emission Activity Growth Indicators

The next step was to review variables expected to be provided by EGAS 5.0 for potential use as emission activity growth indicators for each MACT code. There are two major data sources that are expected to be used as growth indicators in EGAS 5.0: the Department of Energy (DOE)'s *Annual Energy Outlook* and version 5.5 of Regional Economic Models, Inc. (REMI)'s state-level economic models (DOE, 2004; Houyoux, 2004). In general, DOE data are expected to be used as growth indicators for fuel combustion/production categories, while REMI data will be used for all other source categories. Therefore, Pechan first identified the MACT codes associated with fuel combustion/production processes. Next, Pechan reviewed the list of unique DOE growth indicators developed for a recent EPA emission projection effort (Pechan, 2004) to identify a preliminary match between the processes described by fuel combustion/production MACT codes and the DOE growth indicators. For the remaining MACT codes, Pechan attempted to determine the Standard Industrial Classification (SIC) code associated with each MACT. For most MACT codes, this determination was made by looking up the MACT code description in the 1987 SIC code manual (OMB, 1988). For a select number of MACT codes that did not lend themselves to this approach, Pechan identified SIC codes by reviewing background information from MACT standards and MACT category listings (EPA, 2004b; Driscoll, 1999; and Driscoll, 2002).

Next, these SIC codes were used to link to REMI economic sectors, which are generally expressed on a 3-digit SIC code basis. For this preliminary crosswalk, Pechan utilized the growth indicator codes developed for use in the Interstate Air Quality Rulemaking (IAQR) emission forecasts (Pechan, 2004). In cases, where a MACT code is related to more than one IAQR growth indicator, the preliminary crosswalk identifies each code separately (if EPA requires a unique growth indicator code assigned to each SCC in the final crosswalk, then Pechan can create new growth indicator codes representing the sum of these individual REMI sectors). The growth indicator assigned to MACT codes 0502 (Petroleum Refineries - Catalytic Cracking, Catalytic Reforming, & Sulfur Plant Units) and 0503 (Petroleum Refineries - Other Sources Not

Distinctly Listed) was an exception. For these MACT codes, Pechan developed a new DOE growth indicator code (3001) representing total refined petroleum products supplied data.

B. PROPOSED CROSSWALK

Table II-2 presents the proposed crosswalk between MACT codes and REMI/DOE growth indicator codes. Where relevant, this table also lists the SIC code(s) Pechan identified as associated with each MACT and whether each DOE growth indicator is based on national or regional data. Tables II-3a and II-3b present the comprehensive list of REMI output variable and DOE energy consumption variable growth indicator codes used in the IAQR analysis.

Table II-3a also displays the single non-output REMI variable growth indicator (i.e., Gasoline and Oil Expenditures) included in the proposed MACT code crosswalk, and Table II-3b displays the single DOE variable growth indicator (i.e., Total Refined Petroleum Products Supplied) proposed for the MACT crosswalk that was not used in the IAQR analysis.

C. RECOMMENDATIONS FOR FUTURE WORK

In keeping with EGAS 4.0, the REMI growth indicator codes incorporated into the Table II-2 crosswalk represent REMI constant dollar output data. However, it is not clear that constant dollar output is the best available REMI indicator of emission activity changes. The selection of output data as the appropriate REMI growth indicator is based solely on past EPA practice. Pechan recommends that past performance evaluations be conducted to determine whether alternative REMI variables (e.g., employment) generally provide better surrogates for changes in emission activity.

Table II-1. MACT Codes to be Incorporated into EGAS 5.0

MACT	DESCRIPTION	FILE OF UNIQUE CODES USED IN 1999 NEI	FILE OF EPA MACT EMISSION REDUCTIONS	FILE OF EPA NIF 3.0 CODES	FILE WITH EPA 1999 MACT LIST	FILE WITH EPA 2002 MACT LIST	COMMENTS
0101-1	Engine Test Facilities	x	x		x	x	
0101-2	Rocket Engine Test Firing	x	x		x	x	
0105	Stationary Reciprocal Internal Combustion Engines	x	x	x	x	x	
0107	Industrial/Commercial/ Institutional Boilers & Process Heaters	x	x	x	x	x	
0107-1	Industrial/Commercial/Institutional Boilers & Process Heaters: Coal	x	x			x	
0107-2	Industrial/Commercial/Institutional Boilers & Process Heaters: Natural gas	x	x			x	
0107-3	Industrial/Commercial/Institutional Boilers & Process Heaters: Oil	x	x			x	
0107-4	Industrial/Commercial/Institutional Boilers & Process Heaters: Wood/Waste	x	x			x	
0108	Stationary Combustion Turbines	x	x	x	x	x	
0201	Primary Aluminum Production	x	x	x	x	x	
0202	Secondary Aluminum Production	x	x	x	x	x	
0203	Primary Copper Smelting	x	x	x	x	x	
0204	Primary Lead Smelting	x	x	x	x	x	
0205	Secondary Lead Smelting	x	x	x	x	x	
0207	Primary Magnesium Refining	x	x	x	x	x	
0260	Secondary Nonferrous Metals					x	proposed
0262	Primary Nonferrous Metals- Zinc, Cadmium, and Beryllium					x	proposed
0263	Lead Acid Battery Manufacturing					x	proposed
0264	Wood Preserving					x	proposed
0265	Chemical Manufacturing: Chromium Compounds					x	proposed
0266	Primary Metals Manufacturing					x	proposed
0267	Secondary Copper Smelting					x	proposed
0302	Coke Ovens: Charging, Top Side, and Door Leaks	x	x	x	x	x	
0303	Coke Ovens: Pushing, Quenching, & Battery Stacks	x	x	x	x	x	
0304	Ferroalloys Production	x	x	x	x	x	
0305	Integrated Iron & Steel Manufacturing	x	x	x	x	x	
0308	Iron Foundries	x	x	x	x	x	
0309	Steel Foundries	x	x		x	x	
0310	Steel Pickling - HCL Process	x	x	x	x	x	
0360	Ferroalloys Production: Ferromanganese and Silicomanganese					x	proposed
0361	Copper Foundries					x	proposed
0362	Iron and Steel Forging					x	proposed
0363	Nonferrous Foundries, Not Elsewhere Classified					x	proposed
0364	Stainless and Nonstainless Steel Manufacturing: Electric Arc Furnaces (EAF)					x	proposed
0402	Asphalt/Coal Tar Application - Metal Pipes		x	x	x	x	
0406	Refractory Products Manufacturing	x	x	x	x	x	
0408	Lime Manufacturing	x	x	x	x	x	
0409	Mineral Wool Production	x	x	x	x	x	
0410	Portland Cement Manufacturing	x	x	x	x	x	
0411	Taconite Iron Ore Processing	x	x	x	x	x	
0412	Wool Fiberglass Manufacturing	x	x	x	x	x	
0413	Wet-Formed Fiberglass Mat Production	x	x	x	x	x	

Table II-1 (continued)

MACT	DESCRIPTION	FILE OF UNIQUE CODES USED IN 1999 NEI	FILE OF EPA MACT EMISSION REDUCTIONS	FILE OF EPA NIF 3.0 CODES	FILE WITH EPA 1999 MACT LIST	FILE WITH EPA 2002 MACT LIST	COMMENTS
0414	Brick and Structural Clay Products Manufacturing	x	x	x	x	x	
0415	Clay Ceramics Manufacturing	x	x	x	x	x	
0418	Asphalt Roofing and Processing	x	x	x	x	x	
0501	Oil & Natural Gas Production	x	x	x	x	x	
0502	Petroleum Refineries - Catalytic Cracking, Catalytic Reforming, & Sulfur Plant Units	x	x	x	x	x	
0503	Petroleum Refineries - Other Sources Not Distinctly Listed	x	x	x	x	x	
0504	Natural Gas Transmission & Storage	x	x	x	x	x	
0560	Cyclic Crude and Intermediate Production					x	proposed
0601	Gasoline Distribution (Stage I)	x	x	x	x	x	
0602	Organic Liquids Distribution (Non-Gasoline)	x	x	x	x	x	
0603	Marine Vessel Loading Operations	x	x	x	x	x	
0701	Aerospace Industries	x	x	x	x	x	
0702	Auto & Light Duty Truck (Surface Coating)	x	x	x	x	x	
0703	Wood Building Products (Surface Coating)	x	x	x	x	x	
0704	Large Appliance (Surface Coating)	x	x	x	x	x	
0705	Magnetic Tapes (Surface Coating)	x	x	x	x	x	
0707	Metal Can (Surface Coating)	x	x	x	x	x	
0708	Metal Coil (Surface Coating)	x	x	x	x	x	
0709	Metal Furniture (Surface Coating)	x	x	x	x	x	
0710	Miscellaneous Metal Parts & Products (Surface Coating)	x	x	x	x	x	
0711	Paper & Other Webs (Surface Coating)	x	x	x	x	x	
0712	Plastic Parts & Products (Surface Coating)	x	x	x	x	x	
0713	Printing, Coating & Dyeing Of Fabrics	x	x	x	x	x	
0714	Printing/Publishing (Surface Coating)	x	x	x	x	x	
0715	Shipbuilding & Ship Repair (Surface Coating)	x	x	x	x	x	
0716	Wood Furniture (Surface Coating)	x	x	x	x	x	
07xx	Autobody Refinishing Shops					x	not new but an area source
0801	Hazardous Waste Incineration	x	x	x	x	x	
0801-1	Commercial Hazardous Waste Incinerators	x	x		x	x	
0801-2	On-Site Hazardous Waste Incinerators	x	x		x	x	
0801-3	Cement Kilns	x	x		x	x	
0801-4	Lightweight Aggregate Kilns	x	x		x	x	
0802	Municipal Landfills	x	x	x	x	x	
0803	Publicly Owned Treatment Works (POTW) Emissions	x	x	x	x	x	
0805	Site Remediation	x	x	x	x	x	
0806	Off-Site Waste and Recovery Operations		x	x	x	x	
0911	Pesticide Active Ingredient Production	x	x	x	x	x	
0960	Agricultural Chemicals and Pesticides Manufacturing					x	not new but an area source
1001	Acrylic/Modacrylic Fibers Production	x	x	x	x	x	
1003	Spandex Production	x	x	x	x	x	
1101	Manufacture of Nutritional Yeast	x	x	x	x	x	
1103	Solvent Extraction for Vegetable Oil Production	x	x	x	x	x	
11xx	Prepared Feeds Manufacturing					x	not new but an area source
1201	Pharmaceuticals Production	x	x	x	x	x	
1301	Acetal Resins Production	x	x		x	x	

Table II-1 (continued)

MACT	DESCRIPTION	FILE OF UNIQUE CODES USED IN 1999 NEI	FILE OF EPA MACT EMISSION REDUCTIONS	FILE OF EPA NIF 3.0 CODES	FILE WITH EPA 1999 MACT LIST	FILE WITH EPA 2002 MACT LIST	COMMENTS
1302	Acrylonitrile-Butadiene-Styrene Production	x	x	x	x	x	
1305	Boat Manufacturing	x	x	x	x	x	
1307	Butyl Rubber Production	x	x	x	x	x	
1311	Epichlorohydrin Elastomers Production	x	x	x	x	x	
1312	Epoxy Resins Production	x	x	x	x	x	
1313	Ethylene-Propylene Rubber Production	x	x	x	x	x	
1314	Flexible Polyurethane Foam Production	x	x	x	x	x	
1315	Hypalon (TM) Production: POLYMERS & RESINS I		x	x	x	x	
1317	Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production: POLYMERS & RESINS IV		x	x	x	x	
1318	Methyl Methacrylate-Butadiene-Styrene Terpolymers Production	x	x	x	x	x	
1320	Neoprene Production	x	x	x	x	x	
1321	Nitrile Butadiene Rubber Production	x	x	x	x	x	
1322	Non-Nylon Polyamides Production: POLYMERS & RESINS II		x	x	x	x	
1325	Polybutadiene Rubber Production	x	x	x	x	x	
1326	Polycarbonates Production	x	x	x	x	x	
1328	Polyethylene Terephthalate Production	x	x	x	x	x	
1331	Polystyrene Production	x	x	x	x	x	
1332	Polysulfide Rubber Production	x	x	x	x	x	
1336	Polyvinyl Chloride & Copolymers Production		x	x	x	x	
1337	Reinforced Plastic Composites Production	x	x	x	x	x	
1338	Styrene Acrylonitrile Production	x	x	x	x	x	
1339	Styrene-Butadiene Rubber & Latex Production	x	x	x	x	x	
1341	Flexible Polyurethane Foam Fabrication Operations	x	x	x	x	x	
1342	Nitrile Resins Production	x	x	x	x	x	
1347	Amino/Phenolic Resins Production	x	x	x	x	x	
1348	Viscose Process Manufacturing	x	x	x	x	x	
1349	Cellulose Products Manufacturing	x	x	x	x	x	
1360	Plastic Materials and Resins Manufacturing					x	not new but an area source
1361	Synthetic Rubber Manufacturing					x	not new but an area source
1401	Ammonium Sulfate - Caprolactam By-Product Plants	x	x	x	x	x	
1403	Chlorine Production	x	x	x	x	x	
1405	Cyanide Chemicals Manufacturing	x	x	x	x	x	
1407	Hydrochloric Acid Production	x	x	x	x	x	
1409	Hydrogen Fluoride Production	x	x	x	x	x	
1410	Phosphate Fertilizers Production	x	x	x	x	x	
1411	Phosphoric Acid Manufacturing	x	x	x	x	x	
1414	Uranium Hexafluoride Production		x	x	x	x	
1415	Carbon Black Production	x	x	x	x	x	
1460	Inorganic Pigments Manufacturing					x	not new but an area source
1461	Industrial Inorganic Chemical Manufacturing					x	not new but an area source
1501	Synthetic Organic Chemical Manufacturing (HON)	x	x	x	x	x	
1560	Industrial Organic Chemical Manufacturing					x	proposed

Table II-1 (continued)

MACT	DESCRIPTION	FILE OF UNIQUE CODES USED IN 1999 NEI	FILE OF EPA MACT EMISSION REDUCTIONS	FILE OF EPA NIF 3.0 CODES	FILE WITH EPA 1999 MACT LIST	FILE WITH EPA 2002 MACT LIST	COMMENTS
1604	Carbonyl Sulfide (COS) Production		X	X	X	X	
1607	Chromic Acid Anodizing	X	X	X	X	X	
1609	Commercial Sterilization Facilities	X	X	X	X	X	
1610	Decorative Chromium Electroplating	X	X	X	X	X	
1614	Halogenated Solvent Cleaners	X	X	X	X	X	
1615	Hard Chromium Electroplating	X	X	X	X	X	
1619	Industrial Cooling Towers					X	
1621	Paint Stripping Operations	X	X	X	X	X	
1624	Plywood and Composite Wood Products	X	X	X	X	X	
1625	Polyether Polyols Production	X	X	X	X	X	
1626	Pulp and Paper Production - Not Otherwise Sub-Classified	X	X		X	X	
1626-1	Pulp & Paper Production - Pulping and Bleaching Systems at Kraft, Soda, Sulfite, and Semicheical Pulping Mills (Subpart S)	X	X	X	X	X	
1626-2	Pulp & Paper Production - Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semicheical Pulping Mills (Subpart MM)	X	X	X	X	X	
1626-3	Pulp and Paper Production - NonMACT Facilities	X	X		X	X	not a MACT
1629	Semiconductor Manufacturing	X	X	X	X	X	
1631	Rubber Tire Production	X	X	X	X	X	
1634	Leather Tanning & Finishing Operations	X	X	X	X	X	
1635	Ethylene Processes	X	X	X	X	X	
1636	Friction Materials Manufacturing	X	X	X	X	X	
1641	Miscellaneous Organic Chemical Manufacturing	X	X	X	X	X	
1642	Miscellaneous Coating Manufacturing	X	X	X	X	X	
1643	Dry Cleaning: Perchloroethylene	X	X	X	X	X	
1644	Hospital Sterilizers	X	X	X	X	X	
1660	Valves and Pipe Fittings Manufacturing					X	proposed
1661	Heating Equipment Manufacturing					X	proposed
1662	Fabricated Structural Metal Manufacturing					X	proposed
1663	Fabricated Plate Work					X	proposed
1664	Fabricated Metal Products Manufacturing, Not Elsewhere Classified					X	proposed
1665	Electrical and Electronics Equipment: Finishing Operations					X	proposed
1666	Industrial Machinery and Equipment: Finishing Operations					X	proposed
1667	Chemical Preparations					X	proposed
1668	Paints and Allied Products Manufacturing					X	proposed
1669	Plating and Polishing					X	proposed
1801	Medical Waste Incinerators	X	X	X	X	X	
1802	Municipal Waste Combustors	X	X	X	X	X	
1807-1	Commercial, Industrial, Solid Waste Incineration	X	X	X	X	X	
1807-2	Other Solid Waste Incineration - Crematories	X	X	X	X	X	
1808-1	Utility Boilers: Coal	X	X	X	X	X	
1808-2	Utility Boilers: Natural Gas	X	X	X	X	X	
1808-3	Utility Boilers: Oil	X	X	X	X	X	
1860	Sewage Sludge Incineration					X	proposed

Table II-2. Proposed Crosswalk Between MACT Codes and Growth Indicators

MACT	DESCRIPTION	SIC CODE(S)	DOE	INDICATOR CODE	DESCRIPTION	DOE GEOGRAPHY
0101-1	Engine Test Facilities	3531,3519, 3523, 3559, 3599, 3621, 3711, 3714, 4226. 4512, 5541, 7538, 7539, 8299. 8711, 8731, 8734, 8741, 3519, 3621, 3524, 3511, 3566, 3721, 3724, 4512, 4581,7699, 9611, 3711		28	Engines and turbines - SIC 351	
0101-2	Rocket Engine Test Firing	3724, 3764, 3761, 9661, 9711		46	Aerospace - SIC 372, 376	
0105	Stationary Reciprocal Internal Combustion Engines	4911, 4922, 1211, 1321, 9711	Y	2101+1801	Industrial/Refining/Distillate + Industrial/Mining/Distillate	National
0107	Industrial/Commercial/ Institutional Boilers & Process Heaters		Y	1102+2201	Commercial/Delivered Energy + Industrial/Total Industrial/Delivered Energy	Regional
0107-1	Industrial/Commercial/Institutional Boilers & Process Heaters: Coal		Y	1101+2211	Commercial/Coal + Industrial/Total Industrial/Total Coal	Regional
0107-2	Industrial/Commercial/Institutional Boilers & Process Heaters: Natural gas		Y	1107+2206	Commercial/Natural Gas + Industrial/Total Industrial/Natural Gas	Regional
0107-3	Industrial/Commercial/Institutional Boilers & Process Heaters: Oil		Y	1103+2202	Commercial/Distillate + Industrial/Total Industrial/Distillate	Regional
0107-4	Industrial/Commercial/Institutional Boilers & Process Heaters: Wood/Waste		Y	1109+2208	Commercial/Renewable Energy + Industrial/Total Industrial/Renewable Energy	Regional
0108	Stationary Combustion Turbines	4911, 4922, 1311, 1321, 4931	Y	1207	Electric Generation/Total-Nuclear-Imports	
0201	Primary Aluminum Production	3334		15	Primary nonferrous smelting & refining - SIC 333	
0202	Secondary Aluminum Production	3341, 33334, 3353, 3354, 33555, 3363, 3365		15+16+17+18	Primary nonferrous smelting & refining - SIC 333 + All other primary metals - SIC 334, 339 + Nonferrous rolling and drawing - SIC 335 + Nonferrous foundries - SIC 336	
0203	Primary Copper Smelting	3331		15	Primary nonferrous smelting & refining - SIC 333	
0204	Primary Lead Smelting	3339		15	Primary nonferrous smelting & refining - SIC 333	
0205	Secondary Lead Smelting	3341		16	All other primary metals - SIC 334, 339	
0207	Primary Magnesium Refining	3339		15	Primary nonferrous smelting & refining - SIC 333	
0260	Secondary Nonferrous Metals	3341		254	Secondary Metal Production - SIC 334, 336, 339	
0262	Primary Nonferrous Metals- Zinc, Cadmium, and Beryllium			15	Primary nonferrous smelting & refining - SIC 333	
0263	Lead Acid Battery Manufacturing			44	Miscellaneous electrical equipment- SIC 369	
0264	Wood Preserving	2491		4	Wood containers and misc. wood products- SIC 244, 249	
0265	Chemical Manufacturing: Chromium Compounds	2819		85	Industrial chemicals - SIC 281, 286	
0266	Primary Metals Manufacturing	3399		16	All other primary metals - SIC 334, 339	
0267	Secondary Copper Smelting	3341		16	All other primary metals - SIC 334, 339	
0302	Coke Ovens: Charging, Top Side, and Door Leaks	3312	Y	1602	Industrial/Iron and Steel/Metallurgical Coal	National
0303	Coke Ovens: Pushing, Quenching, & Battery Stacks		Y	1602	Industrial/Iron and Steel/Metallurgical Coal	National
0304	Ferroalloys Production	3313		13	Blast furnaces and basic steel products - SIC 331	
0305	Integrated Iron & Steel Manufacturing	331, 332		13+14	Blast furnaces and basic steel products - SIC 331 + Iron and steel foundries - SIC 332	
0308	Iron Foundries	3322, 3321		14	Iron and steel foundries - SIC 332	
0309	Steel Foundries	3325, 3324		14	Iron and steel foundries - SIC 332	
0310	Steel Pickling - HCL Process	3312, 3315, 3317		13	Blast furnaces and basic steel products - SIC 331	
0360	Ferroalloys Production: Ferromanganese and Silicomanganese			13	Blast furnaces and basic steel products- SIC 331	
0361	Copper Foundries			18	Nonferrous foundries - SIC 336	
0362	Iron and Steel Forging	3312		13	Blast furnaces and basic steel products- SIC 331	

Table II-2 (continued)

MACT	DESCRIPTION	SIC CODE(S)	DOE	INDICATOR CODE	DESCRIPTION	DOE GEOGRAPHY
0363	Nonferrou Foundries, Not Elsewhere Classified			18	Nonferrous foundries - SIC 336	
0364	Stainless and Nonstainless Steel Manufacturing: Electric Arc Furnaces (EAF)			13	Blast furnaces and basic steel products- SIC 331	
0402	Asphalt/Coal Tar Application - Metal Pipes	2951, 2952		93	Miscellaneous petroleum and coal products - SIC 295, 299	
0406	Refractory Products Manufacturing	3255, 3297		11	Stone, clay, and misc. mineral products - SIC 325, 326, 328, 329	
0408	Lime Manufacturing	3399, 3274, 3357, 3341, 3331, 3339, 3351, 3312, 3313, 3297		12+13+15+17	Concrete, gypsum, & plaster products - SIC 327 + Blast furnaces and basic steel products - SIC 331 + Primary nonferrous smelting & refining - SIC 333 + Nonferrous rolling and drawing - SIC 335	
0409	Mineral Wool Production	3296		11	Stone, clay, and misc. mineral products - SIC 325, 326, 328, 329	
0410	Portland Cement Manufacturing	3241		10	Hydraulic cement - SIC 324	
0411	Taconite Iron Ore Processing	1011		99	Metal mining - SIC 10	
0412	Wool Fiberglass Manufacturing	3296		11	Stone, clay, and misc. mineral products - SIC 325, 326, 328, 329	
0413	Wet-Formed Fiberglass Mat Production	3229		9	Glass and glass products - SIC 321, 322, 323	
0414	Brick and Structural Clay Products Manufacturing	3251		11	Stone, clay, and misc. mineral products - SIC 325, 326, 328, 329	
0415	Clay Ceramics Manufacturing	3251		11	Stone, clay, and misc. mineral products - SIC 325, 326, 328, 329	
0418	Asphalt Roofing and Processing	2952		93	Miscellaneous petroleum and coal products - SIC 295, 299	
0501	Oil & Natural Gas Production	1311		101	Crude petroleum, natural gas and gas liquids -SIC 131, 132	
0502	Petroleum Refineries - Catalytic Cracking, Catalytic Reforming, & Sulfur Plant Units		Y	3001	Total Refined Petroleum Products Supplied	National
0503	Petroleum Refineries - Other Sources Not Distinctly Listed		Y	3001	Total Refined Petroleum Products Supplied	National
0504	Natural Gas Transmission & Storage		Y	2503	Total Energy; Natural Gas	Regional
0560	Cyclic Crude and Intermediate Production	2865		85	Industrial chemicals - SIC 281, 286	
0601	Gasoline Distribution (Stage I)			406	Gasoline & Oil Expenditures	
0602	Organic Liquids Distribution (Non-Gasoline)	286		85	Industrial chemicals - SIC 281, 286	
0603	Marine Vessel Loading Operations	44		109	Water transportation - SIC 44	
0701	Aerospace Industries	372		46	Aerospace - SIC 372, 376	
0702	Auto & Light Duty Truck (Surface Coating)	371		45	Motor Vehicles and Equipment - SIC 371	
0703	Wood Building Products (Surface Coating)	2435, 2493, 2421, 2429, 2499, 3131, 2426, 2331, 2436		2+3	Sawmills and planing mills - SIC 242 + Millwork, plywood, and structural members - SIC 243	
0704	Large Appliance (Surface Coating)	363		39	Household Appliances- SIC 363	
0705	Magnetic Tapes (Surface Coating)	3695		44	Miscellaneous electrical equipment - SIC 369	
0707	Metal Can (Surface Coating)	341		19	Metal Cans and Shipping Containers- SIC 341	
0708	Metal Coil (Surface Coating)	3479 (over 20, NESHAP said most were in this one)		25	Metal coating, engraving, and allied services - SIC 347	
0709	Metal Furniture (Surface Coating)	25		202	Furniture and Fixtures- SIC 25	
0710	Miscellaneous Metal Parts & Products (Surface Coating)	3479		25	Metal coating, engraving, and allied services - SIC 347	
0711	Paper & Other Webs (Surface Coating)	2672		76	Converted paper products except containers - SIC 267	

Table II-2 (continued)

MACT	DESCRIPTION	SIC CODE(S)	DOE	INDICATOR CODE	DESCRIPTION	DOE GEOGRAPHY
0712	Plastic Parts & Products (Surface Coating)	282		86	Plastic Materials and Synthetics- SIC 282	
0713	Printing, Coating & Dyeing Of Fabrics	222		214	Textile Mill Products - SIC 22	
0714	Printing/Publishing (Surface Coating)	27		217	Printing and Publishing - SIC 27	
0715	Shipbuilding & Ship Repair (Surface Coating)	3731		47	Ship and boat building and repairing - SIC 373	
0716	Wood Furniture (Surface Coating)	25		202	Furniture & Fixtures - SIC 25	
07xx	Autobody Refinishing Shops	7532		136	Automobile parking, repair, and services - SIC 752 - 754	
0801	Hazardous Waste Incineration	4953		116	Water and sanitation - SIC 494 - 497, 493	
0801-1	Commercial Hazardous Waste Incinerators	4953		116	Water and sanitation - SIC 494 - 497, 494	
0801-2	On-Site Hazardous Waste Incinerators	4953, 3241, 3295, 28, 29, 33, 38, 49, 50, 51, 73, 89, 95		258	Total Manufacturing - SIC 20-39	
0801-3	Cement Kilns	3241		10	Hydraulic Cement - SIC 324	
0801-4	Lightweight Aggregate Kilns	325		11	Stone, clay, and misc. mineral products - SIC 325, 326, 328, 329	
0802	Municipal Landfills	4953		116	Water and sanitation - SIC 494 - 497, 493	
0803	Publicly Owned Treatment Works (POTW) Emissions			116	Water and sanitation - SIC 494 - 497, 493	
0805	Site Remediation			116	Water and sanitation - SIC 494 - 497, 493	
0806	Off-Site Waste and Recovery Operations			116	Water and sanitation - SIC 494 - 497, 493	
0911	Pesticide Active Ingredient Production	2879		90	Agricultural chemicals - SIC 287	
0960	Agricultural Chemicals and Pesticides Manufacturing	2879		90	Agricultural chemicals - SIC 287	
1001	Acrylic/Modacrylic Fibers Production	2824		86	Plastics materials and synthetics - SIC 282	
1003	Spandex Production	2221		68	Weaving, finishing, yarn, and thread mills - SIC 221 - 224, 226, 228	
1101	Manufacture of Nutritional Yeast	2099		66	Miscellaneous food and kindred products -SIC 209	
1103	Solvent Extraction for Vegetable Oil Production	2074, 2075, 2076, 2079, 2048, 2041, 2046		62	Grain mill products and fats and oils - SIC 204, 207	
11xx	Prepared Feeds Manufacturing	2048		62	Grain mill products and fats and oils - SIC 204, 207	
1201	Pharmaceuticals Production	2834		87	Drugs - SIC 283	
1301	Acetal Resins Production	2821		86	Plastics materials and synthetics - SIC 282	
1302	Acrylonitrile-Butadiene-Styrene Production	2821		86	Plastics materials and synthetics - SIC 282	
1305	Boat Manufacturing	3732		47	Ship and boat building and repairing - SIC 373	
1307	Butyl Rubber Production	2822		86	Plastics materials and synthetics - SIC 282	
1311	Epichlorohydrin Elastomers Production	2822		86	Plastics materials and synthetics - SIC 282	
1312	Epoxy Resins Production	2821		86	Plastics materials and synthetics - SIC 282	
1313	Ethylene-Propylene Rubber Production	2822		86	Plastics materials and synthetics - SIC 282	
1314	Flexible Polyurethane Foam Production	3086		96	Miscellaneous plastics products, nec - SIC 308	
1315	Hypalon (TM) Production: POLYMERS & RESINS I	2822		86	Plastics materials and synthetics - SIC 282	
1317	Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production: POLYMERS & RESINS IV	2821		86	Plastics materials and synthetics - SIC 282	
1318	Methyl Methacrylate-Butadiene-Styrene Terpolymers Production	2821, 2822		86	Plastics materials and synthetics - SIC 282	
1320	Neoprene Production	2822		86	Plastics materials and synthetics - SIC 282	
1321	Nitrile Butadiene Rubber Production	2822		86	Plastics materials and synthetics - SIC 282	
1322	Non-Nylon Polyamides Production: POLYMERS & RESINS II	2821		86	Plastics materials and synthetics - SIC 282	
1325	Polybutadiene Rubber Production	2822		86	Plastics materials and synthetics - SIC 282	
1326	Polycarbonates Production	2821		86	Plastics materials and synthetics - SIC 282	
1328	Polyethylene Terephthalate Production	282		86	Plastics materials and synthetics - SIC 282	

Table II-2 (continued)

MACT	DESCRIPTION	SIC CODE(S)	DOE	INDICATOR CODE	DESCRIPTION	DOE GEOGRAPHY
1331	Polystyrene Production	2821		86	Plastics materials and synthetics - SIC 282	
1332	Polysulfide Rubber Production	2822		86	Plastics materials and synthetics - SIC 282	
1336	Polyvinyl Chloride & Copolymers Production	2821		86	Plastics materials and synthetics - SIC 282	
1337	Reinforced Plastic Composites Production			96	Miscellaneous plastics products, nec - SIC 308	
1338	Styrene Acrylonitrile Production	2821		86	Plastics materials and synthetics - SIC 282	
1339	Styrene-Butadiene Rubber & Latex Production	2822		86	Plastics materials and synthetics - SIC 282	
1341	Flexible Polyurethane Foam Fabrication Operations	3086		96	Miscellaneous plastics products, nec - SIC 308	
1342	Nitrile Resins Production	2822		86	Plastics materials and synthetics - SIC 282	
1347	Amino/Phenolic Resins Production	2821		86	Plastics materials and synthetics - SIC 282	
1348	Viscose Process Manufacturing	2823		86	Plastics materials and synthetics - SIC 282	
1349	Cellulose Products Manufacturing	282		86	Plastics materials and synthetics - SIC 282	
1360	Plastic Materials and Resins Manufacturing	2821, 2823, 2819, 2869, 3089		86	Plastics materials and synthetics - SIC 282	
1361	Synthetic Rubber Manufacturing	2822		86	Plastics materials and synthetics - SIC 282	
1401	Ammonium Sulfate - Caprolactam By-Product Plants	2869		85	Industrial chemicals - SIC 281, 286	
1403	Chlorine Production	2812		85	Industrial chemicals - SIC 281, 286	
1405	Cyanide Chemicals Manufacturing	2819		85	Industrial chemicals - SIC 281, 286	
1407	Hydrochloric Acid Production	2819		85	Industrial chemicals - SIC 281, 286	
1409	Hydrogen Fluoride Production	2819		85	Industrial chemicals - SIC 281, 286	
1410	Phosphate Fertilizers Production	2874		90	Agricultural chemicals - SIC 287	
1411	Phosphoric Acid Manufacturing	2874		90	Agricultural chemicals - SIC 287	
1414	Uranium Hexafluoride Production	2819		85	Industrial chemicals - SIC 281, 286	
1415	Carbon Black Production	2895		91	Miscellaneous chemical products - SIC 289	
1460	Inorganic Pigments Manufacturing	2816		85	Industrial chemicals - SIC 281, 286	
1461	Industrial Inorganic Chemical Manufacturing	2819		85	Industrial chemicals - SIC 281, 286	
1501	Synthetic Organic Chemical Manufacturing (HON)	286		85	Industrial chemicals - SIC 281, 286	
1560	Industrial Organic Chemical Manufacturing	2833		85	Industrial chemicals - SIC 281, 286	
1604	Carbonyl Sulfide (COS) Production	2819		85	Industrial chemicals - SIC 281, 286	
1607	Chromic Acid Anodizing	2819		85	Industrial chemicals - SIC 281, 286	
1609	Commercial Sterilization Facilities	Numerous		85	Industrial chemicals - SIC 281, 286	
1610	Decorative Chromium Electroplating	3471		25	Metal coating, engraving, and allied services - SIC 347	
1614	Halogenated Solvent Cleaners	Numerous		256	Durables Manufacturing - SIC 24, 25, 32-39	
1615	Hard Chromium Electroplating	3471		25	Metal coating, engraving, and allied services - SIC 347	
1619	Industrial Cooling Towers			114	Electric Utilities- SIC 491, 493	
1621	Paint Stripping Operations	1799		104	Construction - SIC 15, 16, 17	
1624	Plywood and Composite Wood Products	243		3	Millwork, plywood, and structural members - SIC 243	
1625	Polyether Polyols Production	2821		86	Plastics materials and synthetics - SIC 282	
1626	Pulp and Paper Production - Not Otherwise Sub-Classified	2611		74	Pulp, paper, and paperboard mills - SIC 261 - 263	
1626-1	Pulp & Paper Production - Pulping and Bleaching Systems at Kraft, Soda, Sulfite, and Semichemical Pulping Mills (Subpart S)	2611		74	Pulp, paper, and paperboard mills - SIC 261 - 263	
1626-2	Pulp & Paper Production - Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-alone Semichemical Pulping Mills (Subpart MM)	2611		74	Pulp, paper, and paperboard mills - SIC 261 - 263	
1626-3	Pulp and Paper Production - NonMACT Facilities	2611		74	Pulp, paper, and paperboard mills - SIC 261 - 263	
1629	Semiconductor Manufacturing	3674		43	Electronic components and accessories - SIC 367	
1631	Rubber Tire Production	3011		94	Tires and inner tubes - SIC 301	

Table II-2 (continued)

MACT	DESCRIPTION	SIC CODE(S)	DOE	INDICATOR CODE	DESCRIPTION	DOE GEOGRAPHY
1634	Leather Tanning & Finishing Operations	3111		98	Luggage, handbags, and leather products, nec - SIC 311, 315 - 317, 319	
1635	Ethylene Processes	2869		85	Industrial chemicals - SIC 281, 286	
1636	Friction Materials Manufacturing	Numerous		256	Durables Manufacturing - SIC 24, 25, 32-39	
1641	Miscellaneous Organic Chemical Manufacturing	2869		218	Chemicals and Allied Products - SIC 28	
1642	Miscellaneous Coating Manufacturing	282, 284, 286, 287, 289, 386		218	Chemicals and Allied Products - SIC 28	
1643	Dry Cleaning: Perchloroethylene	721		127	Laundry, cleaning, and shoe repair - SIC 721, 725	
1644	Hospital Sterilizers	806		151	Hospitals- SIC 806	
1660	Valves and Pipe Fittings Manufacturing	349		27	Miscellaneous fabricated metal products - SIC 349	
1661	Heating Equipment Manufacturing	3585		35	Refrigeration and service industry machinery - SIC 358	
1662	Fabricated Structural Metal Manufacturing	3441		27	Miscellaneous fabricated metal products - SIC 349	
1663	Fabricated Plate Work	3443		33	General industrial machinery and equipment - SIC 356	
1664	Fabricated Metal Products Manufacturing, Not Elsewhere Classified	3499		27	Miscellaneous fabricated metal products - SIC 349	
1665	Electrical and Electronics Equipment: Finishing Operations	3621, 3699		38+44	Electrical industrial apparatus - SIC 362 + Miscellaneous electrical equipment - SIC 369	
1666	Industrial Machinery and Equipment: Finishing Operations	3533, 3561, 3531		30+33	Construction and related machinery - SIC 353 + General industrial machinery and equipment - SIC 356	
1667	Chemical Preparations	2899		91	Miscellaneous chemical products - SIC 289	
1668	Paints and Allied Products Manufacturing	2851		89	Paints and allied products - SIC 285	
1669	Plating and Polishing	347		25	Metal coating, engraving, and allied services - SIC 347	
1801	Medical Waste Incinerators	4953		116	Water and sanitation - SIC 494 - 497, 493	
1802	Municipal Waste Combustors	4953		116	Water and sanitation - SIC 494 - 497, 493	
1807-1	Commercial, Industrial, Solid Waste Incineration	4953		116	Water and sanitation - SIC 494 - 497, 493	
1807-2	Other Solid Waste Incineration - Crematories	7261		130	Funeral service and crematories - SIC 726	
1808-1	Utility Boilers: Coal		Y	1206	Electric Generation/Steam Coal	Regional
1808-2	Utility Boilers: Natural Gas		Y	1202	Electric Generation/Natural Gas	Regional
1808-3	Utility Boilers: Oil		Y	1201	Electric Generation/Distillate	Regional
1860	Sewage Sludge Incineration	4953		116	Water and sanitation - SIC 494 - 497, 493	

Table II-3a. REMI Growth Indicator Variables

CODE	DESCRIPTION	DATA SOURCE
1	Logging - SIC 241	REMI Output Data
2	Sawmills and planing mills - SIC 242	REMI Output Data
3	Millwork, plywood, and structural members - SIC 243	REMI Output Data
4	Wood containers and misc. wood products - SIC 244, 249	REMI Output Data
5	Wood buildings and mobile homes - SIC 245	REMI Output Data
6	Household furniture - SIC 251	REMI Output Data
7	Partitions and fixtures - SIC 254	REMI Output Data
8	Office and misc. furniture and fixtures - SIC 252, 253, 259	REMI Output Data
9	Glass and glass products - SIC 321, 322, 323	REMI Output Data
10	Hydraulic cement - SIC 324	REMI Output Data
11	Stone, clay, and misc. mineral products - SIC 325, 326, 328, 329	REMI Output Data
12	Concrete, gypsum, & plaster products - SIC 327	REMI Output Data
13	Blast furnaces and basic steel products - SIC 331	REMI Output Data
14	Iron and steel foundries - SIC 332	REMI Output Data
15	Primary nonferrous smelting & refining - SIC 333	REMI Output Data
16	All other primary metals - SIC 334, 339	REMI Output Data
17	Nonferrous rolling and drawing - SIC 335	REMI Output Data
18	Nonferrous foundries - SIC 336	REMI Output Data
19	Metal cans and shipping containers - SIC 341	REMI Output Data
20	Cutlery, hand tools, and hardware - SIC 342	REMI Output Data
21	Plumbing and nonelectric heating equipment - SIC 343	REMI Output Data
22	Fabricated structural metal products - SIC 344	REMI Output Data
23	Screw machine products, bolts, rivets, etc.- SIC 345	REMI Output Data
24	Metal forgings and stampings - SIC 346	REMI Output Data
25	Metal coating, engraving, and allied services - SIC 347	REMI Output Data
26	Ordnance and ammunition - SIC 348	REMI Output Data
27	Miscellaneous fabricated metal products - SIC 349	REMI Output Data
28	Engines and turbines - SIC 351	REMI Output Data
29	Farm and garden machinery and equipment - SIC 352	REMI Output Data
30	Construction and related machinery - SIC 353	REMI Output Data
31	Metalworking machinery and equipment - SIC 354	REMI Output Data
32	Special industry machinery - SIC 355	REMI Output Data
33	General industrial machinery and equipment - SIC 356	REMI Output Data
34	Computer and office equipment - SIC 357	REMI Output Data
35	Refrigeration and service industry machinery - SIC 358	REMI Output Data
36	Industrial machinery, nec - SIC 359	REMI Output Data
37	Electric distribution equipment - SIC 361	REMI Output Data
38	Electrical industrial apparatus - SIC 362	REMI Output Data
39	Household appliances - SIC 363	REMI Output Data
40	Electric lighting and wiring equipment - SIC 364	REMI Output Data
41	Household audio and video equipment - SIC 365	REMI Output Data
42	Communications equipment - SIC 366	REMI Output Data
43	Electronic components and accessories - SIC 367	REMI Output Data
44	Miscellaneous electrical equipment - SIC 369	REMI Output Data
45	Motor vehicles and equipment - SIC 371	REMI Output Data
46	Aerospace - SIC 372, 376	REMI Output Data
47	Ship and boat building and repairing - SIC 373	REMI Output Data
48	Railroad equipment - SIC 374	REMI Output Data
49	Miscellaneous transportation equipment - SIC 375, 379	REMI Output Data
50	Search and navigation equipment - SIC 381	REMI Output Data
51	Measuring and controlling devices - SIC 382	REMI Output Data
52	Medical equipment, instruments and supplies - SIC 384	REMI Output Data
53	Ophthalmic goods - SIC 385	REMI Output Data
54	Photographic equipment and supplies -SIC 386	REMI Output Data
55	Watches, clocks, and parts -SIC 387	REMI Output Data
56	Jewelry, silverware, and plated ware - SIC 391	REMI Output Data
57	Toys and sporting goods - SIC 394	REMI Output Data
58	Manufactured products, nec - SIC 393, 395, 396, 399	REMI Output Data
59	Meat products - SIC 201	REMI Output Data
60	Dairy products - SIC 202	REMI Output Data
61	Preserved fruits and vegetables - SIC 203	REMI Output Data
62	Grain mill products and fats and oils - SIC 204, 207	REMI Output Data
63	Bakery products - SIC 205	REMI Output Data
64	Sugar and confectionery products - SIC 206	REMI Output Data
65	Beverages - SIC 208	REMI Output Data
66	Miscellaneous food and kindred products -SIC 209	REMI Output Data
67	Tobacco products - SIC 21	REMI Output Data
68	Weaving, finishing, yarn, and thread mills - SIC 221 - 224, 226, 228	REMI Output Data

Table II-3a (continued)

CODE	DESCRIPTION	DATA SOURCE
69	Knitting mills - SIC 225	REMI Output Data
70	Carpets and rugs - SIC 227	REMI Output Data
71	Miscellaneous textile goods - SIC 229	REMI Output Data
72	Apparel - SIC 231 - 238	REMI Output Data
73	Miscellaneous fabricated textile products - SIC 239	REMI Output Data
74	Pulp, paper, and paperboard mills - SIC 261 - 263	REMI Output Data
75	Paperboard containers and boxes - SIC 265	REMI Output Data
76	Converted paper products except containers - SIC 267	REMI Output Data
77	Newspapers - SIC 271	REMI Output Data
78	Periodicals - SIC 272	REMI Output Data
79	Books - SIC 273	REMI Output Data
80	Miscellaneous publishing - SIC 274	REMI Output Data
81	Commercial printing and business forms - SIC 275, 276	REMI Output Data
82	Greeting cards - SIC 277	REMI Output Data
83	Blankbooks and bookbinding - SIC 278	REMI Output Data
84	Service industries for the printing trade - SIC 279	REMI Output Data
85	Industrial chemicals - SIC 281, 286	REMI Output Data
86	Plastics materials and synthetics - SIC 282	REMI Output Data
87	Drugs - SIC 283	REMI Output Data
88	Soap, cleaners, and toilet goods - SIC 284	REMI Output Data
89	Paints and allied products - SIC 285	REMI Output Data
90	Agricultural chemicals - SIC 287	REMI Output Data
91	Miscellaneous chemical products - SIC 289	REMI Output Data
92	Petroleum refining - SIC 291	REMI Output Data
93	Miscellaneous petroleum and coal products - SIC 295, 299	REMI Output Data
94	Tires and inner tubes - SIC 301	REMI Output Data
95	Rubber products and plastic hose and footwear - SIC 302, 305, 306	REMI Output Data
96	Miscellaneous plastics products, nec - SIC 308	REMI Output Data
97	Footwear, except rubber and plastic - SIC 313, 314	REMI Output Data
98	Luggage, handbags, and leather products, nec - SIC 311, 315 - 317, 319	REMI Output Data
99	Metal mining - SIC 10	REMI Output Data
100	Coal mining - SIC 12	REMI Output Data
101	Crude petroleum, natural gas and gas liquids -SIC 131, 132	REMI Output Data
102	Oil and gas field services - SIC 138	REMI Output Data
103	Nonmetallic minerals, except fuels - SIC 14	REMI Output Data
104	Construction - SIC 15, 16, 17	REMI Output Data
105	Railroad transportation - SIC 40	REMI Output Data
106	Trucking and warehousing - SIC 42	REMI Output Data
107	Local and interurban passenger transit - SIC 41	REMI Output Data
108	Air transportation -SIC 45	REMI Output Data
109	Water transportation - SIC 44	REMI Output Data
110	Pipelines, except natural gas -SIC 46	REMI Output Data
111	Passenger transportation arrangement - SIC 472	REMI Output Data
112	Miscellaneous transportation services - SIC 473, 474, 478	REMI Output Data
113	Communications - SIC 48	REMI Output Data
114	Electric utilities - SIC 491, 493	REMI Output Data
115	Gas utilities - SIC 492, 493	REMI Output Data
116	Water and sanitation - SIC 494 - 497, 493	REMI Output Data
117	Depository institutions - SIC 60	REMI Output Data
118	Insurance carriers - SIC 63	REMI Output Data
119	Insurance agents, brokers, and services - SIC 64	REMI Output Data
120	Nondepository; holding and investment offices - SIC 61, 67	REMI Output Data
121	Security and commodity brokers - SIC 62	REMI Output Data
122	Real estate - SIC 65	REMI Output Data
123	Eating and drinking places - SIC 58	REMI Output Data
124	Retail trade, exc. eating and drinking places - SIC 52 - 57, 59	REMI Output Data
125	Wholesale trade - SIC 50, 51	REMI Output Data
126	Hotels and other lodging places - SIC 70	REMI Output Data
127	Laundry, cleaning, and shoe repair - SIC 721, 725	REMI Output Data
128	Personal services, nec - SIC 722, 729	REMI Output Data
129	Beauty and barber shops - SIC 723, 724	REMI Output Data
130	Funeral service and crematories - SIC 726	REMI Output Data
131	Electrical repair shops - SIC 762	REMI Output Data
132	Watch, jewelry, & furniture repair - SIC 763 - 764	REMI Output Data
133	Miscellaneous repair services - SIC 769	REMI Output Data
134	Private households - SIC 88	REMI Output Data
135	Automotive rentals, without drivers - SIC 751	REMI Output Data
136	Automobile parking, repair, and services - SIC 752 - 754	REMI Output Data

Table II-3a (continued)

CODE	DESCRIPTION	DATA SOURCE
137	Advertising - SIC 731	REMI Output Data
138	Services to buildings -SIC 734	REMI Output Data
139	Miscellaneous equipment rental and leasing - SIC 735	REMI Output Data
140	Personnel supply services - SIC 736	REMI Output Data
141	Computer and data processing services - SIC 737	REMI Output Data
142	Miscellaneous business services - SIC 732, 733, 738	REMI Output Data
143	Producers, orchestras, and entertainers - SIC 792	REMI Output Data
144	Bowling centers - SIC 793	REMI Output Data
145	Commercial sports - SIC 794	REMI Output Data
146	Amusement and recreation services, nec - SIC 791, 799	REMI Output Data
147	Motion pictures - SIC 781 - 783	REMI Output Data
148	Video tape rental - SIC 784	REMI Output Data
149	Offices of health practitioners - SIC 801 - 804	REMI Output Data
150	Nursing and personal care facilities - SIC 805	REMI Output Data
151	Hospitals - SIC 806	REMI Output Data
152	Health services, nec - SIC 807 - 809	REMI Output Data
153	Legal services - SIC 81	REMI Output Data
154	Engineering and architectural services -SIC 871	REMI Output Data
155	Research and testing services - SIC 873	REMI Output Data
156	Management and public relations - SIC 874	REMI Output Data
157	Accounting, auditing, and other services - SIC 872, 89	REMI Output Data
158	Educational services - SIC 82	REMI Output Data
159	Individual and miscellaneous social services - SIC 832, 839	REMI Output Data
160	Job training and related services - SIC 833	REMI Output Data
161	Child day care services - SIC 835	REMI Output Data
162	Residential care - SIC 836	REMI Output Data
163	Museums, botanical, zoological gardens - SIC 84	REMI Output Data
164	Membership organizations - SIC 86	REMI Output Data
165	Agricultural services - SIC 07	REMI Output Data
166	Forestry, fishing, hunting, & trapping - SIC 08, 09	REMI Output Data
201	Lumber and Wood Products - SIC 24	REMI Output Data
202	Furniture Fixtures - SIC 25	REMI Output Data
203	Stone, Clay and Glass Products - SIC 32	REMI Output Data
204	Primary Metals Industries - SIC 33	REMI Output Data
205	Fabricated Metal Products - SIC 34	REMI Output Data
206	Machinery and Computer Equipment - SIC 35	REMI Output Data
207	Electronic Equipment, except computer equipment - SIC 36	REMI Output Data
208	Motor Vehicles and Equipment - SIC 371	REMI Output Data
209	Transportation Equipment, excluding motor vehicles - SIC 372 - 379	REMI Output Data
210	Instruments and Related Products - SIC 38	REMI Output Data
211	Miscellaneous Manufacturing Industries - SIC 39	REMI Output Data
212	Food and Kindred Products - SIC 20	REMI Output Data
213	Tobacco Products - SIC 21	REMI Output Data
214	Textile Mill Products - SIC 22	REMI Output Data
215	Apparel and Other Textile Products - SIC 23	REMI Output Data
216	Paper and Allied Products - SIC 26	REMI Output Data
217	Printing and Publishing - SIC 27	REMI Output Data
218	Chemicals and Allied Products - SIC 28	REMI Output Data
219	Petroleum and Coal Products - SIC 29	REMI Output Data
220	Rubber and Miscellaneous Plastic Products - SIC 30	REMI Output Data
221	Leather and Leather Products - SIC 31	REMI Output Data
222	Mining - SIC 10, 12 - 14	REMI Output Data
223	Construction - SIC 15 - 17	REMI Output Data
224	Railroad Transportation - SIC 40	REMI Output Data
225	Trucking and Warehousing - SIC 42	REMI Output Data
226	Local & Interurban Passenger Transportation Services - SIC 41	REMI Output Data
227	Air Transportation - SIC 45	REMI Output Data
228	Other Transportation and Transportation Services - SIC 44, 46, 47	REMI Output Data
229	Communication - SIC 48	REMI Output Data
230	Public Utilities - SIC 49	REMI Output Data
231	Banking - SIC 60	REMI Output Data
232	Insurance - SIC 63, 64	REMI Output Data
233	Credit & Finance - SIC 61, 62, 67	REMI Output Data
234	Real Estate - SIC 65	REMI Output Data
235	Eating and Drinking Places - SIC 58	REMI Output Data
236	Other Retail Trade - SIC 52 - 57, 59	REMI Output Data
237	Wholesale Trade - SIC 50, 51	REMI Output Data
238	Hotels and Other Lodging Places - SIC 70	REMI Output Data

Table II-3a (continued)

CODE	DESCRIPTION	DATA SOURCE
239	Personal and Miscellaneous Repair Services - SIC 72, 76	REMI Output Data
240	Private Households - SIC 88	REMI Output Data
241	Auto Repair, Services and Parking - SIC 75	REMI Output Data
242	Business Services - SIC 73	REMI Output Data
243	Amusement and Recreation Services - SIC 79	REMI Output Data
244	Motion Pictures - SIC 78	REMI Output Data
245	Health Services - SIC 80	REMI Output Data
246	Legal, Engineering and Management, and Miscellaneous Services - SIC 81, 87, 89	REMI Output Data
247	Educational Services - SIC 82	REMI Output Data
248	Social Services, Membership Organizations, and Museums, etc. - SIC 83, 84, 86	REMI Output Data
249	Agricultural Services, Forestry, Fisheries and Other - SIC 07-09	REMI Output Data
250	Oil and Gas Production - SIC 13	REMI Output Data
251	Pulp and Paper and Wood Products - SIC 24-27	REMI Output Data
252	Total Industrial - SIC 10,12,14,15-17,20-39	REMI Output Data
253	Primary Metals - SIC 331 and 333	REMI Output Data
254	Secondary Metal Production - SIC 334, 336, 339	REMI Output Data
255	Commercial (Financial, Retail & Wholesale Trade, Servic) - SIC 50-65, 67, 70, 72, 73,75, 76, 78-84, 86-89	REMI Output Data
256	Durables Manufacturing - SIC 24, 25, 32-39	REMI Output Data
257	Nondurable Manufacturing - SIC 20-23, 26-31	REMI Output Data
258	Total Manufacturing - SIC 20-39	REMI Output Data
259	Coal Mining and Nonmetallic Minerals, Except Fuels	REMI Output Data
260	Transportation Equipment - SIC 37	REMI Output Data
261	Transportation- SIC 40, 41, 42 & 45	REMI Output Data
299	Total Output	REMI Output Data
406	Gasoline & Oil	REMI Consumption Data

Table II-3b. DOE Growth Indicator Variables

CODE	DESCRIPTION 1	DESCRIPTION 2	DESCRIPTION 3	DATA SOURCE
1001	Agriculture		Distillate Oil	DOE- National
1002	Agriculture		Liquified Petroleum Gas	DOE- National
1003	Agriculture		Total Energy	DOE- National
1101	Commercial		Coal	DOE- Division
1102	Commercial		Delivered Energy	DOE- Division
1103	Commercial		Distillate	DOE- Division
1104	Commercial		Kerosene	DOE- Division
1105	Commercial		Liquified Petroleum Gas	DOE- Division
1106	Commercial		Motor Gasoline	DOE- Division
1107	Commercial		Natural Gas	DOE- Division
1108	Commercial		Petroleum Subtotal	DOE- Division
1109	Commercial		Renewable Energy	DOE- Division
1110	Commercial		Residual	DOE- Division
1201	Electric Generation		Distillate	DOE- Division
1202	Electric Generation		Natural Gas	DOE- Division
1203	Electric Generation		Petroleum Subtotal	DOE- Division
1204	Electric Generation		Renewable Energy/Other	DOE- Division
1205	Electric Generation		Residual	DOE- Division
1206	Electric Generation		Steam Coal	DOE- Division
1207	Electric Generation		Total-Nuclear-Imports	DOE- Division
1301	Industrial	Bulk Chemicals	Heat and Power-Distillate	DOE- National
1302	Industrial	Bulk Chemicals	Heat and Power-Natural Gas	DOE- National
1303	Industrial	Bulk Chemicals	Heat and Power-Residual	DOE- National
1304	Industrial	Bulk Chemicals	Total Heat and Power	DOE- National
1401	Industrial	Cement	Distillate	DOE- National
1402	Industrial	Cement	Natural Gas	DOE- National
1403	Industrial	Cement	Residual	DOE- National
1404	Industrial	Cement	Steam Coal	DOE- National
1501	Industrial	Food	Distillate	DOE- National
1502	Industrial	Food	Liquified Petroleum Gas	DOE- National
1503	Industrial	Food	Natural Gas	DOE- National
1504	Industrial	Food	Residual	DOE- National
1601	Industrial	Iron and Steel	Distillate	DOE- National
1602	Industrial	Iron and Steel	Metallurgical Coal	DOE- National
1603	Industrial	Iron and Steel	Natural Gas	DOE- National
1604	Industrial	Iron and Steel	Residual	DOE- National
1605	Industrial	Iron and Steel	Total	DOE- National
1701	Industrial	Metals-Based Durables	Distillate	DOE- National
1702	Industrial	Metals-Based Durables	Natural Gas	DOE- National
1703	Industrial	Metals-Based Durables	Residual	DOE- National
1801	Industrial	Mining	Distillate	DOE- National
1802	Industrial	Mining	Lease and Plant Fuel	DOE- National
1803	Industrial	Mining	Natural Gas	DOE- National
1804	Industrial	Mining	Other Petroleum	DOE- National
1805	Industrial	Mining	Residual	DOE- National
1806	Industrial	Mining	Total	DOE- National
1901	Industrial	Other Manufacturing	Distillate	DOE- National
1902	Industrial	Other Manufacturing	Liquified Petroleum Gas	DOE- National
1903	Industrial	Other Manufacturing	Natural Gas	DOE- National
1904	Industrial	Other Manufacturing	Petroleum Subtotal	DOE- National
1905	Industrial	Other Manufacturing	Renewable Energy	DOE- National
1906	Industrial	Other Manufacturing	Residual	DOE- National
1907	Industrial	Other Manufacturing	Steam Coal	DOE- National
1908	Industrial	Other Manufacturing	Total	DOE- National
2001	Industrial	Paper	Distillate	DOE- National
2002	Industrial	Paper	Natural Gas	DOE- National
2003	Industrial	Paper	Residual	DOE- National
2004	Industrial	Paper	Total	DOE- National
2101	Industrial	Refining	Distillate	DOE- National
2102	Industrial	Refining	Liquified Petroleum Gas	DOE- National
2103	Industrial	Refining	Natural Gas	DOE- National
2104	Industrial	Refining	Other Petroleum	DOE- National
2105	Industrial	Refining	Petroleum Subtotal	DOE- National
2106	Industrial	Refining	Residual	DOE- National
2107	Industrial	Refining	Still Gas	DOE- National
2108	Industrial	Refining	Total	DOE- National
2201	Industrial	Total Industrial	Delivered Energy	DOE- Division
2202	Industrial	Total Industrial	Distillate	Industrial

Table II-3b (continued)

CODE	DESCRIPTION 1	DESCRIPTION 2	DESCRIPTION 3	DATA SOURCE
2203	Industrial	Total Industrial	Liquified Petroleum Gas	DOE- Division
2204	Industrial	Total Industrial	Metallurgical Coal	DOE- Division
2205	Industrial	Total Industrial	Motor Gasoline	DOE- Division
2206	Industrial	Total Industrial	Natural Gas	DOE- Division
2207	Industrial	Total Industrial	Other Petroleum	DOE- Division
2208	Industrial	Total Industrial	Renewable Energy	DOE- Division
2209	Industrial	Total Industrial	Residual	DOE- Division
2210	Industrial	Total Industrial	Steam Coal	DOE- Division
2211	Industrial	Total Industrial	Total Coal	DOE- Division
2212	Industrial	Total Industrial	Petroleum Subtotal & Natural Gas	DOE- Division
2301	Marine	Domestic	Distillate	DOE- National
2401	Residential		Coal	DOE- Division
2402	Residential		Delivered Energy	DOE- Division
2403	Residential		Distillate	DOE- Division
2404	Residential		Kerosene	DOE- Division
2405	Residential		Liquified Petroleum Gas	DOE- Division
2406	Residential		Natural Gas	DOE- Division
2407	Residential		Petroleum Subtotal	DOE- Division
2408	Residential		Renewable Energy	DOE- Division
2501	Total Energy		Kerosene	DOE- Division
2502	Total Energy		Liquified Petroleum Gas	DOE- Division
2503	Total Energy		Natural Gas	DOE- Division
2504	Total Energy		Renewable Energy	DOE- Division
2505	Total Energy		Residual Fuel	DOE- Division
2506	Total Energy		Steam Coal	DOE- Division
2601	Total Energy - Transportation		Distillate Fuel	DOE- Division
2602	Total Energy - Transportation		Petroleum Subtotal	DOE- Division
2603	Total Energy - Transportation		Total	DOE- Division
3001	Refined Petroleum Products Supplied		Total	DOE- National

Code in boldface type not included in IAQR

CHAPTER III. REFERENCES

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