



EPA Office of Compliance Sector Notebook Project

Profile of the Healthcare Industry
Chapters VII., VIII. and IX.

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<http://www.epa.gov/compliance/resources/publications/assistance/sectors/notebooks/health.html>

VII. COMPLIANCE AND ENFORCEMENT HISTORY**VII.A. Background**

Until recently, EPA focused much of its attention on ensuring 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-medium databases, extract compliance records, and match the records to individual facilities. IDEA uses the Facility Registry System (FRS) maintained Master Source ID 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), RCRAInfo (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 OSHA.

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.

EPA has also developed Enforcement and Compliance History Online (ECHO). This database was developed in partnership with the Environmental Council of the States (ECOS), a national association representing state and territorial environmental commissioners. ECHO provides users detailed facility reports, which include:

- Federal and state compliance inspections;
- Environmental violations;
- Recent formal enforcement actions taken; and
- Demographic profile of surrounding area.

The data in ECHO covers a two-year period of information and includes information drawn from the following EPA databases:

- AIRS;
- PCS;
- RCRAInfo;
- Integrated Compliance Information System (ICIS);
- Facility Registry System (FRS); and
- U.S. Census Data.

The ECHO database can be found at <http://www.epa.gov/echo/index.html>.

VII.B. Compliance and Enforcement Description

This section discusses how EPA collects data on the historical compliance and enforcement activity of each sector. The Agency compiles compliance and enforcement records from its data systems to the facility level using the Facility Registry System's (FRS) Master Source ID, which links records from virtually any of EPA's data systems to a facility record. For each facility (i.e., Master Source ID), EPA uses the facility-level SIC code that is designated by IDEA, as follows:

1. If the facility reports to TRI, then the designated SIC code is the primary SIC reported in the most recent TRI reporting year.
2. If the facility does not report to TRI, the first SIC codes from all linked AFS, PCS, RCRAInfo, BRS ID/permits are assembled. If more than one permit/ID exists for a particular program, then only one record from that data system is used. The SIC code that occurs most often, if there is one, becomes the designated SIC code.
3. If the facility does not report to TRI and no SIC code occurs more often than others, the designated SIC code is chosen from the linked programs. If more than one permit/ID exists for a particular program, then only one record from that data system is used.

Note that EPA does not attempt to define the actual number of facilities that fall within each sector. Instead, the information presented in this section reflects the records of a subset of facilities within the sector that are well defined in EPA databases.

To compare the number of reported facilities in EPA's database to the total sector universe, most Sector 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 in 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.

This subsection contains four tables that summarize enforcement and compliance activities for the healthcare industry. Tables VII-1 and VII-2 look exclusively at the healthcare industry for the past five years. Tables VII-3 and VII-4 provide a general overview of

compliance and enforcement activities across each of the sectors discussed in a Sector Notebook, for the past five years. Following this introduction is a list defining each column in the tables presented in this section. The data in these tables solely reflect EPA, state, and local compliance assurance activity data that have been entered into EPA databases. EPA ran data queries, for the past five calendar years (February 19, 1998 to February 19, 2004). For up-to-date compliance data, visit the Sector Notebook data refresh web page at: http://epa.gov/compliance/resources/publications/assistance/sectors/notebooks/data_refresh.html.

Because most inspections focus on single-media requirements, the data presented in this section result from queries of single-medium databases. These databases do not provide data on whether inspections are state/local- or EPA-led. However, the table presenting the universe of violations generally measures EPA's and states' efforts within each media program. The presented data illustrate the variations across Regions for certain sectors¹⁰. This variation may result from state/local data entry variations, specific geographic concentrations, proximity to population centers, sensitive ecosystems, highly toxic chemicals used in production, or historical noncompliance. Therefore, the data do not rank regional performance or necessarily reflect which regions may have the most compliance problems.

VII.C. Compliance and Enforcement Data Definitions

Facilities in Search (Tables VII-1, 2, 3, and 4) -- the number of the FRS-maintained Master Source IDs that were designated to the listed SIC code range.

Facilities Inspected (Tables VII-1, 2, 3, and 4) -- the number of EPA and state agency inspections for the facilities in this data search. These values show what percentage of the facility universe is inspected in a 24- or 60-month period.

Number of Inspections (Tables VII-1, 2, 3, and 4) -- the total number of inspections conducted in this sector. An inspection is counted each time it is entered into a single-medium database.

Average Months Between Inspections (Tables VII-1 and 3) -- the average length of time, expressed in months, between compliance inspections at a facility within the defined universe.

Facilities with One or More Enforcement Actions (Tables VII-1 and 3) -- 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 in subsequent columns. EPA obtained these data for administrative, civil/judicial, and criminal enforcement actions. Administrative actions include Notices of Violation (NOVs). A facility with multiple

¹⁰ EPA Regions include the following states: 1 (CT, MA, ME, RI, NH, VT); 2 (NJ, NY, PR, VI); 3 (DC, DE, MD, PA, VA, WV); 4 (AL, FL, GA, KY, MS, NC, SC, TN); 5 (IL, IN, MI, MN, OH, WI); 6 (AR, LA, NM, OK, TX); 7 (IA, KS, MO, NE); 8 (CO, MT, ND, SD, UT, WY); 9 (AZ, CA, HI, NV, Pacific Trust Territories); 10 (AK, ID, OR, WA).

enforcement actions is counted only once in this column. All percentages that appear are referenced to the number of facilities inspected.

Total Enforcement Actions (Tables VII-1, 2, 3, and 4) -- the total number of enforcement actions identified for an industrial sector across all environmental statutes. In this column, a facility with multiple enforcement actions is counted multiple times (e.g., a facility with three enforcement actions counts as three).

State-Led Actions (Tables VII-1 and 3) -- the percentage of the total enforcement actions taken by state and local environmental agencies. Note that this number may not reflect the total number of state enforcement actions; some states extensively report enforcement activities to EPA to include in its data systems, while other states may use their own data systems.

Federal-Led Actions (Tables VII-1 and 3) -- the percentage of the total enforcement actions taken by EPA. This number includes cases that were referred to EPA from state agencies. Many of these actions result from coordinated or joint state/federal efforts.

Enforcement-to-Inspection Ratio (Tables VII-1 and 3) -- shows how often enforcement actions result from inspections; this number is presented for comparative purposes only. This number simply indicates historically how many enforcement actions can be attributed to inspection activity. This ratio includes and enforcement actions under the CWA (PCS), CAA (AFS) and RCRA. Inspections and enforcement actions from the TSCA/FIFRA/EPCRA databases are not factored into this ratio because most of the actions taken under these programs are not the result of facility inspections. This ratio also does not account for enforcement actions arising from noninspection compliance monitoring activities (e.g., self-reported water discharges) under the CAA, CWA and RCRA.

Media Breakdown of Enforcement Actions and Inspections (Tables VII-2 and 4) -- four columns identify the proportion of total inspections and enforcement actions within EPA's Air, Water, Waste, and TSCA/FIFRA/EPCRA databases.

VII.D. Healthcare Industry Compliance History

Table VII-1 provides an overview of the reported compliance and enforcement data for the healthcare industry over the past five years (February 19, 1998 to February 19, 2004). These data are broken out by EPA Region, thereby permitting geographical comparisons. Observations from the data are listed below:

- Regions 2, 3, and 4 contain the most healthcare facilities and conducted the most inspections;
- Region 3 conducted, by far, the most inspections of healthcare facilities and had the lowest average time between inspections; and

- Region 2 had both the most enforcement actions, and the most enforcement actions per inspection.

Table VII-2 provides a more in-depth comparison between the healthcare industry and other sectors by breaking out the compliance and enforcement data by environmental statute for the same five-year period (February 19, 1998 to February 19, 2004). These data are also broken out by EPA Region, thereby permitting geographical comparisons. Observations from the data are listed below:

- The majority of inspections and actions are conducted under the CAA, followed by RCRA; and
- Regions 7 and 8 have only conducted enforcement actions under the CAA.

EPA's Region 2 office identified the following most common healthcare facility violations based on the inspections performed in their region, listed below.

Most Common CAA Healthcare Facility Violations

- Failure to use properly trained and accredited asbestos personnel;
- Failure to notify EPA of asbestos removal projects and to keep required documentation/records;
- Failure to properly dispose of asbestos debris;
- Failure to have CFC leak rate records for chillers and air conditioning units more than 50 pounds of charge;
- Failure to have EPA certified technicians for CFC-containing air conditioning and refrigeration systems;
- Failure to get boilers permitted with the state agency;
- Failure to apply for Title V operating permit;
- Failure to close parts washer lids when not in use; and
- Failure to include spray paint booths and parts degreasers in air permit.

Table VII-1: 5-Year Enforcement and Compliance Summary for the Healthcare Industry (SIC 8000), By Region

Region	Facilities in Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percentage of State Actions	Percentage of Federal Actions	Enforcement-to-Inspection Ratio
National	1,798	1,187	3,953	27	195	343	96%	4%	0.09
1	205	126	265	46	21	31	100%	0%	0.12
2	277	136	391	43	66	130	93%	7%	0.33
3	314	256	1,413	13	20	51	98%	2%	0.04
4	321	235	854	23	24	37	95%	5%	0.04
5	218	120	296	44	25	35	97%	3%	0.12
6	111	75	131	51	9	14	100%	0%	0.11
7	142	105	268	32	6	11	100%	0%	0.04
8	53	40	127	25	1	1	100%	0%	0.01
9	96	55	138	42	18	28	96%	4%	0.2
10	59	37	67	53	5	5	100%	0%	

Table VII-2: 5-Year Enforcement and Compliance Summary for the Healthcare Industry (SIC 8000), by Region and Statute

Region	Facilities In Search	Facilities Inspected	Number of Inspections	Total Enforcement Actions	Clean Air Act		Clean Water Act		RCRA		FIFRA/TSCA/EPCRA	
					% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
National	1,798	1,187	3,953	343	78%	82%	0%	2%	21%	16%	1%	1%
1	205	126	265	31	81%	74%	0%	0%	19%	26%	0%	0%
2	277	136	391	130	71%	85%	2%	2%	24%	12%	3%	1%
3	314	256	1,413	51	88%	90%	0%	0%	12%	10%	0%	0%
4	321	235	854	37	73%	60%	0%	0%	27%	41%	0%	0%
5	218	120	296	35	83%	80%	2%	6%	15%	11%	0%	3%
6	111	75	131	14	45%	79%	0%	0%	55%	21%	0%	0%
7	142	105	268	11	80%	100%	0%	0%	20%	0%	0%	0%
8	53	40	127	1	67%	100%	0%	0%	33%	0%	0%	0%
9	96	55	138	28	70%	86%	0%	0%	29%	14%	1%	0%
10	59	37	67	5	43%	80%	0%	0%	52%	20%	4%	0%

Most Common RCRA Healthcare Facility Violations

- Failure to comply with hazardous waste generator regulations and lack of documentation;
- Failure to comply with Underground Storage Tank regulations and lack of documentation;
- Improper or lack of hazardous waste labeling;
- Failure to have waste batteries/fluorescent lamps stored in proper universal waste containers and labeled;
- No or infrequent weekly inspections of hazardous wastes storage/satellite areas;
- Open containers of hazardous wastes;
- Failure to have hazardous waste determinations on file for all wastes (i.e., some pharmaceutical wastes are classified as RCRA hazardous wastes);
- Failure to have procedures in place to ensure spent aerosol containers are empty before disposal as solid waste;
- Malfunctioning leak detection systems on underground storage tanks;
- Labeling of hazardous waste not done or incorrect;
- Improper disposal of chemotherapy drugs;
- Hazardous waste determination not done or incorrect;
- No or inadequate hazardous waste manifest;
- Disposal of hazardous waste down the drain;
- Improper management of expired pharmaceutical, paints, etc.;
- Lack of contingency plan;
- Lack of or inadequate training for employees in hazardous waste management;
- Failure to ensure that hazardous waste meets Land Disposal Restrictions;
- Failure to upgrade or close USTs by December 22, 1998; and

- Improper consolidation of wastes from nearby facilities.

Most Common CWA Healthcare Facility Violations

- No permit for noncompliance with wastewater discharges;
- Failure to know about local treatment plant sewer use regulations and possible prohibited discharges for indirect dischargers;
- No or inadequate secondary containment for storage tanks;
- Improper disposal down floor drains; and
- No Spill Prevention, Control and Countermeasure Plan.

Most Common EPCRA Healthcare Facility Violations

- Failure to report certain accidental chemical releases to the local authorities along with emissions data; and
- Storage of chemicals (i.e., heating oil and gasoline) on site above threshold amounts (hazardous chemicals above 10,000 lbs and or extremely hazardous substances present at 500 lbs or the threshold planning quantity, whichever is lower).

Most Common FIFRA Healthcare Facility Violations

- Misuse of a registered pesticide product;
- Use of an unregistered product;
- Lack of proper records concerning pest control application within the hospital and or on the hospital grounds; and
- Failure to report pesticide poisonings either occurring within the hospital or of admitted patients.

Common Violations and Problems Found at Hospitals for TSCA Issues

TSCA inspectors are primarily interested in any PCBs and lead-based paint at hospitals. Typical staff residential area lead paint violations/issues are:

- Failure to notify residents of lead paint in building or lack of knowledge of any lead hazard; and

- Failure to provide EPA's pamphlet, "Protect Your Family from Lead in Your Home" as required under 40 CFR Part 745.107(a)(1) (see <http://www.epa.gov/opptintr/lead/leadpdf.pdf>).

Visit the Healthcare Environmental Resource Center at <http://www.herc.org> for plain language explanations on how to comply with environmental regulations and to learn about pollution prevention opportunities. The Center web site also links to state rules and permitting contacts. Its resource sections contain selected compliance assistance and pollution prevention tools. If you don't have access to the Internet, refer to Section VI and to the Bibliography in Section IX.B for additional resources.

VII.E. Comparison of Enforcement Activity Among Selected Industries

Table VII-3 compares the compliance history of the healthcare sector to the other industries covered by the industry Sector Notebooks. Observations from these five years of data are listed below:

- Sixty-six percent of healthcare facilities have been inspected over the past five years, which is about equal to the average (62 percent) for all other sectors listed;
- The inspected healthcare facilities have been inspected an average of three times each; and
- The healthcare, ground transportation, and oil and gas extraction industries have the highest percentage of state-led enforcement actions (96 percent).

Tables VII-4 provides a more in-depth comparison between the healthcare industry and other sectors by breaking out the compliance and enforcement data by environmental statute. As in Table VII-3, the data cover the last five years. Observations from the data are listed below:

- The majority of inspections and actions are conducted under the CAA, followed by RCRA;
- The healthcare industry has a higher percentage of CAA inspections (78 percent) than the average of the other sectors (60 percent); and
- The healthcare industry has one of the lowest percentages of CWA inspections and actions of any of the sectors listed in these tables.

Table VII-3: 5-Year Enforcement and Compliance Summary for Selected Industries

Sector	Facilities In Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percentage of State-Led Actions	Percentage of Federal-Led Actions	Enforcement-to-Inspection Ratio
Healthcare (SIC Code 8000)	1,798	1,187	3,953	27	195	343	96%	4%	0.09
Aerospace	764	526	2,704	17	246	238	65%	35%	0.09
Ag Chem Pesticide & Fertilizer	585	345	2,123	17	138	107	57%	43%	0.05
Ag Crop Production	131	69	165	48	12	7	86%	14%	0.04
Ag Livestock Production	53	17	58	55	14	28	11%	89%	0.48
Air Transportation	428	211	619	41	80	62	71%	29%	0.1
Dry Cleaning	3,345	1,620	2,944	68	232	178	92%	8%	0.06
Electronics & Computer	1,852	906	2,486	45	286	196	75%	25%	0.08
Fossil Fuel Elec Power Gen	3,520	2,543	18,758	11	1,170	1,582	78%	22%	0.08
Ground Transportation	4,970	3,338	13,612	22	1,084	880	96%	4%	0.06
Inorganic Chemical	1,007	629	5,291	11	352	414	79%	21%	0.08
Iron and Steel	683	480	6,060	7	312	536	78%	22%	0.09
Lumber & Wood Products	3,038	2,045	10,728	17	872	814	85%	16%	0.08
Metal Casting	1,346	797	3,549	23	348	340	79%	21%	0.1
Metal Fabrication	8,279	5,092	16,568	30	2,138	1,716	76%	24%	0.1
Metal Mining	281	183	980	17	70	71	85%	16%	0.07
Motor Vehicle Assembly	1,886	1,211	5,531	20	500	448	77%	23%	0.08
Non-Fuel, Non-Metal Mining	3,778	2,005	9,291	24	522	524	95%	6%	0.06
Nonferrous Metals	531	327	2,968	11	242	395	88%	12%	0.13
Oil & Gas Extraction	2,783	1,681	6,371	26	1,120	949	96%	4%	0.15
Organic Chemical	1,050	787	8,483	7	558	846	73%	27%	0.1
Petroleum Refining	438	297	5,405	5	352	1,335	69%	31%	0.25
Pharmaceutical	572	414	2,108	16	174	199	84%	16%	0.09
Plastic Resins & Fibers	709	502	4,637	9	344	444	85%	15%	0.1
Printing	2,384	1,460	4,913	29	476	435	90%	10%	0.09
Pulp and Paper	566	467	5,830	6	336	498	90%	10%	0.09

Table VII-3: 5-Year Enforcement and Compliance Summary for Selected Industries (Continued)

Sector	Facilities In Search	Facilities Inspected	Number of Inspections	Average Months Between Inspections	Facilities with 1 or More Enforcement Actions	Total Enforcement Actions	Percentage of State-Led Actions	Percentage of Federal-Led Actions	Enforcement-to-Inspection Ratio
Rubber and Plastic	3,823	2,294	9,239	25	962	787	90%	10%	0.09
Shipbuilding & Repair	235	168	870	16	96	83	81%	19%	0.1
Stone Clay Glass&Concrete	3,388	2,013	12,190	17	876	930	89%	11%	0.08
Textiles	1,226	814	3,859	19	304	310	87%	13%	0.08
Water Transportation	269	158	384	42	40	36	89%	11%	0.09
Wood Furniture & Fixtures	1,652	1,047	5,515	18	440	382	89%	12%	0.07

Table VII-4: 5-Year Enforcement and Compliance Summary by Statute for Selected Industries

Sector	Facilities In Search	Facilities Inspected	Number of Total Inspections	Total Enforcement Actions	Clean Air Act		Clean Water Act		RCRA		FIFRA/TSCA/EPCRA/Other	
					% of Total Inspections	% of Total Enforcement Actions	% of Total Inspections	% of Total Enforcement Actions	% of Total Inspections	% of Total Enforcement Actions	% of Total Inspections	% of Total Enforcement Actions
Healthcare (SIC Code 8000)	1,798	1,187	3,953	343	78%	82%	0%	2%	21%	16%	1%	1%
Aerospace	764	526	2,704	238	52%	43%	3%	3%	44%	51%	0%	3%
Ag Chem Pesticide & Fertilizer	585	345	2,123	107	55%	34%	12%	8%	27%	31%	6%	27%
Ag Crop Production	131	69	165	7	50%	71%	0%	0%	46%	29%	4%	0%
Ag Livestock Production	53	17	58	28	53%	89%	0%	7%	47%	0%	0%	4%
Air Transportation	428	211	619	62	38%	23%	1%	2%	61%	74%	0%	2%
Dry Cleaning	3,345	1,620	2,944	178	26%	35%	0%	0%	74%	65%	0%	0%
Electronics & Computer	1,852	906	2,486	196	31%	14%	4%	5%	64%	67%	1%	15%
Fossil Fuel Elec Power Gen	3,520	2,543	18,758	1,582	75%	88%	18%	8%	6%	3%	0%	1%
Ground Transportation	4,970	3,338	13,612	880	78%	76%	0%	1%	21%	23%	0%	1%
Inorganic Chemical	1,007	629	5,291	414	48%	54%	13%	10%	37%	31%	1%	6%
Iron and Steel	683	480	6,060	536	61%	67%	13%	10%	26%	20%	0%	3%
Lumber & Wood Products	3,038	2,045	10,728	814	75%	76%	1%	0%	24%	23%	1%	1%
Metal Casting	1,346	797	3,549	340	60%	59%	3%	2%	36%	33%	1%	6%
Metal Fabrication	8,279	5,092	16,568	1,716	45%	46%	2%	1%	52%	46%	1%	7%
Metal Mining	281	183	980	71	56%	52%	28%	39%	15%	7%	1%	1%
Motor Vehicle Assembly	1,886	1,211	5,531	448	60%	56%	1%	1%	38%	40%	0%	3%
Non-Fuel, Non-Metal Mining	3,778	2,005	9,291	524	97%	99%	1%	0%	2%	1%	0%	0%
Nonferrous Metals	531	327	2,968	395	64%	70%	9%	5%	27%	22%	0%	2%
Oil & Gas Extraction	2,783	1,681	6,371	949	97%	98%	0%	1%	3%	2%	0%	0%
Organic Chemical	1,050	787	8,483	846	47%	55%	12%	13%	39%	28%	2%	5%
Petroleum Refining	438	297	5,405	1,335	57%	83%	15%	6%	27%	10%	1%	1%
Pharmaceutical	572	414	2,108	199	40%	49%	7%	8%	52%	37%	1%	6%
Plastic Resins & Fibers	709	502	4,637	444	51%	59%	19%	17%	29%	22%	1%	3%
Printing	2,384	1,460	4,913	435	65%	66%	0%	0%	34%	33%	1%	1%
Pulp and Paper	566	467	5,830	498	67%	75%	26%	18%	7%	4%	0%	3%
Rubber and Plastic	3,823	2,294	9,239	787	71%	73%	1%	0%	27%	23%	1%	5%
Shipbuilding & Repair	235	168	870	83	59%	34%	6%	8%	35%	57%	1%	1%
Stone Clay Glass&Concrete	3,388	2,013	12,190	930	85%	87%	1%	1%	13%	10%	1%	2%

Table VII-4: 5-Year Enforcement and Compliance Summary by Statute for Selected Industries (Continued)

Sector	Facilities In Search	Facilities Inspected	Number of Total Inspections	Total Enforcement Actions	Clean Air Act		Clean Water Act		RCRA		FIFRA/TSCA/EPCRA/Other	
					% of Total Inspections	% of Total Enforcement Actions	% of Total Inspections	% of Total Enforcement Actions	% of Total Inspections	% of Total Enforcement Actions	% of Total Inspections	% of Total Enforcement Actions
Textiles	1,226	814	3,859	310	76%	59%	12%	23%	12%	14%	1%	3%
Water Transportation	269	158	384	36	42%	50%	1%	0%	56%	50%	1%	0%
Wood Furniture & Fixtures	1,652	1,047	5,515	382	76%	75%	0%	1%	23%	23%	0%	2%

VII.F. Review of Major Legal Actions

This subsection discusses major legal cases and pending litigation within the healthcare industry. Following are several press releases that discuss recent major cases regarding healthcare facilities:

DEPARTMENT OF VETERANS AFFAIRS AGREES TO \$133,000 SETTLEMENT FOR LEAD PAINT DISCLOSURE VIOLATIONS IN MAINE AND MASSACHUSETTS

EXCERPTS FROM: EPA Region 1 Press Release, April 6, 2004, Release # 04-04-04

BOSTON - The U.S. Department of Veterans Affairs has agreed to pay a \$10,068 penalty and perform environmental projects worth \$123,050 to settle claims by the U.S. Environmental Protection Agency that it failed to properly inform tenants about potential lead hazards at employee housing provided by the department.

The three EPA complaints allege violations of the federal Lead Disclosure Rule for employee housing at VA Medical Centers in Northampton and Bedford, Mass. and Togus, Maine. The three medical centers include a total of about 41 on-site housing units, which the VA leases to employees and their families. Settlement of this case represents the first time a federal facility has paid a penalty for violations of the Lead Disclosure Rule.

In addition to paying the fine, the VA agreed to assign a person to be responsible for environmental compliance at each facility, and to implement a lead-based paint abatement project in employee housing at a total cost of \$123,050. Of the case penalty, the Bedford facility will pay \$3,080; the Togus facility will pay \$3,908; and the Northampton facility will pay \$3,080. This case abates health risks posed by lead paint in 16 units of employee housing divided between the three locations and addresses the facilities' underlying barriers to compliance.

The case is among numerous lead-related civil and criminal cases EPA New England has taken to make sure landlords and property owners and managers are complying with the federal Lead Disclosure Rule. EPA New England's work to implement the Residential Lead-Based Paint Hazard Reduction Act has included more than 150 inspections around New England, as well as numerous compliance assistance workshops.

Low-level lead poisoning is widespread among American children, affecting as many as three million children under the age of six, with lead paint the primary cause. Elevated lead levels can trigger learning disabilities, decreased growth, hyperactivity, impaired hearing and even brain damage. Lead is also harmful to adults. Adults can suffer from difficulties during pregnancy, other reproductive problems, high blood pressure, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.

**EPA ORDERS CLOSURE OF MEDICAL WASTE INCINERATORS AT GUAM
MEMORIAL HOSPITAL**

FOR RELEASE: June 2004

HONOLULU -- In response to an order from the U.S. Environmental Protection Agency, the Guam Memorial Hospital Authority has shut down one of its medical waste incinerators and will soon shut down a second in order to meet federal Clean Air Act standards.

Guam Memorial Hospital Authority has agreed to comply with the EPA's order by ceasing to operate its incinerators and putting an alternative medical waste treatment method into place.

The first of two incinerators was shut down on May 18. The second incinerator was switched to emergency back-up status on June 11 and will be permanently shut down by Nov. 30. The EPA determined that both incinerators were violating the emissions standards set by the Clean Air Act.

"It is critical that medical waste incinerators meet all of the required emission standards to protect the public's health," said Deborah Jordan, the EPA's air division director for the Pacific Southwest region. "Developing alternative medical waste treatment will further ensure clean air and proper disposal of medical waste for Guam's residents."

During the initial source tests, one of the incinerators violated the particulate matter, dioxins and furans, hydrogen chloride and lead emissions limits, while the second incinerator violated the particulate matter and hydrogen chloride emission limits. At that time, Guam Memorial Hospital Authority also failed to submit to the EPA the required waste management plan and necessary incinerator operating parameters and other required data for both incinerators.

In response to the order, Guam Memorial Hospital Authority has given the EPA a plan to transport all hospital, medical and infectious waste to a commercial medical waste treatment and disposal facility while the hospital develops an alternative waste treatment system.

The EPA's order also requires the Guam Memorial Hospital Authority to:

- Provide to the EPA a copy of its waste management plan which will include plans to separate solid waste from medical waste and other waste minimization opportunities; and
- Complete the shut down of both incinerators by Nov. 30 and complete final removal and proper disposal of the two incinerators by Dec. 30.

All medical waste incinerators need to be permitted and have the necessary air pollution controls to meet all Clean Air Act standards. Medical waste can be a source of

pollution from the pathological and biological waste, along with any chemicals produced during incineration from plastics and other medical waste materials.

**SLOAN-KETTERING FINED FOR FAILURE TO PROPERLY MANAGE
HAZARDOUS WASTE**

FOR RELEASE: Tuesday, January 27, 2004

New York, N.Y. – The U.S. Environmental Protection Agency (EPA) announced today that it has cited Memorial Sloan-Kettering Cancer Center in New York City for violating numerous hazardous waste management requirements. The Agency is seeking full compliance and \$214,420 in penalties for the violations.

"Hospitals and healthcare facilities must consider the proper handling of hazardous waste an integral part of their mandates to protect people's health," said Jane M. Kenny, EPA Regional Administrator. "Chemotherapy waste is an especially toxic waste produced by many medical facilities. Hazardous waste regulations are in place to help to ensure that facilities like Sloan-Kettering do not release these or other toxic chemicals into the environment.

EPA discovered violations of the Resource Conservation and Recovery Act (RCRA) at Sloan-Kettering during a March 2003 inspection. They included improper storage and disposal of chemotherapy and dental solid wastes, as well as a general failure to determine whether they were hazardous wastes. Sloan-Kettering has 30 days to respond to the complaint.

In 2002, EPA started the Hospital and Healthcare Initiative to help hospitals and healthcare facilities comply with environmental regulations as part of a larger EPA voluntary audit policy. The Agency established the policy to encourage prompt disclosure and correction of environmental violations, safeguarding people's health and the environment. Many hospitals and healthcare facilities were not aware of their responsibilities under various environmental laws or had failed to implement effective compliance strategies. As part of the initiative, EPA sent letters to 480 facilities in New Jersey, New York, Puerto Rico and the U.S. Virgin Islands and held free workshops to help hospitals comply. In addition, the Agency established a web site that provides information about their duties under the law, and warned hospitals that EPA inspections of their facilities - with risk of financial penalties - were imminent.

Hospitals that wish to take advantage of the Agency's voluntary self-audit program can investigate and disclose environmental violations to EPA and, if certain conditions are met, receive a partial or complete reduction in financial penalties. To date, fourteen healthcare organizations have entered into voluntary self-audit disclosure agreements with EPA. The Agency is continuing to conduct inspections. More information about the healthcare initiative can be found on EPA's web site at: www.epa.gov/Region2/healthcare/index.html and about hazardous waste regulation in general at: www.epa.gov/epaoswer/osw/index.htm.

**EPA FINES NASSAU HEALTH CARE CORPORATION FOR VIOLATING
HAZARDOUS WASTE REGULATIONS**

FOR RELEASE: Monday, October 20, 2003

New York, N.Y. – The U.S. Environmental Protection Agency (EPA) announced today that it will seek \$279,900 in penalties from the Nassau Health Care Corporation Nassau University Medical Center in East Meadow, New York for violating numerous requirements of the federal and New York State hazardous waste regulations. The medical research, diagnostic and treatment facility must comply with all hazardous waste management requirements under the Resource Conservation and Recovery Act (RCRA).

"Hazardous waste regulations help to ensure that facilities like Nassau Health do not release toxic chemicals into the environment and protect workers, patients and visitors at the hospital," said EPA Regional Administrator Jane M. Kenny. "Many toxic compounds easily contaminate air, ground or water and exposure can cause or aggravate many illnesses. Though there were no releases in this case, it is essential that companies with hazardous chemicals in their waste follow EPA and state regulations very carefully to ensure that they don't endanger people or the environment."

The discovery of violations at Nassau Health grew out of EPA inspections of the facility this past winter. These violations included storage or abandonment of several types of solid waste and chemicals, and failure to determine whether or not they were hazardous wastes. In addition, the hospital did not have a permit to store hazardous waste, and did not meet the protective management requirements needed to be exempt from a permit. Hazardous waste containers were not identified with the required markings or inspected regularly; emergency response agencies were not notified of hazardous waste being stored; and the hospital did not minimize the possibility of fire, explosion or unplanned release of hazardous substances into the environment. Finally, a number of hospital personnel responsible for hazardous waste management were not trained in how to handle it, and no hazardous waste emergency response plan was in place. Since the inspection, Nassau Health has been correcting the violations. The company has 30 days to respond to the complaint.

Nassau Health could have avoided this enforcement action by taking advantage of EPA's Hospitals and Healthcare Initiative. EPA Region 2 started the Hospital and Healthcare Initiative in the fall of 2002 to help hospitals and healthcare facilities comply with environmental regulations as part of a larger EPA Voluntary Audit Policy. The Agency established the policy to encourage prompt disclosure and correction of environmental violations, safeguarding human health and the environment. Many hospitals and healthcare facilities were not aware of their responsibilities under various environmental laws or failed to implement effective compliance strategies. As part of the initiative, EPA sent letters to 480 facilities in New Jersey, New York, Puerto Rico and the U.S. Virgin Islands and held free workshops to help hospitals comply. In addition, the Agency established a web site that provides information about their duties under the law, and warned hospitals that EPA inspections of their facilities - with risk of financial penalties - were imminent.

Hospitals can take advantage of the Agency's Voluntary Audit Policy, through which they can investigate and disclose environmental violations to EPA and, as a compliance incentive, receive a partial or complete reduction in financial penalties. To date, eleven hospitals have entered into voluntary self-audit disclosure agreements with EPA.

More information about hazardous waste regulations can be found on EPA's web site at: <http://www.epa.gov/epaoswer/osw/index.htm>.

NORTH SHORE PAYS FINES FOR VIOLATING FEDERAL HAZARDOUS WASTE HANDLING RULES

FOR RELEASE: Thursday, June 12, 2003

NEW YORK, N.Y. – North Shore University Hospital on Community Drive in Manhasset has agreed to pay \$40,000 in penalties to the federal government for violations of the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations, the U.S. Environmental Protection Agency (EPA) announced today.

EPA Regional Administrator Jane M. Kenny explained. “The only way hospitals and other healthcare facilities can ensure that wastes that have the potential to harm people and the environment are properly handled is to strictly adhere to federal hazardous waste rules.”

As part of a region-wide initiative to bring hospitals into compliance with federal rules, EPA is inspecting healthcare facilities in New York, New Jersey, Puerto Rico and the U.S. Virgin Islands. The discovery of the violations at North Shore Hospital grew out of EPA inspections of the facility in April and May of 2002.

EPA issued a complaint last year against North Shore hospital alleging it failed to determine if spent fluorescent bulbs and chemotherapy waste were hazardous prior to disposal, and had improperly documented the transport of hazardous waste. The Agency also cited North Shore for failing to properly label storage drums containing hazardous waste and to minimize the risk of explosion, fire and release that could have affected people’s health and the environment. As part of the settlement between the facility and EPA, the facility agreed to take corrective actions that would prevent any recurrence of the violations in the future.

EPA operates a Voluntary Audit Policy, through which the Agency can substantially reduce civil penalties for those that voluntarily disclose and promptly correct violations that are identified through self-policing and meet certain other specified conditions, except in cases involving serious harm to public health or the environment. In most cases, the punitive component of the penalty may be fully eliminated, but EPA would still be able to collect any economic benefit as a result of non-compliance.

EPA PROPOSES TO FINE PONCE HOSPITAL FOR ILLEGAL DISCHARGE

FOR RELEASE: Wednesday, November 19, 2003

New York, N.Y. – The U.S. Environmental Protection Agency (EPA) has proposed a \$137,500 penalty against Quality Health Services of Puerto Rico, Inc. (Hospital San Cristobal) for discharging wastewater to a small creek, a tributary to the Rio Inabon, in violation of the federal Clean Water Act. The EPA issued a complaint based on the hospital's continuing failure to comply with the requirements of its wastewater discharge permit.

"Wastewater discharge permits protect public health and the environment," said EPA Regional Administrator Jane M. Kenny. "The hospital has been out of compliance since February 2000. As a healthcare facility, Hospital San Cristobal should understand the importance of properly managing its waste."

The September 30, 2003 complaint charges that Quality Health Services violated the requirements of its National Pollutant Discharge Elimination System (NPDES) permit, issued under the Clean Water Act. In March 2003, EPA inspected the hospital and ordered Quality Health Services to comply with the requirements of its NPDES permit. However, Quality Health Services allegedly continued to violate the Clean Water Act (for a total of 226 times from February 2000 through May 2003) with its discharge of sanitary wastewaters from the hospital's wastewater treatment plant. Specifically, the discharge exceeded permit limitations for ammonia, biochemical oxygen demand, color, fecal coliform, flow, fluoride, nitrate-nitrite, phenolics, phosphorus, silver, sulfide, surfactants and zinc. Under federal regulations, Quality Health Services has the right to request a hearing on the proposed penalty.

NEW YORK PRESBYTERIAN HOSPITAL

BASED ON NOVEMBER 2004 PRESS RELEASE

New York Presbyterian Hospital was charged with failing to provide tenants, including pregnant women and families with young children, with the required lead paint hazard information (i.e., failing to provide a lead warning statement, statement disclosing any knowledge of lead-based paint, and list of any existing records or reports pertaining to lead-based paint, nor obtaining a statement by the lessee of receipt of a lead hazard information pamphlet.) These failures are violations of 42 U.S.C. Section 4852d(b)(5) and § 409 of TSCA, 15 U.S.C. § 2689.

Lead poisoning presents an environmental health hazard for young children living in apartments constructed before 1978, due to the potential chipping or peeling of lead paint, or lead-contaminated dust. New York Presbyterian Hospital owned and leased at least twenty-nine housing units to families of physicians at their facility in White Plains, New York. Region 2 suggested possible activities that could be undertaken as Supplemental Environmental Projects, and New York Presbyterian Hospital submitted a proposal for a SEP that involved exterior maintenance and repair, but the parties were unable to reach agreement on an appropriate SEP. New York Presbyterian Hospital entered into a cash settlement with EPA for \$248,000, which is

the largest monetary settlement in the history of the Lead-based Paint Disclosure Program. On July 10, 2003, the Regional Administrator signed the Final Order memorializing the settlement in the Consent Agreement and Final Order. (T. Bourbon/L. Livingston)

**EPA FINES ATLANTIC HEALTH SYSTEMS INC. FOR FAILURE TO PROPERLY
MANAGE HAZARDOUS WASTE**

FOR RELEASE: Tuesday, November 25, 2003

New York, N.Y. -- The U.S. Environmental Protection Agency (EPA) announced today that it will seek \$64,349 in penalties from Atlantic Health System Inc., owner and operator of Mountainside Hospital in Montclair, New Jersey. The Agency cited the company for violating numerous hazardous waste management requirements under the Resource Conservation and Recovery Act (RCRA).

"Hospitals and healthcare facilities should consider the proper handling of hazardous waste as an integral part of their mandates to protect people's health," said Jane M. Kenny, EPA Regional Administrator. "We are pleased that Mountainside Hospital has recognized its responsibility to its patients, employees and neighbors, and is taking action to correct the violations."

EPA discovered the violations at Mountainside Hospital during an April 2003 inspection. The violations included improper storage or disposal of several types of solid waste, and failure to determine whether they were hazardous wastes. In addition, the hospital did not have a permit to store hazardous waste and did not meet the protective management requirements needed to be exempt from a permit. Hazardous waste containers were not clearly identified with the required markings or inspected regularly, and emergency response information was not posted. Mountainside is working to correct the violations. Its parent company, Atlantic Health, has 30 days to respond to the complaint.

In 2002, EPA started the Hospital and Healthcare Initiative to help hospitals and healthcare facilities comply with environmental regulations as part of a larger EPA voluntary audit policy. The Agency established the policy to encourage prompt disclosure and correction of environmental violations, safeguarding people's health and the environment. Many hospitals and healthcare facilities were not aware of their responsibilities under various environmental laws or had failed to implement effective compliance strategies. As part of the initiative, EPA sent letters to 480 facilities in New Jersey, New York, Puerto Rico and the U.S. Virgin Islands and held free workshops to help hospitals comply. In addition, the Agency established a web site that provides information about their duties under the law, and warned hospitals that EPA inspections of their facilities - with risk of financial penalties - were imminent.

Hospitals that wish to take advantage of the Agency's voluntary self-audit program can investigate and disclose environmental violations to EPA and, if certain conditions are met, receive a partial or complete reduction in financial penalties. To date, eleven hospitals have entered into voluntary self-audit disclosure agreements with EPA. The Agency is continuing to conduct inspections.

**YALE-NEW HAVEN HOSPITAL ACCEPTS EPA PLAN FOR ENVIRONMENTAL
AUDIT**

Yale-New Haven Hospital and EPA say they have reached an agreement under which the hospital will voluntarily carry out a comprehensive environmental audit. The agreement between EPA Region I and the hospital in New Haven, Conn., is the first of its kind to be signed in New England and is part of an agency effort to improve hospital compliance with environmental laws. EPA Region I launched its hospital initiative earlier this year, citing the experience of EPA's New York/New Jersey regional office, which took enforcement actions against several hospitals after significant noncompliance was found during inspections of hospital facilities.

Source: <http://pubs.bna.com/ip/BNA/den.nsf/is/a0b0d4k1d7>

VIII. COMPLIANCE ACTIVITIES AND INITIATIVES

This section highlights organizations, resources, and the voluntary activities being undertaken by the healthcare sector, public agencies, and nongovernmental organizations to improve the sector's environmental performance. These activities include those independently initiated by industrial trade associations.

VIII.A. Healthcare Related Programs and Activities***Healthcare Environmental Resource Center (Compliance Assistance Center)***

Using an EPA grant the National Center for Manufacturing Sciences with the cooperation of the American Hospital Association, the American Nurses Association, and EPA, via the Hospitals for a Health Environment (H2E) program and other stakeholders, is creating an on-line compliance assistance center (or Healthcare Environmental Resource Center - HERC) serving the healthcare industry. The HERC will address issues relevant to hospitals, ambulatory clinics, and other specialized medical facilities. It will serve as a first stop for environmental compliance and pollution prevention information for the healthcare industry. Among its many compliance assistance and pollution prevention features, the HERC will include plain language explanations of applicable regulations and feature links to state and local permitting agencies where users can find information on local regulations and contacts. Look for the Healthcare Environmental Resource Center at www.HERCenter.org.

Hospitals for a Healthy Environment (H2E)

Hospitals for a Healthy Environment (H2E) is a voluntary program jointly sponsored by the EPA, the American Hospital Association, the American Nurses Association, and Health Care Without Harm. The primary goal of the H2E effort is to educate healthcare professionals about pollution prevention opportunities in hospitals and healthcare systems and make significant reductions in mercury-containing healthcare waste, and waste volume overall. Through activities such as the development of best practices, model plans for total waste management, resource directories, and case studies, the project hopes to provide hospitals and healthcare systems with enhanced tools for minimizing the volumes of waste generated and the use of persistent, bioaccumulative, and toxic chemicals. Such reductions are beneficial to the environment and health of our communities. Furthermore, improved waste management practices will reduce the waste disposal costs incurred by the healthcare industry. For more information, see the web site at <http://www.h2e-online.org/>.

Resource Conservation Challenge (RCC)

EPA's Resource Conservation Challenge (www.epa.gov/rcc) is a voluntary, joint effort between EPA, businesses, and communities. RCC aims to find flexible, yet more protective ways of improving waste reduction, public health, and the environment. As part of the Resource Conservation Challenge, EPA is asking the hospital industry to develop projects for the

reuse and recycling of hospital items and the reduction of waste. For more information, see the web site at <http://www.epa.gov/epaoswer/osw/consERVE/clusters/hospital.htm>.

Lead needed to protect healthcare workers from CatScan radiation, mercury in ultraviolet lamps, and residual or expired pharmaceuticals are just a few examples of the hospital waste that can harm the environment if disposed of improperly. EPA's RCC is committed to supporting projects that:

- Reduce the volume of nonhazardous solid waste, including paper, packaging, yard waste, food waste, and electronic equipment, from the healthcare industry and promote its recycling and safe reuse;
- Virtually eliminate all mercury waste from the healthcare industry waste stream;
- Reduce the volume of other toxic chemicals; and
- Improve the management of pharmaceutical waste by reducing the amount of expired/unused pharmaceuticals that are disposed of in landfills.

Performance Track

Performance Track is a public/private partnership recognizing top environmental performance among participating U.S. facilities of all types, sizes, and complexity, public and private. Program partners are providing leadership in many areas, including preventing pollution at its source and implementing environmental management systems. Currently, the program has about 300 members and welcomes all qualifying facilities. Applications are accepted twice a year: February 1-April 30 and August 1-October 31. For more information, contact the Performance Track hotline at (888) 339-PTRK or visit the web site at www.epa.gov/performancetrack.

EPA Audit Policy

EPA encourages companies with multiple facilities to take advantage of the Agency's Audit Policy (Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19618 (April 11, 2000)) to conduct audits and develop environmental compliance systems. The Audit Policy eliminates gravity-based penalties for companies that voluntarily discover, promptly disclose, and expeditiously correct violations of federal environmental law. More information on EPA's Audit Policy can be obtained from the web site at <http://www.epa.gov/compliance/resources/policies/incentives/auditing/index.html>. EPA Region 2 (NY, NJ, PR, VI) has been actively promoting use of the policy; see voluntary audit policy at <http://www.epa.gov/region02/healthcare/>.

Office of Solid Waste and Emergency Response (OSWER) Innovations Pilot

The Office of Solid Waste and Emergency Response (OSWER) initiated a series of innovative pilots to test new ideas and strategies for environmental and public health protection to find creative approaches to waste minimization. For additional information on OSWER Innovations Pilots, visit the EPA OSWER Innovations web site at www.epa.gov/oswer/iwg.

Expanding Pharmaceutical Waste Management in Hospitals

Hospitals for a Healthy Environment is partnering with EPA Region 1, Dartmouth-Hitchcock Medical Center, New Hampshire Department of Environmental Services, New Hampshire Hospital Association, and H2E Champion, PharmEcology Associates, to pioneer pharmaceutical management techniques that ensure regulatory compliance, implement best management practices, and identify and implement waste minimization opportunities. Baseline data on costs and quantities of end-of-life pharmaceuticals will be compiled and evaluated. This information will be used to assess where pharmaceuticals are being discarded, how much is being wasted, and how wasting can be minimized. Based on the results of the baseline assessment, the pilot will develop best management practices incorporating waste reduction activities. A blueprint will be developed providing a step-by-step approach to program implementation and lessons learned. For more detailed information on the pharmaceutical pilot, visit H2E's web site at www.h2e-online.org.

Collaborative Partnership to Improve Environmental Performance in the Healthcare Sector

The overall goal of this project is to institutionalize regulatory compliance and pollution prevention practices in the healthcare sector. To achieve this the project seeks to establish a formal lasting partnership with multiple healthcare and regulatory organizations and JCAHO to maximize EPA compliance assistance and pollution prevention resources, improve the environmental performance of the healthcare sector, and create incentives for continuous improvement. The final product will be a set of matrices for JCAHO surveyors and hospital personnel that align environmental regulations and environmental improvement with the JCAHO standards. The matrices will be available electronically on EPA's forthcoming Healthcare Environmental Resource Center's web site at www.HERCenter.org. For more detailed information on the JCAHO project, visit H2E's web site at: www.h2e-online.org.

National Strategies for Healthcare Providers: Pesticide Initiative

The Pesticide Initiative is an initiative created by EPA and the National Environmental Education & Training Foundation (NEETF) in collaboration with the U.S. Departments of Health and Human Services, Agriculture, and Labor. It is aimed at incorporating pesticide information into the education and practice of healthcare providers. The goal is to

improve the recognition, diagnosis, management, and prevention of adverse health effects from pesticide exposures. This initiative also serves as a model for broader efforts to educate healthcare providers about the spectrum of environmental health issues. Seven federal agencies and 16 professional associations of healthcare providers were involved in launching this initiative. For additional information, visit the EPA Pesticide Initiative web site at <http://www.epa.gov/oppfead1/safety/healthcare/healthcare.htm>

EPA and Veterans Health Administration (VHA) Cooperative Environmental Partnership

Stemming from EPA inspections of VA medical centers in 2002 that revealed repeated violations of environmental regulations, particularly those involving federal hazardous waste management regulations, EPA and VHA are conducting environmental management reviews (EMRs) at select VA medical centers. EMRs evaluate the current status of the management system and identify steps to establish a comprehensive management system for environmental compliance as well as continual improvement beyond compliance. The partnership has fostered environmental training through both EPA Headquarters and the Regions, and assisted in the development of the VA's Green Environmental Management Systems (GEMS). These efforts and others are underway to improve environmental compliance and performance at VA medical centers. For additional information visit <http://www.epa.gov/compliance/assistance/sectors/federal/epavha.html>.

The Green Suppliers Network (GSN)

The Green Suppliers Network (GSN) is a collaborative venture between industry, EPA, and 360vu, the national accounts organization of the Department of Commerce's National Institute of Standards and Technology Manufacturing Extension Partnership (NIST MEP). GSN provides expert technical assistance to small and medium-sized suppliers, through 360vu's national network of technical assistance centers. This assistance provided in a GSN Review enables suppliers to optimize processes and products, eliminate waste, reduce their environmental impacts, identify cost-saving opportunities, and remain competitive. GSN engages both original equipment manufacturers and their suppliers to achieve environmental and economic benefits throughout the supply chain. GSN has launched a pharmaceutical/healthcare initiative piloted in Puerto Rico. For additional information on the program, contact Kristin Pierre at pierre.kristin@epa.gov or (202) 564-8837.

WasteWi\$e Program

The WasteWi\$e 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 February 17, 2004, WasteWise has 1,377 partners (including alumni) spanning more than 54 industry sectors. 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 WasteWi\$e logo for promotional purposes. Sixty-one medical services companies are partners. For more information, contact the Hotline at (800) EPA-WISE (372-9473) or the web site at www.epa.gov/wastewise.

Energy Star®

In 1991, EPA introduced Green Lights®, a program designed for businesses and organizations to proactively combat pollution by installing energy efficient lighting technologies in their commercial and industrial buildings. In April 1995, Green Lights® expanded into Energy Star® Buildings — a strategy that optimizes whole-building energy-efficiency opportunities. The energy needed to run commercial and industrial buildings in the United States produces 19 percent of U.S. carbon dioxide emissions, 12 percent of nitrogen oxides, and 25 percent of sulfur dioxide, at a cost of \$110 billion a year. If implemented in every U.S. commercial and industrial building, the Energy Star® Buildings upgrade approach could prevent up to 35 percent of the emissions associated with these buildings and cut the nation's energy bill by up to \$25 billion annually.

The more than 7,000 participants include corporations, small businesses, universities, healthcare facilities, nonprofit organizations, school districts, and federal and local governments. Energy Star® has successfully delivered energy and cost savings across the country, saving businesses, organizations, and consumers more than \$7 billion a year. Over the past decade, Energy Star® has been a driving force behind the more widespread use of such technological innovations as LED traffic lights, efficient fluorescent lighting, power management systems for office equipment, and low standby energy use. For more information, contact the Energy Star Hotline, (888) STAR-YES ((888) 782-7937) or the web site at <http://www.energystar.gov/healthcare>.

Small Business Compliance Policy

The Small Business Compliance Policy promotes environmental compliance among small businesses (those with 100 or fewer employees) by providing incentives to discover and correct environmental problems. EPA will eliminate or significantly reduce penalties for small businesses that voluntarily discover violations of environmental law and promptly disclose and correct them. A wide range of resources are available to help small businesses learn about environmental compliance and take advantage of the Small Business Compliance Policy. These resources include training, checklists, compliance guides, mentoring programs, and other activities. Businesses can find more information through links on the web site at <http://www.epa.gov/smallbusiness/>.

Healthy Building Network (HBN)

Healthcare institutions are increasingly embracing green building goals driven by several important factors: public health, market competitiveness, operation costs, and social responsibility. HBN is a national network of green building professionals, environmental and health activists, socially responsible investment advocates, and others who are interested in promoting healthier building materials as a means of improving public health and preserving the global environment. For more information, contact HBN at (202) 898-1610 or the web site at <http://www.healthybuilding.net/healthcare/index.html>.

Health Care Without Harm (HCWH)

HCWH is an international coalition of hospitals and healthcare systems, medical professionals, community groups, health-affected constituencies, labor unions, environmental and environmental health organizations, and religious groups.

In 1994, EPA's draft Dioxin Reassessment identified medical waste incineration as the single largest source of dioxin air pollution. The HCWH campaign was formed in 1996 to respond to this serious problem. Since then, the campaign has grown from an initial 28 founding organizations into a broad-based international coalition. The mission of HCWH is to transform the healthcare industry worldwide, without compromising patient safety or care, so that it is ecologically sustainable and no longer a source of harm to public health and the environment. For more information, contact the HCWH web site at <http://www.noharm.org/>.

The Sustainable Hospitals Project (SHP)

SHP's mission is to provide technical support to the healthcare industry for selecting products and work practices that reduce occupational and environmental hazards. The SHP is based at the University of Massachusetts Lowell Center for Sustainable Production (LCSP). The project includes in-hospital research on implementing new products and practices, using SHP's Pollution Prevention and Occupational Safety and Health (P2OSH) model. Additionally the SHP web site, <http://www.sustainablehospitals.org>, provides a list of alternative products to help hospitals identify and evaluate more benign alternatives to existing products. SHP also provides technical support by email (shp@uml.edu) or phone ((978) 934-3386). For more information, contact the web site at <http://www.sustainablehospitals.org>.

Nightingale Institute for Health and the Environment (NIHE)

NIHE assists healthcare professionals recognize the inextricable link between human and environmental health and their role in changing practices to improve the health of humans and the environment. There are three initiatives associated with this program: the Trustees Initiative, the Clinicians Initiative, and the Environmental Procurement Initiative. Each initiative is designed to educate the target audience on the environmental impact of the

healthcare industry, and to offer resources that enable them to improve the environmental performance of their organizations or processes and minimize the adverse ecological impact in the communities they serve. Inherent in this project is an emphasis on sustainability, resource conservation, and life cycle thinking. For more information, contact the web site at <http://www.nihe.org/>.

Canadian Centre for Pollution Prevention (Healthcare EnviroNet)

Healthcare EnviroNet provides the healthcare community with access to environmental information, products, and services that support a commitment to quality healthcare, protection of the environment, and sustainability. Healthcare EnviroNet delivers a unique collection of Canadian-based information including:

- Green alternatives for healthcare facilities;
- Regulatory updates and government initiatives; and
- Canadian case studies.

Healthcare EnviroNet was established with funding from Environment Canada and is developed and maintained by the Canadian Centre for Pollution Prevention in consultation and partnership with healthcare and nongovernment organizations. For more information, go to the web site at http://www.c2p2online.com/main.php3?section=83&doc_id=169.

Recovered Medical Equipment for the Developing World (REMEDY)

Founded in 1991 at Yale University School of Medicine, REMEDY is a group of healthcare professionals and others promoting the nationwide practice of recovery of open-but-unused surgical supplies with the goal of providing international medical relief while reducing solid medical waste from U.S. hospitals. For more information, go to the web site at http://www.remedyinc.org/about_us.cfm.

Public Entity Environmental Resource (PEER) Center

The PEER Center is the Public Entity Environmental Management System Resource Center. A virtual clearinghouse, it is specifically designed to aid local, county, and state governments that are considering implementing or have implemented an environmental management system (EMS) and want to access the knowledge and field experience of other public entities that have done so. For more information, go to the web site at <http://www.peercenter.net/>.

ISO 14000

ISO 14000 is a series of internationally accepted standards for environmental management. The series includes standards for EMS, guidelines on conducting EMS audits, standards for auditor qualifications, and standards and guidance for conducting product lifecycle analysis. Standards for auditing and EMS were adopted in September 1996, while other elements of the ISO 14000 series are currently in draft form. While regulations and levels of environmental control vary from country to country, ISO 14000 attempts to provide a common standard for environmental management. The governing body for ISO 14000 is the International Organization for Standardization (ISO), a worldwide federation of over 110 country members based in Geneva, Switzerland. The American National Standards Institute (ANSI) is the United States representative to ISO. Information on ISO is available at the following Internet site: <http://www.iso.ch/iso/en/ISOOnline.openerpage>.

VIII.B. Summary of Trade Organizations and Industry Organizations

There are dozens of trade organizations associated with the healthcare industry. The following list is meant to act as a representative sample, not a comprehensive list.

Joint Commission on Accreditation of Healthcare Organizations (JCAHO)

JCAHO is an independent nonprofit organization whose mission is to improve the safety and quality of care through its accreditation process. JCAHO standards promote patient safety and care and good operational practices in all aspects of healthcare organizations. Nearly 17,000 healthcare organizations worldwide are accredited by JCAHO. Extensive on-site reviews are conducted at least once every three years. The reviews currently only cover environmental issues in a limited manner. See Collaborative Partnership to Improve Environmental Performance in the Healthcare Sector in Section VIII.A of this Notebook to see how H2E is working with JCAHO to help healthcare facilities improve their environmental performance. Contact Information: One Renaissance Blvd, Oakbrook Terrace, IL 60181, Phone: (630) 792-5000, Fax: (630) 792-5005, web site: <http://www.jcaho.org/>.

American Hospital Association (AHA)

The AHA provides education for healthcare leaders and is a source of information on healthcare issues and trends. Through its representation and advocacy activities, AHA ensures that members' perspectives and needs are heard and addressed in national health policy development, legislative and regulatory debates, and judicial matters. AHA advocacy efforts include the legislative and executive branches and the legislative and regulatory arenas. Contact Information: One North Franklin, Chicago, IL 60606-3421, Phone: (312) 422-3000, web site: <http://www.aha.org/>.

American Medical Association (AMA)

The AMA serves as the steward of medicine and leader of the medical profession. The AMA is the national professional organization for all physicians and the leading advocate for physicians and their patients. The AMA's envisioned future is to be an essential part of the professional life of every physician and an essential force for progress in improving the nation's health. Contact Information: 515 N. State Street, Chicago, IL 60610, Phone: (800) 621-8335, web site: <http://www.ama-assn.org/>.

American Dental Association (ADA)

The ADA is the professional association of dentists committed to the public's oral health, ethics, science and professional advancement and leading a unified profession through initiatives in advocacy, education, research and the development of standards. Contact Information: 211 East Chicago Ave., Chicago, IL 60611-2678, Phone: (312) 440-2500, web site: <http://www.ada.org/>.

American Nurses Association (ANA)

ANA focuses its work on core issues of vital concern to the nation's registered nurses - nursing shortage, appropriate staffing, health and safety, workplace rights, and patient safety/advocacy - in addition to its cornerstone work, ethics and standards.

The ANA, composed of professional nurses dedicated to the promotion of health and the care of the sick, has served as the forum in which the nation's critical health issues have been discussed throughout the last century.

Functioning as a democracy, the ANA provided the structure in which views were expressed, ideas were debated and evaluated, and positions and goals were formulated. Because it represented the views of administrators, clinical practitioners in institutions and community agencies, educators, and researchers, it has served for 100 years as the public voice for the diversity of America's professional nurses. Contact Information: 600 Maryland Ave. SW., Suite 100W, Washington D.C. 20024, Phone: (202) 651-7000, Fax: (202) 651-7001, web site: <http://www.ana.org/>.

American Veterinary Medical Association (AVMA)

The AVMA, established in 1863, is a not-for-profit association representing more than 69,000 veterinarians working in private and corporate practice, government, industry, academia, and uniformed services. Structured to work for its members, the AVMA acts as a collective voice for its membership and for the profession.

The AVMA provides a number of tangible benefits to its members, including information resources, continuing education opportunities, quality publications, and discounts on personal and professional products, programs and services. Contact Information: 1931 North Meacham Road - Suite 100, Schaumburg, IL 60173, Phone: (847) 925-8070, Fax: (847) 925-1329, web site: <http://www.avma.org/>.

American Health Care Association (AHCA)

The AHCA is a nonprofit federation of affiliated state health organizations, together representing nearly 12,000 nonprofit and for-profit assisted living, nursing facility, developmentally disabled, and subacute care providers that care for more than 1.5 million elderly and disabled individuals nationally.

AHCA represents the long-term care community to the nation at large – to government, business leaders, and the general public. It also serves as a force for change within the long-term care field, providing information, education, and administrative tools that enhance quality at every level.

At its Washington, D.C. headquarters, the association maintains legislative, regulatory and public affairs, as well as member services staffs that work both internally and externally to assist the interests of government and the general public, as well as member providers. In that respect, AHCA represents its membership to all publics, and national leadership to its members. Contact Information: 1201 L Street, N.W., Washington, D.C. 20005, Phone: (202) 842-4444, Fax: (202) 842-3860, web site: <http://www.ahca.org/>.

American Society for Healthcare Environmental Services (ASHES)

Setting the standard for environmental excellence, ASHES advances healthcare environmental services, textile care professions and related disciplines. ASHES leads, represents and serves our members by promoting excellence, best practices, innovation, and leadership through advocacy, education and certification. Web site: <http://www.ashes.org/>.

American Society for Healthcare Engineers (ASHE)

ASHE is the advocate and resource for continuous improvement in the healthcare engineering and facilities management professions. Web site: <http://www.ashe.org/>.

College of American Pathologists (CAP)

The CAP, the principal organization of board-certified pathologists, serves and represents the interest of patients, pathologists, and the public by fostering excellence in the practice of pathology and laboratory medicine.

The CAP's Strategic Plan is intended to help ensure that the College fulfills its mission in a thoughtful and effective manner. The plan contains 13 specific directions that the College will follow in carrying out its commitment to members, their patients, and the public. CAP members can download a copy of the Strategic Plan; log in to access the file. Contact Information: 325 Waukegan Road, Northfield, IL 60093-2750, Phone: (847) 832-7000, Fax: (847) 832-8000, web site: <http://www.cap.org/>.

National Indian Health Board (NIHB)

The NIHB represents Tribal Governments operating their own healthcare delivery systems through contracting and compacting, as well as those receiving healthcare directly from the Indian Health Service (IHS). Contact Information: 101 Constitution Ave. N.W., Suite 8-B02, Washington, D.C. 20001, Phone: (202) 742-4262, Fax: (202) 742-4285, web site: www.nihb.org.

IX. CONTACTS/ACKNOWLEDGMENTS/RESOURCE MATERIALS/ BIBLIOGRAPHY

For further information on selected topics within the healthcare industry, a list of publications and contacts is provided below:

IX.A. Contacts/Document Reviewers¹¹

Name	Organization	Telephone/Email	Subject
Seth Heminway	EPA, Office of Compliance	(202) 564-7017 / heminway.seth@epamail.epa.gov	Overall Notebook Content and General Format
Anuj K. Goel, Esq.	Director, Regulatory Compliance, Massachusetts Hospital Association	(781) 272-8000, ext. 140 / agoel@mhlink.org	Characterization of the Healthcare Industry
Charlotte A. Smith, R. Ph., M.S., HEM	President, PharmEcology Associates, LLC	(262) 814-2635 / info@pharmecology.com	Activity Descriptions
Laura Brannen	Hospitals for a Healthy Environment	(603) 643-6700 / laura.brannen@h2e-online.org	Hospital Wastes
Jeffrey Keohane	Karshmer & Associates (P.C.)	(510) 841-5056 / keohane@karshmerindianlaw.com	Environmental Regulations on Indian Country
Eydie Pines	Hospitals for a Healthy Environment	(603) 643-6710 / eydie.pines@h2e-online.org	Pharmaceutical Waste
Fawzi M. Awad, M.S., E.H.S. II	Saint Paul-Ramsey County Department of Public Health, Environmental Health Section	(651) 773-4459 / fawzi.awad@co.ramsey.mn.us	Minnesota Pollution Control Agency Fact Sheets
Catherine Galligan	Sustainable Hospitals Project Clearinghouse Manager	(978) 934-3386 / shp@uml.edu	Healthcare Wastes and Sustainable Hospitals Project Fact Sheets
Kathleen Malone	EPA, Region 2	(212) 637-4083 / malone.kathleen@epa.gov	Federal Statutes and Regulations

¹¹ Many of the contacts listed in this section 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.

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Susan A. Moak, CHSP	Director of Occupational and Environmental Safety, Long Island Jewish Medical Center	(718) 470-4784 / Smoak@lij.edu	Overall Notebook Content
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Linda Martin	Veterans Health Administration	(314) 543-6719 / linda.martin5@med.va.gov	Overall Notebook Content
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Dale Woodin	Deputy Executive Director, American Society of Healthcare Engineering (ASHE)	(312) 422-3813 / dwoodin@aha.org	Healthcare Wastes
Cathy Knox	Director, EHS Parker Hughes Cancer Clinic (PHCC)	cknox@ih.org	Healthcare Wastes
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Diane Buxbaum, M.P.H.	EPA, Region 2	(212) 637-3919 / buxbaum.diane@epa.gov	Industry Specific Environmental Requirements
Diane Lynne	EPA, Federal Facilities Enforcement Office	(202) 564-2587 / diane.lynne@epa.gov	EPA-Veterans Health Administration (VHA) Compliance Assistance Programs

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Daniel Schultheisz	EPA, Radiation Division	(202) 343-9349 / schultheisz.daniel@epa.gov	Mixed Waste
Carey Johnston	EPA, Office of Water	(202) 566-1014 / johnston.carey@epa.gov	Healthcare Wastewater
Kristina Meson	EPA, Office of Solid Waste	(703) 308-8488 / meson.kristina@epa.gov	Hazardous Waste

IX.B. Bibliography

Below is a list of references used in compiling this Sector Notebook, by section. The Healthcare Environmental Resource Center contains additional details on most of the subjects touched on in this Notebook and is an excellent follow-up reference for locating information on state and local requirements. For your convenience, the Center maintains current URLs for all of the sites mentioned in this document at www.HERCenter.org/links.

Section II - Introduction to the Healthcare Industry

American Hospital Association, http://www.hospitalconnect.com/aha/resource_center/fastfacts/fast_facts_US_hospitals.html

The Centers for Medicare & Medicaid Services (CMS), <http://www.cms.hhs.gov/>.

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Section IV - Waste and Emissions Profile

EPA's Hospital/Medical/Infectious Waste Incinerators, <http://www.epa.gov/ttn/atw/129/hmiwi/rihmiwi.html>.

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Minnesota Pollution Control Agency Health Care Fact Sheets: These are available online at <http://www.pca.state.mn.us/industry/healthcare.html>. Over three dozen short, informative summaries covering all aspects of the healthcare industry.

Section VI - Summary of Federal Statutes and Regulations

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