

VII. COMPLIANCE AND ENFORCEMENT PROFILE

Background

To date, EPA has focused much of its attention on measuring compliance with specific environmental statutes. This approach allows the Agency to track compliance with the Clean Air Act, the Resource Conservation and Recovery Act, the Clean Water Act, and other environmental statutes. Within the last several years, the Agency has begun to supplement single-media compliance indicators with facility-specific, multimedia indicators of compliance. In doing so, EPA is in a better position to track compliance with all statutes at the facility level, and within specific industrial sectors.

A major step in building the capacity to compile multimedia data for industrial sectors was the creation of EPA's Integrated Data for Enforcement Analysis (IDEA) system. IDEA has the capacity to "read into" the Agency's single-media databases, extract compliance records, and match the records to individual facilities. The IDEA system can match Air, Water, Waste, Toxics/Pesticides/EPCRA, TRI, and Enforcement Docket records for a given facility, and generate a list of historical permit, inspection, and enforcement activity. IDEA also has the capability to analyze data by geographic area and corporate holder. As the capacity to generate multimedia compliance data improves, EPA will make available more in-depth compliance and enforcement information. Additionally, sector-specific measures of success for compliance assistance efforts are under development.

Compliance and Enforcement Profile Description

Using inspection, violation, and enforcement data from the IDEA system, this section provides information regarding the historical compliance and enforcement activity of this sector. In order to mirror the facility universe reported in the Toxic Chemical Profile, the data reported within this section consists of records only from the TRI reporting universe. With this decision, the selection criteria are consistent across sectors with certain exceptions. For the sectors that do not normally report to the TRI program, data have been provided from EPA's Facility Indexing System (FINDS) which tracks facilities in all media databases. Please note, in this section, EPA does not attempt to define the actual number of facilities that fall within each sector. Instead, the section portrays the records of a subset of facilities within the sector that are well defined within EPA databases.

As a check on the relative size of the full sector universe, most notebooks contain an estimated number of facilities within the sector according to the Bureau of Census (See Section II). With sectors dominated by small businesses, such as metal finishers and printers, the reporting universe within the EPA databases may be small in comparison to Census data. However, the group selected for inclusion in this data analysis section should be consistent with this sector's general make-up.

Following this introduction is a list defining each data column presented within this section. These values represent a retrospective summary of inspections and enforcement actions, and solely reflect EPA, State, and local compliance assurance activities that have been entered into EPA databases. To identify any changes in trends, the EPA ran two data queries, one for the past five calendar years (August 10, 1990 to August 9, 1995) and the other for the most recent twelve-month period (August 10, 1994 to August 9, 1995). The five-year analysis gives an average level of activity for that period for comparison to the more recent activity.

Because most inspections focus on single-media requirements, the data queries presented in this section are taken from single media databases. These databases do not provide data on whether inspections are State/local or EPA-led. However, the table breaking down the universe of violations does give the reader a crude measurement of the EPA's and States' efforts within each media program. The presented data illustrate the variations across regions for certain sectors. This variation may be attributable to State/local data entry variations, specific geographic concentrations, proximity to population centers, sensitive ecosystems, highly toxic chemicals used in production, or historical noncompliance. Hence, the exhibited data do not rank regional performance or necessarily reflect which regions may have the most compliance problems.

Compliance and Enforcement Data Definitions

General Definitions

Facility Indexing System (FINDS) -- this system assigns a common facility number to EPA single-media permit records. The FINDS identification number allows EPA to compile and review all permit, compliance, enforcement, and pollutant release data for any given regulated facility.

Integrated Data for Enforcement Analysis (IDEA) -- is a data integration system that can retrieve information from the major EPA program office databases. IDEA uses the FINDS identification number to "glue together" separate data records from EPA's databases. This is done to create a "master list" of data records for any given facility. Some of the data systems accessible through IDEA are: AIRS (Air Facility Indexing and Retrieval System, Office of Air and Radiation), PCS (Permit Compliance System, Office of Water), RCRIS (Resource Conservation and Recovery Information System, Office of Solid Waste), NCDB (National Compliance Data Base, Office of Prevention, Pesticides, and Toxic Substances), CERCLIS (Comprehensive Environmental and Liability Information System, Superfund), and TRIS (Toxic Release Inventory System). IDEA also contains information from outside sources such as Dun and Bradstreet and the Occupational Safety and Health Administration (OSHA). Most data queries displayed in notebook Sections IV and VII were conducted using IDEA.

Data Table Column Heading Definitions

Facilities in Search -- are based on the universe of TRI reporters within the listed SIC code range. For industries not covered under TRI reporting requirements, the notebook uses the FINDS universe for executing data queries. The SIC code range selected for each search is defined by each notebook's selected SIC code coverage described in Section II.

Facilities Inspected --- indicates the level of EPA and State agency facility inspections for the facilities in this data search. These values show what percentage of the facility universe is inspected in a 12 or 60 month period. This column does not count non-inspectional compliance activities such as the review of facility-reported discharge reports.

Number of Inspections -- measures the total number of inspections conducted in this sector. An inspection event is counted each time it is entered into a single media database.

Average Time Between Inspections -- provides an average length of time, expressed in months, that a compliance inspection occurs at a facility within the defined universe.

Facilities with One or More Enforcement Actions -- expresses the number of facilities that were party to at least one enforcement action within the defined time period. This category is broken down further into Federal and State actions. Data are obtained for administrative, civil/judicial, and criminal enforcement actions. Administrative actions

include Notices of Violation (NOVs). A facility with multiple enforcement actions is only counted once in this column (facility with 3 enforcement actions counts as 1). All percentages that appear are referenced to the number of facilities inspected.

Total Enforcement Actions -- describes the total number of enforcement actions identified for an industrial sector across all environmental statutes. A facility with multiple enforcement actions is counted multiple times (a facility with 3 enforcement actions counts as 3).

State Lead Actions -- shows what percentage of the total enforcement actions are taken by State and local environmental agencies. Varying levels of use by States of EPA data systems may limit the volume of actions accorded State enforcement activity. Some States extensively report enforcement activities into EPA data systems, while other States may use their own data systems.

Federal Lead Actions -- shows what percentage of the total enforcement actions are taken by the U.S. EPA. This value includes referrals from State agencies. Many of these actions result from coordinated or joint State/Federal efforts.

Enforcement to Inspection Rate -- expresses how often enforcement actions result from inspections. This value is a ratio of enforcement actions to inspections, and is presented for comparative purposes only. This measure is a rough indicator of the relationship between inspections and enforcement. This measure simply indicates historically how many enforcement actions can be attributed to inspection activity. Related inspections and enforcement actions under the Clean Water Act (CWA), the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA) are included in this ratio. Inspections and actions from the TSCA/FIFRA/EPCRA database are not factored into this ratio because most of the actions taken under these programs are not the result of facility inspections. This ratio does not account for enforcement actions arising from non-inspection compliance monitoring activities (e.g., self-reported water discharges) that can result in enforcement action within the CAA, CWA and RCRA.

Facilities with One or More Violations Identified -- indicates the number and percentage of inspected facilities having a violation identified in one of the following data categories: In Violation or Significant Violation Status (CAA); Reportable Noncompliance, Current Year Noncompliance, Significant Noncompliance (CWA); Noncompliance and Significant Noncompliance (FIFRA, TSCA, and EPCRA); Unresolved

Violation and Unresolved High Priority Violation (RCRA). The values presented for this column reflect the extent of noncompliance within the measured time frame, but do not distinguish between the severity of the noncompliance. Percentages within this column can exceed 100% because facilities can be in violation status without being inspected. Violation status may be a precursor to an enforcement action, but does not necessarily indicate that an enforcement action will occur.

Media Breakdown of Enforcement Actions and Inspections -- four columns identify the proportion of total inspections and enforcement actions within EPA Air, Water, Waste, and TSCA/FIFRA/EPCRA databases. Each column is a percentage of either the "Total Inspections," or the "Total Actions" column.

VII.A. Non-Fuel, Non-Metal Mining Industry Compliance History

Exhibit 11 presents enforcement and compliance information specific to the non-fuel, non-metal mining industry. As indicated in the chart, Regions III, IV, V, VIII, and X have been the most active in terms of enforcement actions against this sector.

Exhibit 11
Five Year Enforcement and Compliance Summary for the Non-Metal, Non-Fuel Mining Industry

A	B	C	D	E	F	G	H	I	J
Non-Fuel, Non-Metal Mining SIC 14	Facilities in Search	Facilities Inspected	Number of Inspections	Average Number of Months Between Inspections	Facilities w/one or more Enforcement Actions	Total Enforcement Actions	State Lead Actions	Federal Lead Actions	Enforcement to Inspection Rate
Region I	48	22	80	36	1	1	0%	100%	0.01
Region II	52	39	203	15	8	26	100%	0%	0.13
Region III	62	44	396	9	6	13	85%	15%	0.03
Region IV	428	203	1,310	20	32	59	71%	29%	0.05
Region V	164	100	382	26	6	6	100%	0%	0.02
Region VI	71	36	123	35	8	19	63%	37%	0.15
Region VII	57	19	84	41	5	6	33%	67%	0.07
Region VIII	133	64	347	23	10	31	74%	26%	0.09
Region IX	64	58	297	13	3	10	100%	0%	0.03
Region X	64	46	200	19	5	21	71%	29%	0.11
Total/Average	1,143	631	3,422	20	84	192	76%	24%	0.06

VII.B. Comparison of Enforcement Activity Between Selected Industries

Exhibits 12-15 provide enforcement and compliance information for selected industries. The non-fuel, non-metal mineral mining industry has the fourth largest number of facilities tracked by EPA across the selected industries. Of the total number of enforcement actions over five years, 76 percent are State-lead actions and 24 percent are federal-lead actions. For this industry, Clean Air Act inspections comprise 65 percent of all inspections conducted, and Clean Water Act inspections account for 31 percent of all inspections. This inspection pattern seems consistent with the general priority of environmental concerns within this sector. Importantly, the non-fuel, non-metal mining sector exhibits the lowest number of enforcement actions in relations to inspections that any other industry covered under this project over the last five years (see Exhibit 12).

Exhibit 12
Five Year Enforcement and Compliance Summary for Selected Industries

A	B	C	D	E	F	G	H	I	J
Industry Sector	Facilities in Search	Facilities Inspected	Number of Inspections	Average Number of Months Between Inspections	Facilities w/One or More Enforcement Actions	Total Enforcement Actions	State Lead Actions	Federal Lead Actions	Enforcement to Inspection Rate
Metal Mining	873	339	1,519	34	67	155	47%	53%	0.10
Non-metallic Mineral Mining	1,143	631	3,422	20	84	192	76%	24%	0.06
Lumber and Wood	464	301	1,891	15	78	232	79%	21%	0.12
Furniture	293	213	1,534	11	34	91	91%	9%	0.06
Rubber and Plastic	1,665	739	3,386	30	146	391	78%	22%	0.12
Stone, Clay, and Glass	468	268	2,475	11	73	301	70%	30%	0.12
Nonferrous Metals	844	474	3,097	16	145	470	76%	24%	0.15
Fabricated Metal	2,346	1,340	5,509	26	280	840	80%	20%	0.15
Electronics/Computers	405	222	777	31	68	212	79%	21%	0.27
Motor Vehicle Assembly	598	390	2,216	16	81	240	80%	20%	0.11
Pulp and Paper	306	265	3,766	5	115	502	78%	22%	0.13
Printing	4,106	1,035	4,723	52	176	514	85%	15%	0.11
Inorganic Chemicals	548	298	3,034	11	99	402	76%	24%	0.13
Organic Chemicals	412	316	3,864	6	152	726	66%	34%	0.19
Petroleum Refining	156	145	3,257	3	110	797	66%	34%	0.25
Iron and Steel	374	275	3,555	6	115	499	72%	28%	0.14
Dry Cleaning	933	245	633	88	29	103	99%	1%	0.16

Exhibit 13
One Year Enforcement and Compliance Summary for Selected Industries

A Industry Sector	B Facilities in Search	C Facilities Inspected	D Number of Inspections	E Facilities w/One or More Violations		F Facilities w/One or More Enforcement Actions		G Total Enforcement Actions	H Enforcement to Inspection Rate
				Number	Percent*	Number	Percent*		
Metal Mining	873	114	194	82	72%	16	14%	24	0.13
Non-metallic Mineral Mining	1,143	253	425	75	30%	28	11%	54	0.13
Lumber and Wood	464	142	268	109	77%	18	13%	42	0.15
Furniture	293	160	113	66	41%	3	2%	5	0.04
Rubber and Plastic	1,665	271	435	289	107%	19	7%	59	0.14
Stone, Clay, and Glass	468	146	330	116	79%	20	14%	66	0.20
Nonferrous Metals	844	202	402	282	140%	22	11%	72	0.18
Fabricated Metal	2,346	477	746	525	110%	46	10%	114	0.15
Electronics/Computers	405	60	87	80	133%	8	13%	21	0.24
Motor Vehicle Assembly	598	169	284	162	96%	14	8%	28	0.10
Pulp and Paper	306	189	576	162	86%	28	15%	88	0.15
Printing	4,106	397	676	251	63%	25	6%	72	0.11
Inorganic Chemicals	548	158	427	167	106%	19	12%	49	0.12
Organic Chemicals	412	195	545	197	101%	39	20%	118	0.22
Petroleum Refining	156	109	437	109	100%	39	36%	114	0.26
Iron and Steel	374	167	488	165	99%	20	12%	46	0.09
Dry Cleaning	933	80	111	21	26%	5	6%	11	0.10

*Percentages in Columns E and F are based on the number of facilities inspected (Column C). Percentages can exceed 100% because violations and actions can occur without a facility inspection.

Exhibit 14
Five Year Inspection and Enforcement Summary by Statute for Selected Industries

Industry Sector	Number of Facilities Inspected	Total Inspections	Enforcement Actions	Clean Air Act		Clean Water Act		Resource Conservation and Recovery Act		FIFRA/TSCA/ EPCRA/Other*	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Metal Mining	339	1,519	155	35%	17%	57%	60%	6%	14%	1%	9%
Non-metallic Mineral Mining	631	3,422	192	65%	46%	31%	24%	3%	27%	<1%	4%
Lumber and Wood	301	1,891	232	31%	21%	8%	7%	59%	67%	2%	5%
Furniture	293	1,534	91	52%	27%	1%	1%	45%	64%	1%	8%
Rubber and Plastic	739	3,386	391	39%	15%	13%	7%	44%	68%	3%	10%
Stone, Clay and Glass	268	2,475	301	45%	39%	15%	5%	39%	51%	2%	5%
Nonferrous Metals	474	3,097	470	36%	22%	22%	13%	38%	54%	4%	10%
Fabricated Metal	1,340	5,509	840	25%	11%	15%	6%	56%	76%	4%	7%
Electronics/Computers	222	777	212	16%	2%	14%	3%	66%	90%	3%	5%
Motor Vehicle Assembly	390	2,216	240	35%	15%	9%	4%	54%	75%	2%	6%
Pulp and Paper	265	3,766	502	51%	48%	38%	30%	9%	18%	2%	3%
Printing	1,035	4,723	514	49%	31%	6%	3%	43%	62%	2%	4%
Inorganic Chemicals	302	3,034	402	29%	26%	29%	17%	39%	53%	3%	4%
Organic Chemicals	316	3,864	726	33%	30%	16%	21%	46%	44%	5%	5%
Petroleum Refining	145	3,237	797	44%	32%	19%	12%	35%	52%	2%	5%
Iron and Steel	275	3,555	499	32%	20%	30%	18%	37%	58%	2%	5%
Dry Cleaning	245	633	103	15%	1%	3%	4%	83%	93%	<1%	1%

* Actions taken to enforce the Federal Insecticide, Fungicide, and Rodenticide Act; the Toxic Substances and Control Act, and the Emergency Planning and Community Right-to-Know Act as well as other Federal environmental laws.

Exhibit 15
One Year Inspection and Enforcement Summary by Statute for Selected Industries

Industry Sector	Number of Facilities Inspected	Total Inspections	Enforcement Actions	Clean Air Act		Clean Water Act		Resource Conservation and Recovery Act		FIFRA/TSCA/EPCRA/Other	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Metal Mining	114	194	24	47%	42%	43%	34%	10%	6%	<1%	19%
Non-metallic Mineral Mining	253	425	54	69%	58%	26%	16%	5%	16%	<1%	11%
Lumber and Wood	142	268	42	29%	20%	8%	13%	63%	61%	<1%	6%
Furniture	293	160	5	58%	67%	1%	10%	41%	10%	<1%	13%
Rubber and Plastic	271	435	59	39%	14%	14%	4%	46%	71%	1%	11%
Stone, Clay, and Glass	146	330	66	45%	52%	18%	8%	38%	37%	<1%	3%
Nonferrous Metals	202	402	72	33%	24%	21%	3%	44%	69%	1%	4%
Fabricated Metal	477	746	114	25%	14%	14%	8%	61%	77%	<1%	2%
Electronics/Computers	60	87	21	17%	2%	14%	7%	69%	87%	<1%	4%
Motor Vehicle Assembly	169	284	28	34%	16%	10%	9%	56%	69%	1%	6%
Pulp and Paper	189	576	88	56%	69%	35%	21%	10%	7%	<1%	3%
Printing	397	676	72	50%	27%	5%	3%	44%	66%	<1%	4%
Inorganic Chemicals	158	427	49	26%	38%	29%	21%	45%	36%	<1%	6%
Organic Chemicals	195	545	118	36%	34%	13%	16%	50%	49%	1%	1%
Petroleum Refining	109	439	114	50%	31%	19%	16%	30%	47%	1%	6%
Iron and Steel	167	488	46	29%	18%	35%	26%	36%	50%	<1%	6%
Dry Cleaning	80	111	11	21%	4%	1%	22%	78%	67%	<1%	7%

* Actions taken to enforce the Federal Insecticide, Fungicide, and Rodenticide Act; the Toxic Substances and Control Act, and the Emergency Planning and Community Right-to-Know Act as well as other Federal environmental laws.

VII.C. Review of Major Legal Actions

VII.C.1. Review of Major Cases

As indicated in EPA's *Enforcement Accomplishments Report, FY 1991 through FY 1993* publications, two significant enforcement cases were resolved between 1991 and 1993 for the mining and quarrying of non-fuel, nonmetallic minerals. The cases were comprised of CERCLA and the Marine Protection Research and Sanctuaries Act (MAPRSA) violations. Both cases were related to companies in the sand and gravel business.

One of the three cases resulted in the assessment of a penalty. In U.S. v. Petersen Sand & Gravel, Inc. (1993), the defendant failed to furnish accurate and complete information relating to its disposal of hazardous wastes at its site. The defendant mined sand and gravel at the site, during which time several hundred drums of paints, solvents, and other industrial wastes were dumped. The company was required to pay \$700,000 and to provide a full response to EPA's original information requests.

In U.S. v. Custom Sand and Gravel (1993), an administrative order was issued under MAPRSA for unauthorized construction of dikes and roadways and for clearing and leveling activities associated with sand and gravel mining operations that impacted wooded swamp. A restoration plan was submitted to restore approximately 65 acres of wetland habitat.

VIII. COMPLIANCE ACTIVITIES AND INITIATIVES

This section highlights the activities undertaken by this industry sector and public agencies to voluntarily improve the sector's environmental performance. These activities include those independently initiated by industrial trade associations. In this section, the notebook also contains a listing and description of national and regional trade associations.

VIII.A. Sector-Related Environmental Programs and Activities

EPA's Office of Solid Waste (OSW) conducts research into mining waste issues, including engineering studies conducted on innovative methods of mining to reduce mine waste. OSW prepares reports that evaluate current mining designs and how these designs impact the environment. The reports, which are subject to peer review, cover topics such as the design and operation of waste rock piles, subaqueous disposal of tailings, and cyanide detoxification. OSW also provides outreach and technical support to other program and Regional offices to address mine waste problems located on Indian reservations. OSW is currently involved in providing outreach and technical support to approximately six different sites. (Contact: Steve Hoffman, 703-308-8413)

U.S. Bureau of Mines Environmental Research Program

The U.S. Bureau of Mines environmental research program is developing technology to prevent pollution and to maintain a healthy work environment. In the pollution prevention area, the USBM, in conjunction with the Florida phosphate industry and the Florida Institute of Phosphate Research, is researching the environmental pollution associated with phosphogypsum stacks, and the large process/cooling water ponds associated with them. The Bureau is also evaluating the potential for in-situ mining of western phosphate ores, a technique that would significantly reduce gypsum production in the processing of western phosphate rock. (Contact: Frank Lanzetta, Research Staff, (202) 501-9272)

The focus of the environmental health research is the monitoring and control of small airborne dusts that can be inhaled deep into the lungs and cause respiratory diseases. Emphasis is on the monitoring and control of coal and rock dusts and emissions from diesel engines. A continuous monitor to evaluate dust conditions during the extraction process for mineral ores is being developed to provide a means to alert workers to hazardous dust conditions. Dust control techniques are directed primarily towards reducing concentrations through the application of water sprays,

more effective use of ventilation air, and modification of mining operating parameters. (Contact: Dr. J. Harrison, Research Staff (202) 501-9309)

Mine Safety and Health Administration (MSHA) Mines Initiative

Electrical transformers or capacitors containing polychlorinated biphenyls (PCBs) are often used as power sources in underground mines. This equipment is regulated by EPA to ensure against environmental release of PCBs, chemicals classified as probable human carcinogens. Abandoned mines often fill with ground water, which can cause PCB-containing equipment to corrode and leak chemicals into the water.

EPA and MSHA launched a joint effort in early 1993 to identify all underground mines using electrical transformers or capacitors that contain PCBs. During 1993, MSHA inspectors completed PCB checklists that identified mines using PCB- or other liquid-filled equipment underground, and whether there were any violations of EPA regulations governing PCB use, marking, storage, or disposal. In total, 85 underground mines that may use PCB-containing equipment were identified. EPA has used the PCB checklists as part of its enforcement efforts. As a result of these efforts, four mining companies have been cited for mismanaging PCBs and face Federal penalties of up to \$317,575. EPA has settled one of these cases and filed three additional complaints.

Miscellaneous Activities

Members of several government agencies have been informally meeting over the past five years to share and communicate ideas on mining waste issues. Known as the Federal Land Management Agencies, this group includes EPA, the National Park Service, the Department of Agriculture, the Department of the Interior, the Bureau of Land Management, and the U.S. Forest Service. According to Steve Hoffman of EPA's Office of Solid Waste, a memo of understanding is currently under development to formalize the group's meetings at the senior level.

EPA has provided a multi-year grant to the Southwest Research and Information Center to conduct research and outreach activities regarding mine waste issues. The Center maintains a clearinghouse of technical studies conducted on mine waste topics. (Contact: Paul Robinson, 505-262-1862)

Over the last few years, EPA has enlisted the advice and assistance of the States in developing a Federally-mandated RCRA mine waste program. In order to facilitate the involvement of the States in this effort, EPA has

provided funding to the Western Governors' Association (WGA), an independent non-partisan organization of 21 member governors. In 1988, WGA formed a Mine Waste Task Force to coordinate the views of the member States and to work with EPA, the mining industry, the environmental community, and the public in the development of a workable mine waste management program.

Kansas State University's Hazardous Substance Research Center (HSRC) is an EPA-funded center providing research and technology transfer services for pollution prevention and other waste management techniques. HSRC programs include outreach for industry, assistance to government, videos, radio programs, written materials, data bases, and workshops on pollution prevention and hazardous waste remediation. One pollution prevention focus of HSRC is on soils and mining waste.

Contact: Dr. Larry E. Erickson, Director
Hazardous Substance Research Center (HSRC)
Ward Hall, Room 101
Kansas State University
Manhattan, Kansas 66506-5102
(913) 532-6519

The Arizona Department of Environmental Quality (ADEQ) (602-779-0313) has established a multifaceted pollution prevention program to encourage generators of hazardous waste to prepare a pollution prevention plan. ADEQ encourages companies to prepare pollution prevention plans by reducing environmental permit filing fees 50 percent if companies implement a pollution prevention plan. Some mining companies have participated in this program. In addition, a joint partnership between the State and private industry has been formed, called the Arizona Pollution Prevention Partnership. The Partnership consists of 22 of the State's largest hazardous waste generators. These companies, which include some mining companies, have spelled out specific hazardous waste reduction plans for a two to three year period.

The Mineral Policy Center is a non-profit organization that provides technical, legal, and political strategy assistance to deal with mineral threats to sensitive areas. The main goal of the Center is to promote environmentally responsible mining. The organization educates and assists citizens' groups and agency personnel working with conservation problems related to legislation such as the 1872 Mining Law and RCRA. The Mineral Policy Center provides educational materials such as fact sheets, information packets, videos, and publications that summarize the results of research conducted on the environmental impacts of mining. Its

publications include *Burden of Guilt*, which provides a current assessment of the abandoned mine problem and a proposal to develop and fund an effective nationwide reclamation program. The Center also conducts roundtable discussions with mining companies to discuss environmental issues facing the mining industry. (Contact: Gary Kravis, 202-887-1872)

In 1990, a funding agreement was entered into between EPA and the Interstate Mining Compact Commission (IMCC) (Contact: Greg Conrad 703-709-8654). IMCC is an association that studies and recommends techniques for the protection and restoration of land, water, and other resources affected by mining. The purpose of the funding agreement between EPA and IMCC is to facilitate State involvement in developing and implementing mine waste regulation. Fifteen member States have participated in this effort thus far.

VIII.B. EPA Voluntary Programs

Environmental Leadership Program

The Environmental Leadership Program (ELP) is a national initiative piloted by EPA and State agencies in which facilities have volunteered to demonstrate innovative approaches to environmental management and compliance. EPA has selected 12 pilot projects at industrial facilities and Federal installations which will demonstrate the principles of the ELP program. These principles include: environmental management systems, multimedia compliance assurance, third-party verification of compliance, public measures of accountability, community involvement, and mentoring programs. In return for participating, pilot participants receive public recognition and are given a period of time to correct any violations discovered during these experimental projects. (Contact: Tai-ming Chang, ELP Director, 202-564-5081 or Robert Fentress, 202-564-7023)

Project XL

Project XL was initiated in March 1995 as a part of President Clinton's *Reinventing Environmental Regulation* initiative. The projects seek to achieve cost effective environmental benefits by allowing participants to replace or modify existing regulatory requirements on the condition that they produce greater environmental benefits. EPA and program participants will negotiate and sign a Final Project Agreement, detailing specific objectives that the regulated entity shall satisfy. In exchange, EPA will allow the participant a certain degree of regulatory flexibility and

may seek changes in underlying regulations or statutes. Participants are encouraged to seek stakeholder support from local governments, businesses, and environmental groups. EPA hopes to implement fifty pilot projects in four categories including facilities, sectors, communities, and government agencies regulated by EPA. Applications will be accepted on a rolling basis and projects will move to implementation within six months of their selection. For additional information regarding XL Projects, including application procedures and criteria, see the May 23, 1995 Federal Register Notice, or contact Jon Kessler at EPA's Office of Policy Analysis (202) 260-4034.

Green Lights Program

EPA's Green Lights program was initiated in 1991 and has the goal of preventing pollution by encouraging U.S. institutions to use energy-efficient lighting technologies. The program has over 1,500 participants which include major corporations; small and medium sized businesses; Federal, State and local governments; non-profit groups; schools; universities; and health care facilities. Each participant is required to survey their facilities and upgrade lighting wherever it is profitable. EPA provides technical assistance to the participants through a decision support software package, workshops and manuals, and a financing registry. EPA's Office of Air and Radiation is responsible for operating the Green Lights Program. (Contact: Susan Bullard at 202-233-9065 or the Green Light/Energy Star Hotline at 202-775-6650)

WasteWiSe Program

The WasteWiSe Program was started in 1994 by EPA's Office of Solid Waste and Emergency Response. The program is aimed at reducing municipal solid wastes by promoting waste minimization, recycling collection, and the manufacturing and purchase of recycled products. As of 1994, the program had about 300 companies as members, including a number of major corporations. Members agree to identify and implement actions to reduce their solid wastes and must provide EPA with their waste reduction goals along with yearly progress reports. EPA in turn provides technical assistance to member companies and allows the use of the WasteWiSe logo for promotional purposes. (Contact: Lynda Wynn, 202-260-0700 or the WasteWiSe Hotline at 1-800-372-9473)

Climate Wise Recognition Program

The Climate Change Action Plan was initiated in response to the U.S. commitment to reduce greenhouse gas emissions in accordance with the Climate Change Convention of the 1990 Earth Summit. As part of the Climate Change Action Plan, the Climate Wise Recognition Program is a partnership initiative run jointly by EPA and the Department of Energy. The program is designed to reduce greenhouse gas emissions by encouraging reductions across all sectors of the economy, encouraging participation in the full range of Climate Change Action Plan initiatives, and fostering innovation. Participants in the program are required to identify and commit to actions that reduce greenhouse gas emissions. The program, in turn, gives organizations early recognition for their reduction commitments; provides technical assistance through consulting services, workshops, and guides; and provides access to the program's centralized information system. At EPA, the program is operated by the Air and Energy Policy Division within the Office of Policy Planning and Evaluation. (Contact: Pamela Herman, 202-260-4407)

NICE³

The U.S. Department of Energy and EPA's Office of Pollution Prevention are jointly administering a grant program called The National Industrial Competitiveness through Energy, Environment, and Economics (NICE³). By providing grants of up to 50 percent of the total project cost, the program encourages industry to reduce industrial waste at its source and become more energy-efficient and cost-competitive through waste minimization efforts. Grants are used by industry to design, test, demonstrate, and assess the feasibility of new processes and/or equipment with the potential to reduce pollution and increase energy efficiency. The program is open to all industries; however, priority is given to proposals from participants in the pulp and paper, chemicals, primary metals, and petroleum and coal products sectors. (Contact: DOE's Golden Field Office, 303-275-4729)

VIII.C. Trade Association/Industry-Sponsored Activity

The Missouri Limestone Producers Association, along with EPA's Region VII developed a voluntary compliance program for Missouri rock crushing companies in violation of the Clean Air Act. Affected rock crusher facilities in Missouri's pilot program must comply with New Source Performance Standards (NSPS) of the Clean Air Act. The EPA regulations, commonly called Subpart OOO, are designed to control air

pollution from specific new equipment at nonmetallic mineral processing plants. This includes: rock crushing units, screens, conveyors, and bins. Regulations require owners, who have purchased new equipment since August 31, 1983, to maintain records, conduct performance testing of air emissions, and provide notification to EPA. Many Missouri rock crushers have failed to provide necessary notification and to conduct required performance testing. These failures are violations of Federal regulations and owners are liable for penalties under the Clean Air Act. The maximum penalty can be as much as \$25,000 per day, per violation. By participating in the voluntary compliance program, sources are eligible for reduced penalties for notification and testing violations. Forty five companies have taken advantage of this voluntary compliance program and have achieved significant penalty reductions as a result of their participation.

VIII.C.1. Environmental Programs

The National Stone Association produces a Clean Air Management Guide, summarizing provisions of the Clean Air Act, that has been praised by the California Air Resources Board. Additionally, the National Stone Association, along with the Florida Concrete & Products Association and Aggregate Institute produces a course on the Clean Air Act Amendments of 1990 and Title V Operating Permits for the Florida Aggregates Industry. This course has also been taught in other areas of the country i.e. Northern California and Kansas City. The National Stone Association also runs an environmental excellence program for its members with winners receiving Environmental Eagle Awards.

VIII.C.2. Summary of Trade Associations

Trade and professional organizations serving the mining industry in general are divided along mining processes as well as type of mineral mined.

In 1990, a funding agreement was entered into between EPA and the Interstate Mining Compact Commission (IMCC) (Contact: Greg Conrad 703-709-8654). IMCC is an association that studies and recommends techniques for the protection and restoration of land, water, and other resources affected by mining. The purpose of the funding agreement between EPA and IMCC is to facilitate state involvement in developing and implementing mine waste regulation. Fifteen member states have participated in this effort thus far.

National Aggregates Association 900 Spring Street Silver Spring, Maryland 20910 Phone: (301) 587-1400 Fax: (301) 587-9419	Members: 350 Staff: 28 Budget: \$1.2 million Contact: Richard A. Morris
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The National Aggregates Association (NAA) represents producers of construction aggregates, which include sand, gravel, and crushed and broken stone. For over 75 years, NAA has provided its members with education, training, research, technology, and representation before the Congress and federal regulatory bodies to increase the growth and professionalism of the aggregates industry. NAA is an international trade association with a membership of over 400 companies throughout the United States, Canada, and various foreign countries.

Aggregate Producers Association of Northern California 400 Capitol Mall, Suite 900 Sacramento, CA 95814-4407 Phone: (916) 449-3926 Fax: (916) 443-5369	Members: Staff: 7 Budget: \$200,000 Contact: George Cope
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The Aggregate Producers Association (APA) is a non-profit trade association comprised of rock, sand and gravel producers, ready-made concrete companies and asphalt companies in Northern California. APA provides its members with a variety of committees that monitor legislation, regulations and other industry issues e.g. environment, safety, product education and promotion, and technical and government affairs. Currently, APA sponsors a Stormwater/NPDES Group Compliance Program for 140 plant locations. APA also meetings regularly with the Mine Safety and Health Administration (MSHA) to address and resolve issues of concern.

The National Stone Association 1415 Elliot Place, NW Washington, DC 20007 Phone: (202) 342-1100 Fax: (202) 342-0702	Members: 579 Staff: 20 Budget: \$3.26 million Contact: Bill Ford
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The National Stone Association (NSA) is the national trade association representing the many interests and concerns of the crushed stone industry in the United States. NSA, now celebrating its 75th anniversary, is based in Washington, DC. It provides support to member companies, provides technical assistance to universities and schools, and works cooperatively with other national, state and regional groups and associations that help advance the interests of the industry.

National Mining Association 1130 17th Street Washington, DC 20036 Phone: (202) 861-2800 Fax: (202) 861-7535	Contact: Richard L. Lawson
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Founded in 1995 as a result of a merger between the American Mining Congress and the National Coal Association, the National Mining Association represents producers of domestic coal, metals, and industrial and agricultural minerals; manufacturers of mining and mineral processing machinery, equipment, and supplies; engineering/consulting firms; and financial institutions that serve the mining industry. It also offers tax, communications, and technical workshops.

Missouri Limestone Producers Association P.O. Box 1725 Jefferson City, Missouri 65102 Phone: (314)-635-0208 Fax: (314)-634-8006	Members: 66 Staff: 2 Budget: \$220,000 Contact: Steve Rudloff
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The Missouri Limestone Producers Association represents the crushed stone producers for the state of Missouri. This association has taken an active role in voluntary compliance initiatives with EPA's Region VII office.

American Society for Surface Mining and Reclamation (ASSMR) 21 Grandview Dr. Princeton, WV 24740 Phone: (304) 425-8332	Members: 450 Regional Groups: 2 Contact: William T. Plass
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Founded in 1973, ASSMR members consist of mining companies and corporations, representatives from Federal agencies and State governments, and individuals from the academic community. It encourages efforts to protect and enhance land disturbed by mining. In addition, ASSMR assists in research and demonstrations and fosters communication among research scientists, regulatory agencies, landowners, and the surface mining industry. Its publications include the Reclamation Newsletter (quarterly).

InterState Mining Compact Commission (IMCC) 459B Carlisle Dr. Herndon, VA 22070 Phone: (703) 709-8654 Fax: (703) 709-8655	Members: 17 Staff: 2 Budget: \$150,000 Contact: Gregory E. Conrad
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Founded in 1971, IMCC consists of States engaged in surface mining. Its purposes are to study and recommend techniques for the protection and restoration of land, water, and other resources affected by mining; to assist in reducing, eliminating, or counteracting pollution or deterioration of natural resources; to encourage programs of member States that will achieve comparable results in protecting and improving the usefulness of natural resources; and to maintain an efficient and productive mining industry. IMCC also compiles industry statistics, disseminates studies and reports on surface mining and legislative developments, and maintains liaison between State and Federal governments. IMCC publications include The Compact (quarterly).

Society for Mining, Metallurgy, and Exploration, Inc. (SME, Inc.) P.O. Box 625005 Littleton, CO 80162 Phone: (303) 973-9550 Fax: (303) 973-3845	Members: 20,000 Staff: 31 Budget: \$3,700,000 Contact: Tom Hendricks
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Founded in 1871, SME, Inc. consists of persons engaged in the finding, exploitation, treatment, and marketing of all classes of minerals (metal ores, industrial minerals, and solid fuels) except petroleum. SME, Inc. promotes the arts and sciences connected with the production of useful minerals and metals. Specialized education programs are offered, as well as publications such as Minerals and Metallurgical Processing (quarterly), Mining Engineering (monthly), and handbooks and other materials on mining.

Coalition for Responsible Mining Law (CRML) c/o Coeur D'Alene Mines Corp. P.O. Box 1 Coeur D'Alene, ID 83816-0316 Phone: (208) 667-3511 Fax: (208) 667-2213	Members: 300 Contact: Justin Rice
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Founded in 1979, CRML consists of mining company executives, exploration geologists, small miners, and others interested in mining laws. CRML is organized as a means of focusing Western mining interests behind a proposal to preserve the basic provisions of the National Mining Law of 1872. It seeks to raise the level of awareness about the law within the mineral industry, Congress, and the general public through specialized education. Publications include a periodic newsletter.

Clay Minerals Society (CMS) P.O. Box 12210 Boulder, CO 80303 Phone: (303) 444-6405	Members: 950 Contact: Jo Eberl
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Founded in 1963, CMS consists of professionals concerned with clay mineralogy and technology in industry, university research, and government. It includes students of mineralogy and other scientific disciplines as well as representatives of clay mining companies. CMS seeks to stimulate research and disseminate information relating to all aspects of clay science and technology. It maintains a store of clay minerals at the Geology Department of the University of Missouri. CMS publications include *Clays* and *Clay Minerals* (bimonthly), and *Quantitative Mineral Analysis*.

Asbestos Information Association/North America (AIA/NA) 1745 Jefferson Davis Hwy., Ste. 509 Arlington, VA 22202 Phone: (703) 979-1150 Fax: (703) 979-1152	Members: 45 Staff: 30 Budget: \$300,000 Contact: B.J. Pigg
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Founded in 1970, AIA/NA represents manufacturers, processors, and miners/millers of asbestos or products containing asbestos. Its main purposes are: to provide industry-wide information on asbestos and health and on industry efforts to eliminate existing hazards; to cooperate with government agencies in developing and implementing industry-wide standards for exposure to asbestos dust and for the control of asbestos dust emissions into air and water; to exchange information on methods and techniques of asbestos dust control; to assist in solving problems arising from the health effects of asbestos; and to increase public knowledge of the unique benefits and importance of asbestos products. AIA/NA acts as a central information center for collecting and disseminating medical and technical information on asbestos-related disease, asbestos dust control, and other asbestos-related ecological considerations. Publications include *News and Notes* (monthly) and other technical materials.

Gypsum Association (GA) 810 1st St., N.E., No. 510 Washington, D.C. 20002 Phone: (202) 289-5440	Members: 17 Staff: 30 Budget: \$1,000,000 Contact: Jerry A. Walker
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Founded in 1930, GA represents miners and manufacturers of gypsum and gypsum products. It sponsors basic and applied research programs at educational institutions and commercial testing laboratories on fire resistant assemblies, structural assemblies, wallboard application techniques, and new uses for gypsum products. GA also compiles market statistics and publishes technical bulletins and data on gypsum products.

IX. CONTACTS/ACKNOWLEDGMENTS/RESOURCE MATERIALS/BIBLIOGRAPHY**General Profile**

Annual Report 1992 - Industrial Sand and Gravel, Wallace P. Bolen, Bureau of Mines, September 1993.

Annual Report 1992 - Clays, Robert L. Virta, Bureau of Mines, September 1993.

Annual Report 1992 - Gypsum, Lawrence L. Davis, Bureau of Mines, September 1993.

Annual Report 1992 - Phosphate Rock, David E. Morse, Bureau of Mines, September 1993.

Burden of Guilt, Mineral Policy Center, Washington, D.C., June 1993.

Bureau of Mines Research 92 - A Summary of Significant Results and Economics in Mineral Technology, Bureau of Mines, 1992. (GPO no. I 28.115:992)

California Environmental Protection Agency and the National Stone Association, Aggregate Plants Compliance Assistance Program, September 1993.

CRS Issue Brief, The 1872 Mining Law: Time to Reform?, Marc Humphries, Environment and Natural Resources Policy Division, Congressional Research Service, Library of Congress, July 7, 1994. (Order Code IB89130)

Directory of Principal Crushed Stone Producers in the United States in 1993, U.S. Department of the Interior, Bureau of Mines, Mineral Industry Surveys, January 1995.

Directory of Principal Sand and Gravel Producers in the United States in 1992, U.S. Department of the Interior, Bureau of Mines, Mineral Industry Surveys, November 1993.

Encyclopedia of Associations, 27th ed., Deborah M. Burek, ed., Gale Research Inc, Detroit, Michigan, 1992.

Enforcement Accomplishments Report, FY 1991, U.S. EPA, Office of Enforcement (EPA/300-R92-008), April 1992.

Enforcement Accomplishments Report, FY 1992, U.S. EPA, Office of Enforcement (EPA/230-R93-001), April 1993.

Enforcement Accomplishments Report, FY 1993, U.S. EPA, Office of Enforcement (EPA/300-R94-003), April 1994.

Internal Document: TRI Industry Expansion, Description of Industry Sector Activities, U.S. EPA, Office of Pollution Prevention and Toxics.

Internal EPA Letter: Mine Safety and Health Administration Mines Initiative, Connie Musgrove, Office of Compliance Monitoring, U.S. EPA, June 7, 1994.

Memo: Lead Inspection Inquiry Regarding Region VIII Mining Initiative, Beth Greenwald, U.S. EPA Region VIII, September 21, 1994.

Mineral Commodity Summaries 1994, Bureau of Mines.

Minerals Yearbook, Metals and Minerals, vol. I, Bureau of Mines, 1992.

1987 Census of Mineral Industries: Clay, Ceramic, and Refractory Minerals, Bureau of the Census, April 1989. (MIC87-I-14C(P))

1987 Census of Mineral Industries: Miscellaneous Nonmetallic Minerals (Except Fuels) and Services, Bureau of the Census, August 1989. (MIC87-I-14E(P))

1987 Census of Mineral Industries: Sand and Gravel, Bureau of the Census, August 1989. (MIC87-I-14B(P))

1987 Census of Mineral Industries: Stone, Bureau of the Census, August 1989. (MIC87-I-14A(P))

Standard Industrial Classification Manual, Office of Management and Budget, 1987.

Sustainable Environmental Law, Ch. 16, Campbell-Mohn, Environmental Law Institute, 1993.

Technical Support Document, International Training Workshop, Principles of Environmental Enforcement, Office of Enforcement and Compliance Assurance, U.S. EPA, April, 1994.

1992 Toxic Release Inventory (TRI) Public Data Release, U.S. EPA, Office of Pollution Prevention and Toxics, April 1994. (EPA/745-R94-001)

U.S. Industrial Outlook 1994 - Metals and Industrial Minerals Mining, U.S. Department of Commerce.

U.S. Industrial Outlook 1994 - Construction Materials, U.S. Department of Commerce.

Process Description

Air Pollution Engineering Manual, 3rd ed., Air & Waste Management Association, International Thomson Publishing, New York, New York, 1992.

Draft SIC Code Profile 14, Mining and Quarrying of Nonmetallic Minerals, Office of Pollution Prevention and Toxics, U.S. EPA, December 9, 1993.

McGraw-Hill Encyclopedia of Science & Technology, 7th ed., vol. 11, McGraw-Hill Book Company, New York, New York, 1992.

Nonmetallic Mineral Processing Plants - Background Information for Proposed Standards, Office of Air Quality Planning and Standards, U.S. EPA, April 1983. (EPA-450/3-83-001a)

Regulatory Profile

Mineral Mining and Processing Point Source Category Rules and Regulations, Federal Register vol. 40, no. 201, October 16, 1975.

Standards of Performance for Nonmetallic Mineral Processing Plants Rules and Regulations, Federal Register vol. 50, no. 148, August 1, 1985.

Pollution Prevention

Environmental Fact Sheet, Recycling Municipal Solid Waste: Facts and Figures, Office of Solid Waste and Emergency Response, U.S. EPA, July 1992. (EPA/530-SW-91-024)

Contacts*

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Greg Conrad	InterState Mining Commission	703-709-8654

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Edwin G. Buckner	U.S. EPA Region VII Air Branch	913-551-7621
Roger Wilmoth	U.S. EPA Region V	513-564-7509

¹Please Note: Bureau of Mines data for the crushed stone and sand and gravel industries is reported in alternate years. This profile presents crushed stone industry data for 1993, and sand and gravel industry data for 1992.

²Please Note: Bureau of Mines data for the crushed stone and sand and gravel industries is reported in alternate years. This profile presents crushed stone industry data for 1993, and sand and gravel industry data for 1992.

Many of the contacts listed above have provided valuable background information and comments during the development of this document. EPA appreciates this support and acknowledges that the individuals listed do not necessarily endorse all statements made within this notebook.