January 4, 2006

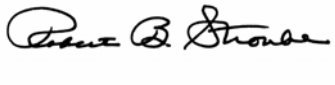
Division of Legislative Automated Systems
910 Capitol Square
General Assembly Building, Suite 660
Richmond, Virginia 23219
Attention: Legislative Documents and Reports Processing

Dear Sir:

Enclosed please find a report entitled "Biennial Report to the Governor and General Assembly on Toxic Substances in the Commonwealth." This report was prepared pursuant to Section 32.1-245 of the Code of Virginia. Should you have any questions concerning the report, please contact Joe Hilbert, Executive Advisor to the Commissioner, at 864-7006.

.

Sincerely,



Robert B. Stroube, M.D., M.P.H.
State Health Commissioner

Enc.

Commonwealth of Virginia

State Board of Health

Biennial Report
to the
Governor and General Assembly
on

Toxic Substances in the Commonwealth

Division of Health Hazards Control
Virginia Department of Health
109 Governor Street
Richmond, Virginia 23219

December 15, 2005

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

MEMBERS OF THE STATE BOARD OF HEALTH
December 2005

Jack O. Lanier, Dr.P.H., Chairman
Richmond

Julie L. Beales, M.D.
Richmond

W. Scott Burnette
South Hill

Jean M. Donovan, Ph.D.
Staunton

James H. Edmondson, Jr.
McLean

Katherine “Kandy” Elliott
Roanoke

Barry I. Griffin, D.D.S.
Richmond

Richardson Grinnan, M.D.
Richmond

Frederick J. Hannett
Arlington

Bennie Marshall, Ed.D., RN
Chesapeake

Bhushan Pandya, M.D.
Danville

Craig A. Reed, DVM
Marshall

Ed D. Spearbeck
Arlington

TABLE OF CONTENTS

PAGE

5. APPENDIX: PROGRAM SUMMARY SHEETS

1. FOREWORD

This biennial report has been prepared in accordance with the provisions of the Toxic Substances Information Act, Section 32.1-245 of the *Code of Virginia*, 1950, as amended.[1]

The Toxic Substances Information Act was originally passed in 1976, and was signed into law on April 9, 1976. The Act required the State Board of Health to submit an annual report on "the status of the control of toxic substances in the Commonwealth." The first annual report on the subject, dated November 24, 1978, was formally submitted to the Governor and the General Assembly on March 23, 1979. Subsequently, annual reports dated July 1, 1980, July 1, 1981, and July 1, 1982 were submitted to the Governor and the General Assembly.

In 1982, the requirement for submitting the report on the status of the control of toxic substances was changed from annually to biennially. Accordingly, biennial reports have been submitted to the Governor and the General Assembly since 1984. The 1992 session of the General Assembly changed the title of the report to "Toxic Substances in the Commonwealth."

This report was compiled and written by Khizar Wasti, Ph.D., Director, Division of Health Hazards Control, Virginia Department of Health (VDH), with assistance from Patsy Hayden and Lala Wilson. Individuals within many state agencies contributed to this report.

[1] § **32.1-245. Biennial Report to General Assembly and Governor.--** The Board shall advise the General Assembly and the Governor as to all matters relating to toxic substances and shall report biennially on toxic substances in the Commonwealth. (Code 1950, § 32-438; 1976, c. 627; 1979, c. 711; 1984, c. 433; 1992, c. 203.)

The 1992 amendment deleted "the status of the control of" preceding "toxic substances."

2. INTRODUCTION

This report summarizes numerous programs which are pertinent to the control of toxic substances in the Commonwealth. These programs are contained within 14 agencies of government and cover a variety of issues, including water and waterways, ambient air, the workplace, fertilizers and pesticides, solid and hazardous wastes, radioactive materials, and transportation of hazardous materials.

The term *toxic*, like the terms *hot* and *cold*, is relative in its application. All chemical substances may be considered toxic to a greater or lesser extent, depending on quantity, route and conditions of exposure, susceptibility of the exposed organism, and other factors. Many chemicals are innocuous under normal conditions of use and exposure. However, some substances, required for essential life processes, result in toxic manifestations when either too little or too much is available to an organism.

There are many definitions of toxic substances, but to set bounds on the content of this report, the following definition from Section 32.1-239 of the *Code of Virginia* is used:

> "Toxic substance" means any substance, including any raw materials, intermediate products, catalysts, final products, or by-products of any manufacturing operation conducted in a commercial establishment, that has the capacity, through its physical, chemical or biological properties, to pose a substantial risk of death or impairment either immediately or over time, to the normal functions of humans, aquatic organisms, or any other animal.

Pursuant to this broad definition, radiation, biological agents, and some classes of chemicals, such as medicinals, cosmetics, fertilizers, and other chemicals not usually viewed as toxic, are included and discussed in this report.

4. OVERVIEW

The vast increase in the production and use of chemicals and chemical products, as well as ubiquity of chemicals in the environment, have caused growing concern about the impact of toxic substances on human health and the environment. Modern society has become dependent on the use of chemicals in scientific and technological achievements, industrial processes, agricultural production, food processing, medicinal products for humans and animals, cosmetics, and other consumer products. This proliferation of chemicals has created a need for establishing safeguards for their manufacture, use, storage, disposal, and transportation.

Chemicals cannot easily be divided into "toxic" and "nontoxic" categories. Substances which are beneficial at certain concentrations and levels of exposure are frequently harmful when conditions change to increase exposure. Most chemicals, chemical mixtures, and chemical products are not known to produce adverse health effects in humans under safe and normal conditions of use and exposure. Yet, many have had unforeseen harmful effects on humans and the environment especially when used improperly or under the wrong circumstances.

The widespread use of chemicals and chemical products, as well as release of these substances into the environment, produces many opportunities for human exposure to toxic substances. Thus, the number of substances which potentially could cause harmful human health effects or could adversely impact the environment in the Commonwealth is very large. Accidents and spills are of special concern because of their potential to introduce large amounts of toxic substances into the environment and, therefore, produce long lasting and far reaching consequences. Gradual pollution in the environment by widely used toxic substances can also cause grave difficulties.

The potential for bioterrorism represents a relatively new threat of exposure to toxic agents in the Commonwealth. Since April 2002, the Virginia Department of Health's (VDH) Emergency Preparedness and Response Programs have received grant funding from the U.S. Centers for Disease Control and Prevention (CDC) for preparedness for bioterrorism and other public health emergencies. Funding for the year 2005 totaled more than $20 million dollars. The funding has provided for the hiring of more than 100 new positions including physicians, epidemiologists, planners, trainers, laboratory scientists, technology specialists, public information officers and other personnel to bolster state, regional and local preparedness. In addition, VDH received funding for smallpox preparedness efforts, the Strategic National Stockpile, and enhancement of chemical testing capabilities at DCLS. The CDC funding will enhance public health preparedness and planning, improve infectious disease surveillance and investigation, advance public health laboratory and communications systems capabilities, provide education and training, and enhance hospitals' capacity to respond to mass casualty incidents requiring mass immunization, treatment, isolation and quarantine in the aftermath of bioterrorism or other outbreaks of infectious disease.

If a biological attack is announced or discovered publicly as it is occurring, it could result in a large number of patients suddenly presenting for medical services. This would

place extraordinary demands on private and public healthcare staff and facilities. The threat of a large-scale incident involving intentional release of chemical or biological agents in the United States is significant. Currently, no practical models exist for healthcare facility response to a suddenly recognized event requiring decontamination of mass casualties. Preparation and response training for terrorism events or natural disasters are similar and should be incorporated into local community activities and coordinated with state and local health departments, as well as with all community emergency responders including rescue workers and fire and police personnel.

The deliberate use of chemical and biological weapons against civilians is a threat that must be acknowledged and prepared for. In many instances, these weapons are relatively easy to produce, inexpensive, and can be deployed covertly. The toxic and psychological threats posed by chemical terrorism were demonstrated by the 1995 nerve agent release in the Tokyo subway system. The assault resulted in 11 deaths and more than 5,000 emergency medical evaluations, of which 74% had no identifiable clinical injury. Nevertheless, the threat posed by chemical and biological terrorism must be kept in proper perspective. For example, disaster preparedness plans must also address possible terrorist use of conventional explosives. Effective healthcare facility preparedness integrated with local community planning will help insure a coordinated and adequate emergency medical response to all disasters.

Another rapidly emerging source of toxic exposure in Virginia involves the illicit use and manufacture of methamphetamine (meth). In 2004, there were 61 clandestine meth laboratories seizures in the Commonwealth. Substances used in these clandestine operations often are corrosive, flammable, and toxic and can cause fires, explosions, and other uncontrolled reactions. Meth is manufactured using ephedrine or pseudoephedrine as a precursor, commonly found in legal, over-the-counter cold medications purchased at retail stores and pharmacies. On September 15, 2005, the State Health Commissioner issued an Emergency Order limiting quantities of the meth precursors, restricting access to the targeted products, requiring identification for purchase of the targeted products, and requiring a record of purchase to be maintained.

Successful control of toxic substances requires the cooperative efforts of people with a very wide range of educational backgrounds and expertise, including toxicologists, engineers, biologists, hydrologists, geologists, physicians, lawyers, epidemiologists, health physicists, industrial hygienists, and analytical chemists. Numerous skills and specialties are required for various environments, ranging from air and water, to industry and the farm, to public buildings and private homes. Given the scope of these efforts, it is clear why there are numerous programs and state agencies, as outlined in this report, which deal both directly and indirectly with toxic substances. The programs responsible for the control of toxic substances in the Commonwealth appear to be adequate at the present time. Many programs within several agencies addressing control of toxic substances have been in existence for a number of years and have reached a steady-state level of operation. VDH will continue to work cooperatively with other state agencies to protect and promote the health of Virginians.

4. PROGRAMS PERTINENT TO TOXIC SUBSTANCES

This section describes programs administered by various state agencies involved in the control of potentially toxic substances. These agencies are listed in Table 1. A summary sheet for each program is included in the Appendix.

TABLE 1. AGENCIES INVOLVED IN THE CONTROL OF TOXIC SUBSTANCES IN VIRGINIA

Regulated Medium, Operation, or Product	Responsible Agencies*
1. Air	DEQ
2. Animal remedies/medicated feed	VDACS
3. Asbestos	DEQ, DOLI, DPOR
4. Drugs/devices	DHP
5. Explosives	DOLI
6. Ethanol, industrial	VDACS
7. Emergency response	VDEM
8. Fertilizers	VDACS
9. Geothermal energy	DMME
10. Household substances (hazardous)	VDACS
11. Laboratory analysis for all agencies	DGS/DCLS
12. Lead abatement	DPOR
13. Mines	DMME
14. Paints	VDACS
15. Pesticides	VDACS, DEQ
16. Radioactive materials	VDH, DEQ
17. Sewage	VDH, DEQ
18. Toxicologic assessment	VDH
19. Transportation	VSP, VDEM, DEQ
20. Waste, hazardous	DEQ
21. Water	DEQ, VIMS, VDH, DCR, VMRC
22. SARA III, Right-to-Know	DEQ
23. Workplace	DOLI

***Abbreviations Used:**

DCR	Department of Conservation and Recreation
DEQ	Department of Environmental Quality
DGIF	Department of Game and Inland Fisheries
DGS/DCLS	Department of General Services/Division of Consolidated Laboratory Services
DHP	Department of Health Professions
DMME	Department of Mines, Mineral and Energy
DOLI	Department of Labor and Industry
DPOR	Department of Professional and Occupational Regulation
VDACS	Department of Agriculture and Consumer Services
VDEM	Department of Emergency Management
VDH	Virginia Department of Health
VIMS	Virginia Institute of Marine Science
VMRC	Virginia Marine Resources Commission
VSP	Virginia State Police

Department of Agriculture and Consumer Services (VDACS):

The Office of Pesticide Services (OPS) continued to develop and implement programs under the regulations adopted by the Pesticide Control Board.

The Pesticide Management Program was supported by $5,843,748 in state non-general funds, $962,939 from U.S. Environmental Protection Agency (EPA) grants, and $40,969 from U.S. Department of Agriculture grants.

Under the Pesticide Disposal Program, 210,423 pounds of pesticide were collected during 2003-2005 bringing the total collected to exceed 1.2 million pounds since program inception in 1990.

The Plastic Pesticide Container Recycling Program was continued and approximately 54,000 containers were collected in 18 localities and 11 pesticide dealer sites in 2003-2004; while approximately 76,000 containers were collected in 18 localities and 11 pesticide dealer locations in 2004-2005. Approximately 630,000 containers have been collected and recycled since the program's inception.

The Office of Product and Industry Standards (OPIS) is responsible for weights and measures laws and those impacting agricultural commodities such as commercial feed, fertilizer and animal remedies. Activities of the OPIS during Fiscal Year (FY) 2003 and 2004 are summarized in Table 2.

The Commercial Feed Act regulates medicated animal feeds that are capable of sustaining life when fed alone, all non-medicated animal feeds, and supplements. Manufacturing licenses and per product registration fees are $50.00.

The Animal Remedies Act regulates animal drugs and medicated feeds which are capable of supporting life when fed alone. The per product registration fee is $25.00.

The Fertilizer Act regulates commercial fertilizer, specialty fertilizer, soil amendments, soil conditioners and horticultural growing media. Compost is exempt from the Act, and industrial co-products must be evaluated for agronomic value and safety prior to approval for application. Manufacturer license fees, contractor/ applicator permit fees, and per product registration fees for specialty fertilizer registrations are $50.00. Per product fees for soil amendments, soil conditioners and horticultural growing media are $100.00.

The Industrial Ethanol producers will continue to be regulated by the Virginia Department of Alcoholic Beverage Control and the U.S. Department of Alcohol, Tobacco, and Firearms.

TABLE 2. VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, OFFICE OF PRODUCT AND INDUSTRY STANDARDS STATISTICS

	FY 2003-04	FY 2004-05
Establishment Inspections	No longer recorded	No longer recorded
Fertilizer Data		
Samples Reported	778	979
Samples in Violation	121	122
Percent of Samples in Violation	15%	12%
Fertilizer Tonnage Sold	847,236	815,836
Commercial Licenses	492	470
Animal Remedies Data		
Products Registered	715	862
Samples Reported	3	4
Samples in Violation	0	0
Percent of Violation	0	0
Commercial Feed		
Total Feed Samples Reported	1,400	1,921
Total Feed Samples in Violation	119	133
Medicated Feed Products Registered	862	846
Medicated Feed Samples Reported	260*	248*
Medicated Feed Samples in Violation	24*	19*
Percent of Violation - Medicated Feed	9*	7*
Commercial Feed Tonnage Sold	3,443,002	3,390,282
Licenses	925	933
Contamination Survey Samples		
Aflatoxins-Taken/Action Level Found	0/0	0/0
Pesticides-Taken/Action Level Found	0/0	0/0
Sulfamethazine-Taken/Action Level Found	0/0	0/0

* Included in Total Feed Sample

Department of Conservation and Recreation (DCR):

Nonpoint Source Toxic Reduction Activities

The Department of Conservation and Recreation (DCR) is the lead agency for nonpoint source pollution control efforts in Virginia. Although nutrient and sediment reductions are the primary focus of most DCR nonpoint source pollution control programs, some programs have direct or secondary toxics reduction benefits. In particular, the Stormwater Management Program promotes the use of best management practices (BMPs) that filter a wide range of pollutants. Implementation of many agricultural BMPs and of BMPs as part of Total Maximum Daily Load (TMDL) implementation in impaired streams also help reduce toxics. To help reduce pesticide usage, DCR provides ongoing support for Integrated Pest Management (IPM) implementation.

Stormwater Management BMPs

Polluted runoff from urban areas carries with it significant contributions of oil and other hydrocarbons, pesticides, and other toxic chemicals. DCR works with other state agencies and local governments to implement stormwater management BMPs such as extended detention ponds and low impact development techniques, restoration of protection of riparian and forest buffers and wetland restoration. These practices can be effective in reducing or even eliminating some toxics.

The 2004 Virginia General Assembly unanimously passed House Bill 1177 transferring regulatory authority of the National Pollutant Discharge Elimination System (NPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities from the State Water Control Board to the Soil and Water Conservation Board and transferred oversight of these programs from the Department of Environmental Quality to the Department of Conservation and Recreation. As a result, DCR is responsible for the issuance, denial, revocation, termination, and enforcement of NPDES permits for the control of stormwater discharges from MS4s and land-disturbing activities under the Virginia Stormwater Management Program.

DCR Stormwater Management Program staff are developing a Notice of Intended Regulatory Action for revisions to the Virginia Stormwater Management Regulations. Staff are also working on developing a Stormwater Management Enforcement Manual. These legislative and regulatory revisions will help reduce toxics by increasing public awareness of the importance of controlling polluted runoff and improving overall stormwater management program effectiveness.

Integrated Pest Management

Integrated Pest Management (IPM) is an important tool for reducing pesticide usage. IPM uses a multi-disciplinary process to help control pests through biological, physical and mechanical, and chemical methods. DCR has continued to support IPM implementation activities in Virginia through grant funding. Using the National Oceanic and Atmospheric Administration (NOAA), Coastal Nonpoint Source Program funding, DCR contracted with Virginia Polytechnic Institute and State University to produce a field guide for identifying beneficial and pest insects. This field guide was made available to many agricultural producers within Tidewater area in Virginia.

Department of Emergency Management (VDEM):

The Virginia Hazardous Materials Emergency Response Program has established eight response areas with offices located in Richmond, Northern Virginia, Southwest Virginia, and Tidewater. There are nine Hazardous Materials Officers, one assigned to each response area, plus the field manager in Richmond. To date, 22 jurisdictions have signed formal agreements with VDEM. These jurisdictions make up 13 Hazardous Materials Response Teams, which are available to respond at the direction of VDEM. All team members are trained by VDEM to the Hazardous Materials Technician level in accordance with 29 CFR 1910.120 and NFPA 472. The regional response teams are provided annual

funding to purchase new response equipment and replace outmoded gear. VDEM has established a program whereby all jurisdictions under agreement with VDEM are eligible for re-supply of absorbents used in containing oil spills.

Department of Environmental Quality (DEQ):

Air Toxics

During the 2002-2004 biennium, the DEQ Toxics Section continued to implement the federal Maximum Achievable Control Technology (MACT) standards as part of the requirements of Title III of the 1990 Clean Air Act Amendments (CAAA). The standards regulate 188 Hazardous Air Pollutants (HAP) based on control technology currently in use by specific source categories. These standards are incorporated into Title V operating permits. EPA is in the process of developing the residual risk standards. As standards were issued and compliance dates reached, the Air Toxics Section assisted the DEQ Regional Offices and affected facilities to implement the standards.

The State Air Toxic Regulations (9 VAC 5-60-200 and 9 VAC 5-60-300) were revised in May 2002. The state regulations were designed to regulate HAP sources not regulated under the federal MACT program. The revisions to the state rregulations are intended to eliminate dual regulation of the same HAP source. Unlike the federal MACT standards, the state regulations are based on concentration. The HAPs have been incorporated into the state regulations and include 185 of the 188 HAPs listed in section 112(b) of the 1990 CAAA. DEQ does not apply the state toxics regulations to asbestos, fine mineral fibers and radionuclides. The state HAP list also limits the glycol ethers to be evaluated during permitting to include only those which have a threshold limit value (TLV), as listed in the American Conference of Governmental Industrial Hygienists (ACGIH) Handbook. DEQ continues to use the 1991-1992 ACGIH Handbook as the source of TLVs.

Superfund - General Program

The DEQ Superfund program's role was reduced when the state reverted primacy back to EPA in 1994. The Superfund program currently carries out only the activities required by law or legal agreements, and activities that are of interest to the Commonwealth and its citizens. These activities include: fulfillment of specified obligations in two site-specific consent decrees; review of activities at the three fund-financed sites where the state is obligated to pay 10 percent of cleanup costs; identification of all state laws that must be complied with in the conduct of remedial actions; operation and maintenance activities at the fund-financed remedial action sites; activities to assure the availability of waste disposal facilities; public notification and freedom of information responsibilities; long-term records management; and assistance to site owners, localities and citizens with issues relating to remedial and other Superfund sites.

Currently, there are 17 private National Priority Listing (NPL) fund and enforcement-financed sites in the Commonwealth. These include seven manufacturing facilities, five wood-treating facilities, one unpermitted waste dump, and four permitted municipal or industrial landfills. Four sites have been re-mediated and removed from the NPL.

DEQ and EPA have developed a working relationship through the execution of intergovernmental agreements. The Superfund Memorandum of Agreement (SMOA) between DEQ and EPA is a comprehensive document defining the responsibilities, authorities and schedules that EPA and DEQ must recognize for all site activities. The SMOA is a working document which assures cooperation, communication and efficient coordination of actions.

Cooperative Agreements (CAs) between EPA and DEQ serve as the mechanism for providing federal funds for DEQ's non-federal NPL activities in Virginia. A separate CA is executed to reimburse DEQ for oversight activities at each individual site and portions of sites. Superfund program management activities are covered under a separate CA, which is referred to as the Core Grant.

State funds must be used to pay for a portion of the construction and implementation costs of remedial actions that are conducted at fund-financed NPL sites. These remedial actions require a 10 percent cost share match from the Commonwealth. EPA and DEQ enter into the State Superfund Contracts (SSCs) for each fund-financed remedial action to govern this cost-sharing arrangement. In addition, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires the state to pay for 100 percent of the costs of operation and maintenance at fund-financed sites. The Long Term Response Action period between completion of remedial construction and state assumption of the operation and maintenance responsibilities can last up to ten years.

Brownfields and Land Renewal Program

The Brownfields and Land Renewal Program provides technical and administrative services, as well as site sampling, to support both Virginia's and EPA's Brownfields Initiative. Brownfields sites are those sites that have economic potential, but which currently lie idle because of environmental liability concerns. Through an EPA grant, DEQ performs a Brownfields Site Screening (BSS), which is a critical first step for a site to go into productive re-use. This is conducted by performing Phase I and Phase II environmental investigations including, but not limited to, researching the history, reviewing enforcement records/reports, sampling, laboratory analysis of samples, and preparing site investigation reports. These reports help document site environmental conditions and are often used to market the site to prospective purchasers. Such investigations are performed at no cost to communities, property owners or prospective purchasers.

Additionally, the Land Renewal Initiative provides outreach in the form of presentations, project facilitation, and public meetings. This outreach provides program education as well as assists developers in utilizing program tools to help achieve re-use of Virginia's brownfields.

Voluntary Remediation Program

The Voluntary Remediation Program (VRP) was formally initiated through legislation when adopted during the 1995 Virginia General Assembly as an amendment to the Waste Management Act (§ 10.1-1429.1 - 1429.3 of the *Code of Virginia*.) This statute authorized DEQ to develop and administer the VRP through promulgation of regulations. The regulations were promulgated on June 26,1997.

The VRP provides a streamlined mechanism for eligible participants to voluntarily enter into an agreement with DEQ to clean up properties not clearly mandated for remediation under existing environmental laws. The VRP is intended to encourage cleanup of contamination that might not otherwise take place, and to

reduce future liability for owners or lenders. The VRP also serves as a convenient and appropriate vehicle for cleanup of Brownfields sites.

The VRP process consists of five basic elements that bring a site from entry to completion in the program. First, DEQ determines eligibility for the program based upon an evaluation of information submitted by an applicant. Second, the participant submits a registration fee to defray the actual reasonable costs of the VRP expended at the site, not to exceed the lesser of $5,000 or one percent of the cost of the remediation. Third, the participant submits a Voluntary Remediation Report, which characterizes site conditions along with an assessment of appropriate remedial actions. Fourth, DEQ concurs with the Voluntary Remediation Report. Fifth, if a participant satisfactorily completes the remedial action, DEQ then issues a Certification of Satisfactory Completion of Remediation. This certification provides immunity from future DEQ enforcement action regarding the contamination addressed under the VRP.

The remediation levels established for VRP sites can be risk-based and can include consideration of current and future site use, the availability of institutional and engineering controls, and potential ecological receptors. During the 2002-2004 biennium, 42 sites made application to the VRP and 25 sites (representing 379 acres of land) were remediated through the VRP.

Preliminary Assessment and Site Investigation Program

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund was passed into law in December 1980. Superfund established a program to identify sites from which releases of hazardous substances into the environment might occur or have already occurred, and to respond to these sites that were often abandoned and /or where the owner or the operator was bankrupt.

DEQ has worked with EPA to develop a structured process to determine what, if any, cleanup actions should be taken at uncontrolled hazardous waste sites in Virginia. The entire site evaluation process consists of two major phases (site assessment and site remediation). This new program is still under development and will address only the site assessment phase (pre-remedial) of the process.

One of the traditional methods of the site assessment is to rank/score sites for

proposal of listing on the NPL. Although this is an important function of the Site Assessment Program, other state and federal remedial programs now exist that may be able to address many of these sites (Brownfields, VRP, etc). While the Site Assessment Program will combine the traditional remedial process to determine eligibility for the NPL, it will also use a non-traditional pre-Comprehensive Environmental Response, Compensation, and Liability Information System screening for sites going into or already alternative programs.

DEQ's Site Assessment Program consists of six full-time employees (FTEs) working in a team oriented structure. The staff has the capabilities to:

- Sample multi-media (air, groundwater, surface water, soils, sediments, leachate, and containerized wastes)
- Conduct field screening, data collection, and report writing
- Sample large and small scale sampling events

Federal Facilities Restoration and Base Closure Program

In order to expedite the cleanup of hazardous waste sites on Department of Defense (DOD) installations within the Commonwealth and to ensure compliance with the applicable laws and regulations of the Commonwealth, DOD and the Virginia Department of Waste Management (now DEQ) negotiated and entered into the Defense and State Memorandum of Agreement in 1990. In return for federal funding, the Federal Facilities Restoration Program provides the DOD with technical assistance at 48 defense installations. This assistance starts at the date of site identification and continues through remedial action and construction. Technical assistance includes technical review and recommendation; identification and explanation of state applicable, relevant and appropriate requirements; site visits to ensure that requirements are being met; community relations support; and other services requested by DOD.

The Defense Appropriations Act provides the primary funding for the Defense Environmental Restoration Program, through the Defense Environmental Restoration Account. Funding for restoration work at bases scheduled for closure via the Base Realignment and Closure program is provided by the Base Closure Account.

In return for the DEQ's services, DOD reimburses the state for up to one percent of the total remedial costs at each installation. The funding for reimbursement of costs incurred by DEQ is managed through a CA and outlined in an approved work plan by the U.S. Army Corps of Engineers.

During the 2002-2004 biennium numerous sites were remediated to the extent that the sites no longer presented a risk to human health or the environment. The federal facilities are addressed using a risk-based approach for contaminants of concern which include metals, pesticides, polychlorinated biphenyls (PCBs), volatile and semi-volatile compounds. Following is a summary of several cleanups during 2002-2004 that address the most persistent compounds found in the Commonwealth:

Naval Weapons Station Yorktown

- **2002 Removal Action:** At Site 22 a removal action was completed in the spring of 2002. This removal action included the excavation of approximately 3,450 cubic yards of soil contaminated with metals and polycyclic aromatic hydrocarbons (PAHs) exceeding ecological remediation levels.

- **2002 Removal Action:** At Site 21 Battery Disposal Area a second removal action was completed in the fall of 2002. This removal action included the excavation and off-site disposal of approximately 145 cubic yards of soil contaminated with mercury exceeding remediation levels.

- **2003 Removal Action:** At Site 23 Bracken Road Incinerator site the Navy conducted a second removal action in the spring of 2003. The removal action included the excavation and off-site disposal of approximately 1,025 tons of contaminated soil and buried debris. However, an incorrect cleanup goal for mercury was used: 24.0 milligrams per kilogram instead 0.24 milligrams per kilogram. Therefore, the Navy left soil in place that was above the cleanup goal for mercury. Also, the closeout report states that the top six inches of topsoil were removed and stockpiled prior to excavation. This stockpiled topsoil was later reused at the site following backfill of the excavation areas. While the Navy had a sample of the topsoil analyzed, it is not clear that the topsoil was analyzed for all of the contaminants of concern. Therefore, the topsoil may contain contaminants exceeding the site cleanup goals. In addition, analytical results of a backfill sample taken by the Navy from an Installation source indicated a mercury concentration greater than the cleanup goal. Based on these uncertainties, re-characterization of soil at the site was necessary.

Cheatham Annex

- **2003 Removal Action:** At Site 1 landfill, approximately 18,700 cubic yards of contaminated soil and landfill material (metals, PAHs, PCBs) were removed from the landfill in 2003. An additional 1,100 cubic yards of surface debris were also removed. A riverbank stabilization project was also included as part of the 2003 removal action. Two breakwaters, constructed with Class 2 riprap, were installed in the York River parallel to Site 1.

Camp Peary

- During the 2002-2004 biennium, AFETA-Camp Peary has conducted two removal actions. Over 4,360 cubic yards of PCB-, lead-, and PAH-contaminated soils were removed. Additionally, over 340 tons of debris were removed. The PCB concentrations generally ranged from 46 to 150 parts per million, and the lead was detected at a maximum concentration of 1500 parts per million .

Dahlgren Naval Surface Warfare Center

- At the Dahlgren Naval Surface Warfare Center, a remedial action at the Terminal Range Airplane Park was conducted to mitigate volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals and pesticides. During the course of this remedial action, a total of three acres were cleaned up, along with 0.9 acres of new wetlands constructed. Site remediation was completed in July 2004. At the Higley Road Land Application Area, a removal action was conducted to mitigate risks associated with PAHs. In an effort to mitigate these risks, surface soil, residual slag, metal debris and land-farmed sludge were removed during May 2004. During the spring 2004, a removal action was initiated at the World War I Munitions Mound. This action was initiated due to elevated PAHs and metals in surface soil. Approximately 25% of the projected total removal action volume was completed during the 2002-2004 biennium. At the Gambo Creek Projectile Disposal area, PAHs and metals were addressed in a removal action which was completed in December 2004. A total of 650 cubic yards of contaminated soil, and 3,000 pounds of scrap/ordnance related material were removed.

St. Juliens Creek Annex

- Approximately 12,800 cubic yards of waste and soil were removed in 2003 and 2004 from Waste Disposal Area C at St. Juliens Creek Annex. The removal mitigated the potential risk to human and ecological receptors due to PAHs, metals and pesticide. Approximately 180 cubic yards of PAH- and metal-contaminated soil were removed from the Small Arms Unit in the summer of 2002.

Fort Lee

- The Reformatory Road Landfill site at Fort Lee was a former 35 acre sanitary landfill. An engineered cap consisting of geosynthetic membrane and additional cover material was installed in 2004 to mitigate risks to human and ecological receptors due to VOCs, PAHs, metals and pesticides. A gas collection/venting system was installed and ground water monitoring is required at the site. A five acre former household waste landfill (Landfill 15) contained levels of VOCs, PAHs and metals which represented a potential risk to human health and the environment. The risk was mitigated by the placement of two feet of soil cover over the affected area.

Norfolk Naval Base

- At the Norfolk Naval Base, at least 12 inches of clean cover materials were placed over metals-contaminated soils at the Camp Allen Salvage Yard site.

Institutional controls implemented at the site prevent contact with contaminated soils and restrict any activities that may compromise the cover within the approximately 20 acres of the site.

Fort Eustis

- Approximately 5,200 tons of soils and sediments contaminated with PAHs, pesticides, and metals were excavated and disposed of offsite from the 0.75 acre Storage Yard site at Fort Eustis. In addition, monitoring of groundwater and sediments will be conducted for five years to verify the effectiveness of the remedial action at the Storage Yard site. Also, 2,130 cubic yards of lead- and PAH- contaminated soils were removed from a three acre area within the former skeet range. Investigations are being conducted to determine the need for and the extent of additional soil removal at the skeet range.

Naval Supply Center - Craney Island

- Approximately 348 cubic yards of PCB-contaminated soils were excavated and disposed of offsite from Site 3 at Craney Island. No further action is required at this site.

Fort Pickett

- 160 tons of soils contaminated with VOCs, SVOCs, PAHs, pesticides, and metal as well as two drums of liquid wastes were removed. At a second site, approximately 100 cubic yards of VOC-contaminated soil and waste were excavated and disposed of offsite. Groundwater monitoring will be conducted at this site to verify the effectiveness of the remedy.

Contaminated soils and sediments were disposed off in out-of-state landfills approved by EPA for the disposal of hazardous materials. Virginia does not have any EPA-approved landfill site for hazardous materials.

SARA Title III

DEQ continues to implement, and to assist others in implementing, the state and federal statutes regarding Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III). SARA Title III is also called the Emergency Planning and Community Right-to-Know Act (EPCRA) and has two components. The first component is the preparation of local chemical emergency response plans. The second component establishes mechanisms by which any citizen may obtain information on the hazardous chemicals present in his or her community.

The local chemical emergency response plans are principally the responsibility of Virginia's 111 Local Emergency Planning Committees (LEPCs). To assist in this component, DEQ cooperates with the Virginia Department of Emergency Management in providing technical assistance and support to the Virginia LEPCs. DEQ maintains the list of

LEPC members and serves as staff to the Virginia Emergency Response Council (VERC). By federal statute, each year approximately 3,000 Virginia facilities submit Emergency Planning and Hazardous Material Inventory Reports to the LEPCs and to DEQ's SARA Title III Program. These reports include information on many toxic chemicals, including mercury and PCBs.

The "Right-to-Know" component of SARA Title III relies on compilation of periodic and annual reports regarding hazardous substances that are submitted by business and industry under federal law. All federal facilities, including military installations, must also report under SARA Title III. Files are maintained of facilities with Extremely Hazardous Substances (EHSs); manufacturing and non-manufacturing facilities (including municipal and state facilities) with hazardous chemicals above certain thresholds; and facility reports on the accidental release of EHSs and/or Superfund hazardous substances. Also under federal law, each year approximately 501 Virginia facilities submit Toxic Release Inventory (TRI) information, an inventory of listed toxic chemicals released to the air, land, or water, as well as transfers of these chemicals to municipal wastewater treatment systems, and/or to off-site locations for proper treatment, storage, or disposal. The facility reports include information on many toxic chemicals, including mercury, PCBs, and certain chemicals termed by EPA as persistent bioaccumulative toxins (PBTs). Since April 2005, DEQ has been able to receive SARA § 313 TRI reports via EPA's Central Data Exchange (CDX). Using CDX will eliminate the requirement to deliver a disk or hard copy to DEQ. Under state law, DEQ publishes state TRI information in March of each year in the Virginia Toxics Release Inventory Report.

Solid Waste and Hazardous Waste Program

Solid wastes and hazardous wastes in Virginia are regulated by DEQ under the programs created by the federal Resource Conservation and Recovery Act (RCRA), and the Virginia Waste Management Act.

Solid waste is regulated under a number of different programs at DEQ. These programs are designed to encourage the reuse and recycling of solid waste and to regulate the disposal and treatment of solid waste including regulated medical waste. Standards are designed to protect human health, and the environment. In its 2004 session, the General Assembly authorized the collection of annual fees from solid waste management facilities. The Virginia Waste Management Board has approved an amendment to the regulations assessing annual fees, 9 VAC 20-90, which became effective July 1, 2004.

The Virginia Hazardous Waste Management Regulations, which closely follow federal standards established under RCRA, require permits for transportation, storage, treatment, and disposal of hazardous wastes. Amendment 17 to the Virginia Hazardous Waste Management Regulations became effective on July 1, 2004 and included a revision of the fees schedule. The Virginia Waste Management Board approved Immediate Final Rule: Amendment 2004 on August 9, 2004 as a final regulation. This was a revision of 9 VAC 20-60-18 of the Hazardous Waste Management Regulations. DEQ is also authorized to implement RCRA corrective action.

Pollution Prevention

DEQ's Office of Pollution Prevention promotes voluntary multimedia pollution prevention initiatives and incentives for facilities of all types to go beyond regulatory requirements. At present, the main focus of the program is the Virginia Environmental Excellence Program (VEEP). The program, through recognition and incentives, encourages facilities to adopt environmental management systems and pollution prevention plans. In addition to VEEP, the program promotes specific business sector or pollutant-focused outreach efforts. Current initiatives include Virginia Hospitals for a Healthy Environment, Businesses for the Bay, Environmental Lodging, the National Partnership for Environmental Priorities, and mercury reduction in schools, homes and facilities. Staff are also available to research solutions for specific issues facing facilities.

Toxics in Wastewater Discharges

Water quality criteria for toxic pollutants to protect aquatic life and human health exist for about 125 substances. Incorporation of these toxic pollutants into discharge permits is an ongoing process. Limits are incorporated into permits with a reasonable potential to exceed the criteria. Most dischargers are given four years after the issuance or reissuance of their permit to meet the limits. Pretreatment programs are in place at 39 publicly-owned treatment works (POTWs). This enables the dischargers to pretreat their waste to a level that will allow the treatment plant to remain compliant with their Virginia Pollution Discharge Elimination System (VPDES) permit.

The Toxics Management Program is a special condition in a VPDES permit. Facilities that meet certain applicability criteria will be required to do aquatic toxicity tests on the effluent. If an effluent causes an adverse effect at or above a calculated threshold, it will be considered to have reasonable potential for toxicity and a Whole Effluent Toxicity (WET) limit will be derived. Currently, there are 342 facilities covering 911 outfalls included in the Toxics Management Program. Sixty-eight facilities have WET limits covering 77 outfalls.

Storage Tank Remediation Program

The Storage Tank Remediation Program directs the investigation and cleanup of the petroleum-contaminated sites managed by responsible parties. DEQ ensures that appropriate emergency response, initial abatement measures, site investigation and site remediation are performed by the responsible party. DEQ also authorizes activities eligible for reimbursement from the Virginia Petroleum Storage Tank Fund.

DEQ itself conducts investigation and cleanup of high priority petroleum-contaminated sites in instances where the responsible party is either unknown or financially unable to undertake the required work. Through a number of contractors, DEQ conducts emergency response, initial abatement measures, site investigation and site remediation.

DEQ also provides immediate, interim, and permanent relief to individuals whose drinking water wells have been rendered unusable by petroleum contamination. Through a

DEQ contractor, carbon filtration units (CFUs) are installed and maintained on contaminated wells until a permanent solution is implemented. Permanent solutions typically include extension of an existing public water supply or installation of a new well free from petroleum contamination.

Since 1988, there have been over 21,500 storage tank contamination sites reported to DEQ. Approximately, 19,500 of these sites have been closed and 2,100 sites are still active. Permanent alternate water supplies have been provided to over 450 residences and CFUs are being maintained at about 245 residences. Over $252 million of Virginia Petroleum Storage Tank Funds have been spent on leaking underground storage tank remediations.

Storage Tank and Tank Vessel Compliance Program

The Registration Program tracks ownership and technical information for 14,500 owners of 86,500 Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs) at 28,000 facilities in the Commonwealth. Each year the program receives over 2,000 registrations that report new tanks, tank closures, and amendments to existing tank information, such as changes of ownership. DEQ and the public use registration information to determine the identity of persons responsible for pollution prevention measures and cleanup of releases.

The AST Compliance Program regulates AST facilities of 25,000 gallons or greater that store oil. Nearly 1.5 billion gallons of oil are stored in the 2,800 regulated AST facilities across the Commonwealth. Through facility inspections, the program seeks to ensure that Virginia's AST facilities have measures in place to prevent releases and to respond quickly and effectively when releases occur.

The UST Compliance Program regulates USTs larger than 110 gallons that contain regulated substances, which include most petroleum products. Nearly 350 million gallons of regulated substances are stored in the 29,000 active USTs across the Commonwealth. Through tank inspections, the program seeks to ensure that USTs in the Commonwealth have measures in place to prevent releases and to have immediate notice of actual releases.

Operators of tank vessels transporting or transferring more than 15,000 gallons of oil and operators of facilities storing or handling more than 25,000 gallons of oil are required to have an approved oil discharge contingency plan (ODCP). Operators of tank vessels may meet this requirement by having an approved U.S. Coast Guard Vessel Response Plan (VRP). In the event of an oil discharge, the operator must immediately implement all applicable provisions of the VRP, including notifications to Virginia state authorities.

Toxics Reduction Strategy

DEQ continues to implement "Toxic 2000 Strategy" of chemical contaminant reduction, prevention, and assessment in the Chesapeake Bay Watershed through both regulatory and voluntary programs. In June 2000, the Chesapeake Executive Council

adopted the Chesapeake 2000 Bay Agreement or Toxic 2000 Strategy committing to fulfill the goal of a "Chesapeake Bay free of toxics by reducing or eliminating the input of chemical contaminants from all controllable sources to levels that result in no toxic or bioaccumulative impact on the living resources that inhabit the Bay or on human health." A series of objectives and commitments are included within four areas: 1) Taking Restoration, Protection and Prevention Actions; 2) Addressing Point Sources; 3) Addressing Non-Point Sources; and 4) Conducting Monitoring, Assessments and Research.

Initial strategy implementation has focused on several key areas. For those areas with known chemical contaminant problems and identified as Regions of Concern (such as the Elizabeth River) the strategy includes commitments leading to restoration. These commitments support a pre-existing Watershed Action Plan that was developed with the partnership of the Commonwealth and the Elizabeth River Project (ERP) during the implementation of the 1994 strategy. Another critical strategy objective is to strive for zero release of chemical contaminants from point and non-point sources through pollution prevention and other voluntary means. Relative to point sources, the Bay signatories committed to the eventual elimination of mixing zones. Finally, the strategy includes commitments that will provide the means to measure progress toward meeting the overall strategy goal.

Chesapeake Bay Water Quality and Living Resources Monitoring

Long-term water quality and living resources monitoring programs throughout the tributaries and Bay mainstream continued in the 2002-2004 biennium in order to identify areas impacted by toxics and to track changes resulting from management actions. Data and reports from these monitoring programs are used to support management decisions for Bay protection and restoration, and to implement the Basin-wide Strategies for Nutrient and Sediment Reduction and the Basin-wide Toxics Reduction Strategy.

Chesapeake Bay Water Quality Modeling and Enhanced Tributary Monitoring

The Chesapeake Bay Program, in partnership with the U.S. Army Corps of Engineers, maintains the Chesapeake Bay Water Quality Model. The model has been a critical tool in the development of pollution reduction strategies. It is used to analyze chemical dynamics in the Bay and its living resources, and to predict effects of various pollutant reduction activities. Although pollutant modeling has been limited to nutrients to date, a goal for the water quality model is to provide the framework for future toxics modeling.

A 1992 nutrient strategy reevaluation determined that the model provided an excellent representation of processes in the Bay's mainstream, but required refined data on Virginia's tributaries to model sediment transport and other river processes in critical shallow water habitats. Monitoring activities have been expanded to include water in shallow areas or littoral zones where most critical habitat and living resources are located; river sediments; and enhanced parametric coverage at river input stations. Although this project's current phase does not include chemical contaminants sampling, its goal is to refine the water quality model framework to enable the future addition of potentially toxic

chemicals.

Kepone Monitoring

Monitoring for Kepone began in 1976 and continued every year through 2000. This monitoring indicated that the level of Kepone in fish tissue had consistently become lower over this period and that since 1995 none of the fish collected had exceeded the level of concern for Kepone in fish tissue. Based on this previous monitoring, DEQ and Virginia Department of Health determined that sampling would be conducted every other year starting in 2002. In 2002, DEQ sampled striped bass and white perch (the two species that have shown the highest levels of Kepone contamination in the past) at four locations in the lower James River. All samples of each species collected in 2002 were consistently below the U.S. Food and Drug Administration(FDA) action level for Kepone in fish tissue. In 2004, 173 samples of striped bass and white perch were collected from five locations in the lower James River. Again, all fish samples from 2004 had concentrations well below the FDA action level of 0.30 parts per million (ppm) of Kepone in fish tissue. The mean concentration of Kepone in the striped bass was 0.05 ppm and 0.0325 ppm in white perch. This continued the trend seen since 1995 of fish containing Kepone at concentrations well below the level of concern. In 2004, sediment was sampled at seven sites in the lower James River and Kepone was below the level of detection (0.01 ppm) at all but one site where the concentration was 0.02 ppm. This site was near Hopewell, the original Kepone contamination source.

Department of Game and Inland Fisheries (DGIF):

The Department of Game and Inland Fisheries documented four incidents of wildlife poisoning by toxic substances from July 1, 2002 through June 30, 2004. This included organophosphate poisoning of several mallard ducks in Virginia Beach (October 2003); ethylene glycol poisoning of a Virginia opossum and a raccoon in Augusta County (November 2003); zinc phosphate intoxication of two eastern cottontail rabbits in Grayson County (January 2004); and organophosphate poisoning of two Canada geese in Southampton County (June 2004).

Department of General Services (DGS):

The Department of General Services, through the Division of Consolidated Laboratory Services (DCLS), continues to provide routine and emergency laboratory services to identify and characterize toxic substances for a variety of local, state, and federal agencies. In support of several state programs, DCLS routinely identifies active ingredients listed on herbicide and pesticide labels and tests water, food and environmental samples for pesticide residue. Analytical services and expert testimony are provided to local, state and federal agencies investigating the exposure of both humans and animals to toxic substances, illegal disposal of hazardous waste, hazardous material spills, pollution complaints and fish kills. In support of the Virginia Occupational Safety and Health program, DCLS routinely tests environmental samples to evaluate the risk of exposure to toxic substances in the workplace. Air samples are routinely analyzed in support of the state's Air Pollution Control Board and in emergencies during chemical spills or fires. DCLS

also provides surge capacity support for the BioWatch program. DCLS also supports Virginia's Safe Drinking Water Program by testing water for inorganic, organic and radioactive compounds. The emission of radioactive materials from a variety of environmental samples obtained within and around nuclear power plants is also monitored in support of Virginia Department of Health and VDEM. In support of numerous agencies, the laboratory also tests for exposure to biological and chemical warfare agents and toxins. This ability extends to environmental and clinical samples.

Department of Health (VDH):

VDH is responsible for a number of different programs affecting the control of toxic substances in the Commonwealth. These include the Division of Shellfish Sanitation, the Division of Health Hazards Control, the Division of Zoonotic and Environmental Epidemiology, and Emergency Preparedness and Response Programs.

The Division of Shellfish Sanitation is responsible for assuring the safety of shellfish for human consumption. Division efforts regarding toxic substances are shown by the following excerpt from the Division's fiscal year 2004 and 2005 annual reports.

	FY 2004	FY 2005
Samples Collected for Radiological Evaluation Shellfish and Silt	2	2
Samples Collected for Heavy Metals/Pesticide Evaluation Shellfish	30	80

In addition, there are two growing areas on the Lafayette and Elizabeth Rivers where the taking of any shellfish is prohibited because of unacceptable levels of heavy metals. Studies have shown the Elizabeth River to have concentrations of polynuclear aromatic hydrocarbons at levels of potential health concern and other refractory organic compounds of a suspect nature.

The Division of Health Hazards Control advises the Governor, other state agencies, the federal government, and local governing bodies on matters pertaining to chemical exposures posing a threat to human health and the environment. Staff respond directly to requests for toxicologic assistance from local health departments and political subdivisions of the Commonwealth, other state agencies, legislators, business and industry, educational institutions, health care professionals, media, and citizens. The Division staff investigate potential human health effects associated with environmental exposures through biomedical studies to address emergency and non-emergency site-specific problems. Toxicologists develop health risk assessments for chemical exposures and coordinate assessments of such risks with other local, state, and federal agencies. The Division communicates the risk of chemical exposure by developing and disseminating documents, technical reports, information sheets, advisories, and press releases.

During the 2002-2004 biennium, the Division staff responded to over 1,000 inquiries for information and health hazard evaluations of chemicals and related subjects. Many

computerized searches were conducted for chemical, environmental, and toxicologic literature.

In July 2002, a fish consumption advisory was issued for two species of fish in a portion of the James River. The advisory area covered a 43-mile stretch of the James River beginning at the Interstate 95 James River Bridge crossing in Richmond. The advisory extended south to Flowerdew Hundred where the power lines cross the river about seven miles downstream of the Benjamin Harrison Bridge. The advisory recommended that people do not eat any blue catfish and only two meals per month of carp from the described area. This section of the river is already under a fish eating advisory for Kepone contamination for people who eat fish from these waters on a daily basis.

In July 2003, VDH issued three new fish consumption advisories due contamination of fish with mercury in Great Dismal Swamp, Dragon Run Swamp, and portion of the Blackwater River.

In December 2004, VDH revised the guidelines for issuing fish consumption advisories due to contamination of fish with PCBs. The revised guidelines reduced the level of concern for the issuance of fish consumption advisories for PCBs in fish from 600 parts per billion to 50 parts per billion. This new guidance resulted in modification of several existing advisories as well as posting of new fish consumption advisories on various bodies of water in the state.

During the past few years, the illegal manufacture of methamphetamine (meth) has increased in Virginia. In 2004, there were 61 clandestine meth laboratories seizures in the Commonwealth. Substances used in these clandestine operations often are corrosive, flammable, and toxic and can cause fires, explosions, and other uncontrolled reactions. Meth is manufactured using ephedrine or pseudoephedrine as a precursor, commonly found in legal, over-the-counter cold medications purchased at retail stores and pharmacies. On September 1, 2005, Governor Warner issued Executive Directive 8 entitled “Curbing Methamphetamine Manufacture and Use” requiring several state agencies to take steps to protect the public health and safety and curb the production of methamphetamine. Pursuant to this Directive, on September 15, 2005, the State Health Commissioner issued an Emergency Order limiting quantities of the meth precursors, restricting access to the targeted products, requiring identification for purchase of the targeted products, and requiring a record of purchase to be maintained.

The Emergency Order requires sellers of the methamphtamine precursors to record the purchaser’s name, quantity sold, and the date of transaction. This information is required only for the purchase of those products that contain ephedrine or pseudoephedrine as the sole active ingredient. Purchasers of combination formulations with pseudoephedrine as one of two or more active ingredients are exempt from the identification and recording requirement.

Pursuant to the *Regulations for Disease Reporting and Control*, the Division maintains a statewide computerized database for the surveillance of childhood elevated blood lead levels. Data are collected from clinical laboratories, physicians, hospitals, and

local health departments. Statistical analysis of the data is performed for annual and monthly reports, and is provided to state and local agencies and the general public upon request.

In addition, the Division also maintains a statewide database for reported cases of adult toxic substance exposures. Data are reported by physicians, clinical laboratories, and medical care facilities and are entered into a computerized system. Statistical analysis is performed for monthly and annual reports. Toxic-substances-related illnesses reported to VDH are provided in Table 3.

TOXIC SUBSTANCES-RELATED ILLNESSES REPORTED TO VDH BY FISCAL YEAR FROM JULY, 1998 THROUGH JUNE, 2004

	FISCAL YEAR (JULY 1 THROUGH JUNE 30)					
ILLNESS	**1998 - 99 TOTAL**	**1999 - 00 TOTAL**	**2000 - 01 TOTAL**	**2001 - 02 TOTAL**	**2002 - 03 TOTAL**	**2003 - 04 TOTAL**
PNEUMOCONIOSES						
Coalworkers' & Silicosis	128	85	14	4	8	67
Asbestosis	414	394	244	393	209	67
Byssinosis	0	0	0	0	0	0
MESOTHELIOMA	4	1	0	1	0	4
OCCUPATIONAL ASTHMA	0	0	0	0	0	0
HYPERSENSITIVITY PNEUMONITIS	0	0	0	0	0	0
OCCUPATIONAL HEARING LOSS	302	*	*	*	*	*
OCCUPATIONAL DERMATITIS	1	0	0	0	0	0
POISONINGS						
Lead	73	127	122	110	105	75
Pesticides	0	0	0	0	0	0
Carbon monoxide	3	0	0	0	0	0
Arsenic	1	0	0	1	0	4
Cadmium	1	3	4	1	4	6
Mercury	2	2	0	0	8	13
Other/unspecified	0	0	0	1	1	8
HYDROCARBON INHALATION	0	0	0	0	0	0
TOTAL CASES REPORTED	**929**	**612**	**384**	**511**	**335**	**244**

*Effective January, 1999, occupational illnesses not related to toxic substances were no longer reported.

The Division of Health Hazards Control's Radiological Health Program is responsible for a number of activities that includes the following:

- Licensing of radioactive materials
- Registration, inspection, and certification of X-ray producing machines
- Emergency response to radiological incidents
- Emergency planning and training

- Environmental radiation monitoring around nuclear facilities
- Technical assistance and education concerning indoor radon

The radioactive materials licensing program regulates the use of naturally occurring and accelerator produced radioisotopes. The program has issued 248 licenses and each licensed activity is inspected at least every four years to ensure compliance with radiation protection standards. Approximately 93 license amendments and 77 renewals were issued in fiscal year 2005.

The X-ray machine program ensures the public health and safety are protected from unnecessary radiation due to malfunctioning diagnostic X-ray machines resulting in repeat examinations for patients, or the production of poor clinical images that may result in improper diagnosis. In the case of malfunctioning therapeutic X-ray machines, patients may receive an inappropriate amount of radiation that may lead to injury or inadequate treatment. There are 17,371 X-ray tubes in the Commonwealth. The program is also responsible for assisting the U.S. Food and Drug Administration to enforce the federal standards for mammography facilities. There are 196 mammography facilities in Virginia.

A radiological emergency response capability is maintained by providing a duty officer rotation system with 24-hour coverage. Response personnel have adequate field equipment for several field teams, including a mobile radiation laboratory capable of providing laboratory analysis in the field. The program is also authorized to issue U.S. Department of Transportation exemptions for the return of scrap metal and solid waste shipments that arrive at facilities with detectable radiation levels. The staff issued twelve exemptions in fiscal year 2004 and seven in fiscal year 2005.

Staff are actively involved in emergency planning and training activities for the Commonwealth's two nuclear power stations. The program has provided support to VDEM and Dominion Virginia Power by training local jurisdiction staff and volunteers to successfully participate in federally evaluated exercises of the state and local emergency response plans. There are four training exercises annually at the two nuclear power stations, one of which is evaluated by the Federal Emergency Management Agency.

Environmental monitoring of ionizing radiation around nuclear facilities in the state is conducted through the collection and analysis of 200 samples annually. Facilities under surveillance include Northrop Grumman (formerly known as Newport News Shipbuilding and Dry Dock), Norfolk Naval Shipyard, BWX Technology (formerly known as Babcock and Wilcox) Naval Nuclear Fuel Division, North Anna Nuclear Power Plant, and Surry Nuclear Power Plant.

A technical assistance hotline is maintained and education materials concerning indoor radon are disseminated to the public on request and in mass mailings to targeted areas. The hotline inquiries average around 100 each month.

The Waterborne Hazards Control Program in the Division of Zoonotic and Environmental Epidemiology is responsible for providing human health advisories when there are any fish kills or fish with lesions where *Pfiesteria* species or *Pfiesteria*-like

organisms are suspected as the cause. Division efforts include participation on an Interagency Harmful Algal Bloom (HAB) Task Force, an ongoing response and investigation of reported events and information requests on potential *Pfiesteria* exposures, monitoring for *Pfiesteria* and other harmful algae at shellfish harvesting areas, and active surveillance for *Pfisteria*-related illness, and Vibrio and Mycobacterium infections and/or illness.

Water samples for *Pfiesteria* species and *Pfiesteria*-like organisms are collected by DEQ and the VDH Division of Shellfish Sanitation, and analyzed by Old Dominion University and the Virginia Institute of Marine Sciences. There were no fish kills or fish lesion events attributed to *Pfiesteria* since the fish kill event that occurred on the Pocomoke River in the late fall of 1997.

Since April 2002, VDH's Emergency Prepared and Response Programs have received grant funding from the Centers for Disease Control and Prevention (CDC) for preparedness for bioterrorism and other public health emergencies. Funding for the most recent year totaled more than $20 million. The funding has provided for the hiring of more than 100 new positions including physicians, epidemiologists, planners, trainers, laboratory scientists, technology specialists, public information officers and other personnel to bolster state, regional and local preparedness. In addition, VDH also received funding for smallpox preparedness efforts, Strategic National Stockpile, and enhancement of chemical testing capabilities at DCLS.

The CDC funding will enhance public health preparedness and planning, improve infectious disease surveillance and investigation, advance public health laboratory and communications systems capabilities, provide education and training, and enhance hospitals' capacity to respond to mass casualty incidents requiring mass immunization, treatment, isolation and quarantine in the aftermath of bioterrorism or other outbreaks of infectious disease.l

If a biological attack is announced or discovered publicly as it is occurring, it could result in a large number of patients suddenly presenting for medical services. This would place extraordinary demands on private and public healthcare staff and facilities. The threat of a large-scale incident involving intentional release of chemical or biological agents in the United States is significant, but currently, no practical models exist for healthcare facility response to a suddenly recognized event requiring decontamination of mass casualties. Preparation and response training for terrorism events or natural disasters are similar and should be incorporated into local community activities and coordinated with state and local health departments, as well as with all community emergency responders including rescue workers and fire and police personnel.

The terrorism threat entails the deliberate use of chemical, biological, and radiological weapons against civilians, and in many instances, these weapons are relatively easy to produce, inexpensive, and can be deployed covertly. The toxic and psychological threats posed by chemical terrorism were demonstrated by the 1995 nerve agent release in the Tokyo subway system. The assault resulted in 11 deaths and more than 5,000 emergency medical evaluations, of which 74% had no identifiable clinical injury. No chemical attacks of this nature have been reported in the United States. The threat

posed by chemical and biological terrorism must be kept in proper perspective. Disaster preparedness plans must also address possible terrorist use of conventional explosives. Effective health care facility preparedness integrated with local community planning will help insure a coordinated and adequate emergency medical response to all disasters.

Department of Health Professions:

The Department of Health Professions regulates drugs. Specific details are provided in the Appendix.

Department of Labor and Industry:

During the 2003-2005 biennium, the Department of Labor and Industry conducted 6,481 safety and health inspections and issued citations with a total of 14,555 violations. Accident investigations, using specially trained investigators, continued to be a high priority with 125 fatality/catastrophe inspections during the biennium.

Department of Mines, Minerals and Energy:

The Department of Mines, Minerals and Energy maintains records in each regulatory division about hazardous chemicals and materials that may be encountered on surface and underground mines and other mineral extraction sites. In addition, the Department requires that miners receive training in proper recognition and handling of hazards.

The Division of Mines (DM) has the responsibility to oversee the regulation and enhancement of miner safety and health on underground and surface coal mines. DM inspection staff respond to and educate miners and mine operators on the potential hazards related to working at mine sites. The Division's Emergency Response Team provides mine emergency response.

The Division of Mined Land Reclamation requires prior approval for chemicals that may be utilized for the purpose of water treatment, where water quality may have been impacted by mine-related activities. A mine operator is required to provide the division with Material Safety Data Sheets for those chemicals.

The Division of Mineral Mining maintains information on the use of potentially hazardous chemicals and substances at mineral mine sites through the mineral mine permitting process.

The Division of Gas and Oil (DGO) works with permitted operators to identify hazardous materials, substances and conditions that may occur during the drilling of gas and oil wells. DGO regulations prohibit the use of any potentially toxic substances during drilling without a variance from the division director.

The Department of Professional and Occupational Regulation (DPOR):

DPOR is an occupational regulatory agency. The Department ensures that workers, supervisors, inspectors, management planners, project designers, and contractors involved

with the removal and handling of asbestos and asbestos-containing products have demonstrated the required levels of knowledge and training before being licensed in the Commonwealth.

DPOR also responds to federal and state mandates to regulate the lead abatement industry. The Department now licenses contractors, workers, supervisors, inspector technicians, inspector/risk assessors, and project designers for the lead abatement industry.

Department of State Police:

Table 4 provides a detailed summary of the Motor Carrier Safety and Hazardous Materials Program for 2003 and 2004. These statistics illustrate vehicle inspections for the purpose of determining compliance with regulations governing transportation of hazardous materials. In 2003, a total of 38,769 vehicles were inspected with 8,517 being placed out of service. In 2004, a total of 34,747 commercial vehicles were inspected resulting in 8,528 being placed out of service.

TABLE 4. MOTOR CARRIER SAFETY AND HAZARDOUS MATERIALS PROGRAM

	Calendar Years	
	2003	2004
Commercial Motor Vehicles Inspected	38,769	34,747
Out-of-Service Vehicles	8,517	8,528
Hazardous Materials (HM) Haulers Inspected	3,202	2,781
HM Haulers Placed Out of Service (OOS)	406	333
Percentage of HM Haulers Placed OOS	12.6%	11.9%
HM Haulers with Violations	2,470	1,995
Percentage of HM Haulers with Violations	77%	71.7%

Virginia Institute of Marine Science (VIMS):

The Virginia Institute of Marine Science conducts analyses of chemicals for various agencies of the Commonwealth. These chemicals include PAHs, tributyltin (TBT), several pesticides, especially Kepone, and PCBs. Ambient concentrations are measured in sediment, water, and biota and reported to DEQ, VMRC, VDH, and other users of this information. The activity is funded in part by DEQ, VMRC, and various federal sources.

Office of Naval Research (ONR) and Department of Defense funding has supported in part the study of the associations of organic matter and contaminants at the water-sediment interface. Additional funding from ONR and the Chesapeake Bay Environmental Effects Committee has supplemented support for study of the role of biota in material flux at the sediment-water interface and effects on macro invertebrates.

Supercritical fluid extraction for analysis of PCBs and PAHs in various biological matrices is being applied to many projects at VIMS. Additional techniques to use extraction methods are being implemented (*e.g.,* accelerated solvent extraction) on a relatively limited scale. These extraction methods both reduce risks to chemists in the laboratory and minimize the amounts of solvents to be disposed of as hazardous waste.

Some resins were evaluated for their ability to remove toxic materials from contaminated sediments. Resins have been shown to remove PAHs and thereby reduce toxicity of sediment when contamination levels are moderate. Additional research is needed to find means to remediate more heavily contaminated sediments.

In addition to the research activities, VIMS scientists have participated in various activities related to Bay cleanup. VIMS scientists serve as technical advisors to several military Restoration Advisory Boards. They also provide advice to various state and federal agencies on an *ad hoc* basis. During the past two years, several VIMS scientists have played active roles with the Elizabeth River Project, an organization dedicated to restoration of the Elizabeth River, including the Toxic Reduction Team of the Elizabeth River Project.

Virginia Marine Resources Commission (VMRC):

The Virginia Marine Resources Commission enforces closures of condemned shellfish growing areas. VMRC also inspects for illegal use of paints containing TBT. Specific details are given in the Appendix.

5. APPENDIX: PROGRAM SUMMARY SHEETS

1. Regulated Products:	Animal Remedies and Medicated Feeds
2. Responsible Agency:	Department of Agriculture and Consumer Services
3. Code of Virginia Citation:	§ 3.1-829 et seq. and § 3.1-828.1 et seq.
4. Virginia Rules and Regulations:	Rules, Regulations and Standards, Virginia Animal Remedies Law, 1994; Rules and Regulations for the Enforcement of the Virginia Commercial Feed Law, as amended, 1994.
5. Related Federal Statutes:	The Federal Food, Drug & Cosmetic Act - Public Law No. 75-717. 1938 (U.S. Food and Drug Administration).
6. Program Identification:	
a. Budget Code:	301-883-01-557-06 and 301-885-09-557-06
b. Source of Funds:	General Funds; license and product registration fees; and assessments.
c. Contact:	Mr. J. Alan Rogers, Program Manager Office of Product and Industry Standards Department of Agriculture & Consumer Services 1100 Bank Street, Suite 402 Richmond, VA 23219 804-786-2476
d. Support Agencies:	Department of General Services, Division of Consolidated Laboratory Services; Department of Agriculture & Consumer Services.
7. Control Strategies:	Registration; approval of labeling; inspection; sampling; facility licensing.
8. Legal Remedies:	Commissioner may order withholding from sale of non-complying products, assess fees for content deficiencies, and may petition court for condemnation of products; court may order destruction or correction of non-complying products at defendant's expense; Class 3 Misdemeanor.
9. Status:	
a. Reports:	Annual Report on Program Activities.
b. Current Status:	Continuing routine operations.
c. Major Future Plans:	Continue routine operations.

1. Regulated Products:	Fertilizers
2. Responsible Agency:	Department of Agriculture & Consumer Services
3. Code of Virginia Citation:	§ 3.1-106.1 et seq.
4. Virginia Rules and Regulations:	Rules and Regulations for the Enforcement of the Virginia Fertilizer Law, as amended, 1994.
5. Related Federal Statutes:	None
6. Program Identification:	
a. Budget Code:	301-883-01-557-06 and 301-885-09-557-06
b. Source of Funds:	General Fund; license and product registration fees; and assessments.
c. Contact:	Mr. J. Alan Rogers, Program Manager Office of Product and Industry Standards Department of Agriculture & Consumer Services 1100 Bank Street, Suite 402 Richmond, VA 23219 804-786-2476
d. Support Agencies:	Department of General Services, Division of Consolidated Laboratory Services; Department of Agriculture & Consumer Services.
7. Control Strategies:	Licensing of commercial fertilizer manufacturers and distributors; approval of labeling; sampling; inspection.
8. Legal Remedies:	Commissioner may issue stop-sales order, file complaint for seizure and assess fees for content deficiencies; court may order condemnation and disposition; Class 3 Misdemeanor.
9. Status:	
a. Reports:	Annual - Fertilizers Used and Results of Inspections.
b. Current Status:	Continuing routine operations.
c. Major Future Plans:	Continue routine operations.

1. Regulated Products:	Industrial Ethanol
2. Responsible Agency:	Department of Agriculture & Consumer Services
3. Code of Virginia Citation:	§ 3.1-1050
4. Virginia Rules and Regulations:	Rules and Regulations for Enforcement of the Virginia Industrial Ethanol Act, February 26, 1981.
5. Related Federal Statutes:	Distilled Spirits for Fuel, 26 U.S.C. 5181.
6. Program Identification:	
a. Budget Code:	
b. Source of Funds:	
c. Contact:	
d. Support Agencies:	
7. Control Strategies:	
8. Legal Remedies:	
9. Status:	
a. Reports:	
b. Current Status:	
c. Major Future Plans:	

1. Regulated Products:	Pesticides
2. Responsible Agency:	Department of Agriculture & Consumer Services
3. Code of Virginia Citation:	§ 3.1-249.27 et seq.
4. Virginia Rules and Regulations:	Rules and Regulations for Enforcement of the Virginia Pesticide Law.
5. Related Federal Statutes:	The Federal Insecticide, Fungicide and Rodenticide Act, Public Law 92-516, 21 Oct 72 (U.S. Environmental Protection Agency).
6. Program Identification:	
a. Budget Code:	301-883-0100-557-04
b. Source of Funds:	Certification and license fees; Pesticide Product Registration.
c. Contact:	W. Wayne Surles, Ph.D. Office of Pesticide Services Department of Agriculture & Consumer Services 1100 Bank Street, Room 401 Richmond, VA 23219 804-371-6559
d. Support Agencies:	Department of General Services, Division of Consolidated Laboratory Services; Department of Agriculture & Consumer Services; Department of Health.
7. Control Strategies:	Registration of active ingredients; approval of labels; compliance inspections for labeling, application, storage and disposal; certification of applicators; reports of pesticide accidents, incidence or loss; record keeping.
8. Legal Remedies:	Commissioner may deny, suspend, or revoke license, permit or certification, or bring action to enjoin actual or threatened violations; Class 1 Misdemeanor.
9. Status:	
a. Reports:	Annual reports on program activities.
b. Current Status:	Continuing routine operations.
c. Major Future Plans:	Continue to develop and implement programs to insure the proper and safe use of pesticide chemicals in Virginia.

1. Regulated Products:	Agricultural Nonpoint Source Pollution
2. Responsible Agency:	Department of Conservation & Recreation, Division of Soil & Water Conservation
3. Code of Virginia Citation:	§ 10.1-505 and 10.1-542
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	Clean Water Act of 1987; Sections 117 and 319.
6. Program Identification:	
a. Budget Code:	199-Land Management (5030000), Sub Program Land Stabilization & Conservation (5030200), Nonpoint Source Pollution Control (5031200)
b. Source of Funds:	General Funds, Federal Funds.
c. Contact:	Jack E. Frye, Director Division of Soil & Water Conservation Department of Conservation & Recreation 203 Governor Street, Suite 206 Richmond, VA 23219 804-786-2064
d. Support Agencies:	Dept. of Agriculture & Consumer Services, Cooperative Extension Service; Dept. of Environmental Quality; Soil & Water Conservation Districts; Natural Resources Conservation Service.
7. Control Strategies:	Technical assistance, financial cost-share assistance, and educational activities geared to voluntary implementation of agricultural pollution control remedies to reduce water quality impacts to ground and surface water.
8. Legal Remedies:	Referral to other regulatory agencies when environmental problems found or suspected.
9. Status:	
a. Reports:	Virginia Nonpoint Source Pollution Management Program (12/1999); Virginia Nonpoint Source Pollution Watershed Assessment Report (7/2000); Annual reports to the Governor, General Assembly and EPA on overall Nonpoint Source Program Implementation.
b. Current Status:	Ongoing and expanding program.
c. Major Future Plans:	Greater technical assistance and educational activities targeted to high priority areas and support for implementation of best management practices.

1. Regulated Products:	Virginia Hazardous Materials Emergency Response Program
2. Responsible Agency:	Department of Emergency Management
3. Code of Virginia Citation:	§ 44.146.34 thru 44.146.39
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	Hazardous Materials Transportation Act (U.S. Department of Transportation); Resource Conservation and Recovery Act of 1978 (RCRA); Superfund Amendments and Reauthorization Act of 1986; OSHA 1910.120; Oil Pollution Act of 1990; Clean Air Act; Clean Water Act.
6. Program Identification:	
a. Budget Code:	127-0410-722-02
b. Source of Funds:	State Funds.
c. Contact:	Mr. Brett Burdick, Director Technological Hazards Division Department of Emergency Management 10501 Trade Court Richmond, VA 23236 804-897-6500, Ext. 6569
d. Support Agencies:	Department of Health; Department of State Police; Department of Environmental Quality; Department of General Services, Division of Consolidated Laboratory Services; Department of Transportation.
7. Control Strategies:	Training, technical information, and emergency assistance to local governments and state agencies in the event of a hazardous materials incident; full team response concept draws personnel from a variety of state agencies to evaluate hazardous materials incidents; coordination with local, state and federal agencies and the chemical industry is part of the program; agreements with local jurisdictions to provide hazardous materials response teams to support state effort.
8. Legal Remedies:	None
9. Status:	
a. Reports:	None
b. Current Status:	Continuing operations.
c. Major Future Plans:	Continue to support and develop local jurisdictions' response efforts in the form of planning, training and funding. Maintain the State's response capability by operating out of eight regional offices in addition to the Richmond office. Develop and expand planning, training, response capabilities of state to include supporting terrorism and environmental crime initiatives.

1. Regulated Products:	Hazardous Radioactive Materials Transportation
2. Responsible Agency:	Department of Emergency Management
3. Code of Virginia Citation:	§ 44-146.30
4. Virginia Rules and Regulations:	Regulations for Transportation of Hazardous Radioactive Materials, July 1, 1984.
5. Related Federal Statutes:	Hazardous Materials Transportation Act (U.S. Department of Transportation); Atomic Energy Act (U.S. Nuclear Regulatory Commission).
6. Program Identification:	
a. Budget Code:	127-1000-722-02
b. Source of Funds:	Federal Trust Funds
c. Contact:	Mr. Brett Burdick, Director Technological Hazards Division Department of Emergency Management 10501 Trade Court Richmond, VA 23236 804-897-6500 Ext. 6569
d. Support Agencies:	Department of Health; Department of Environmental Quality; Department of State Police.
7. Control Strategies:	Registration of shippers and carriers; advance notification of routes; status reports; notification of local authorities on route of transport; exemptions; variances; records for inspection; escorts.
8. Legal Remedies:	None
9. Status:	
a. Reports:	
b. Current Status:	Continue operations.
c. Major Future Plans:	Continue routine operations.

1. Regulated Products:	Ambient Air
2. Responsible Agency:	Department of Environmental Quality
3. Code of Virginia Citation:	§ 10.1-1182, et seq.; § 10.1-1300. et seq.
4. Virginia Rules and Regulations:	Regulations for the Control and Abatement of Air Pollution, effective March 17, 1972, as amended: 1972 (March 17, August 11, September 15); 1973 (October 5, December 5); 1974 (February 3, July 5, December 20); 1975 (August 9, December 6); 1976 (January 30, June 11, August 9, December 10); 1977 (April 8, September 30); 1978 (October 6); 1979 (January 30, August 3, October 5, November 30); 1980 (February 8, August 1, December 5); 1981 (April 3, June 5, July 31); 1982 (March 1, July 1); 1983 (January 1, March 1); 1985 (January 1); 1986 (July 1, October 1); 1988 (January 1, April 1, July 1); 1989 (January 1, October 1); 1990 (January 1, May 1); 1991 (January 1, July 1, August 1, October 15); 1992 (January 1, April 15); 1993 (January 1, September 1); 1994 (May 16); 1995 (April 1, June 1, December 1); 1996 (April 1, June 1, October 15); 1997 (January 1, April 1, May 1, July 1); 1998 (January 1, April 1); 1999 (January 1, April 1, April 14, August 4); 2000 (February 1, July 1, May 1); 2001 (January 1, June 1, July 18); 2002 (January 1, February 1, May 1, August 1, September 1, December 1); 2003 (February 1, June 4, July 1, September 10); 2004 (January 1, January 29)
5. Related Federal Statutes:	Clean Air Act, 42 USC 7401 et seq., as amended by the Air Quality Act of 1967 PL 90-148; Clean Air Amendments of 1970, PL 91-604; Technical Amendments to the Clean Air Act, PL 92-157; PL 93-15, April 9, 1973; PL 93-319, June 24, 1974; Clean Air Act Amendments of 1977, PL 95-95, August 7, 1977; Technical Amendments to the Clean Air Act, PL 95-190, November 16, 1977; Health Services Research, Health Statistics & Health Care Technology Act of 1978, PL 95-623, November 9, 1978; PL 96-300, July 17, 1981; PL 97-375, December 21, 1982; PL 97-375, December 8, 1983; Clean Air Act Amendments of 1990, PL 101-549, November 15, 1990.
6. Program Identification:	
a. Budget Code:	440 514-01-00; 440 512-14-00; 440 512-20-00; 440 512-21-00; 440 513-07-00
b. Source of Funds:	General Funds, Federal Funds, Permit Fee Funds
c. Contact:	Robert G. Burnley, Director Department of Environmental Quality P.O. Box 10009 Richmond, VA 23240-0009 804- 898-4000
d. Support Agencies:	Department of Health; Department of General Services, Division of Consolidated Laboratory Services.

7. Control Strategies:	Facility inspections; permit issuance; ambient air monitoring; inventory of existing facilities; enforcement of standards.
8. Legal Remedies:	Special and emergency orders; noncompliance penalties; injunctions; civil penalties; civil charges; appeals; adoption of regulations; mandamus.
9. Status:	
a. Reports:	None
b. Current Status:	Implementing Federal MACT standards. Continuing application of State Toxic Rules.
c. Major Future Plans:	Continued implementation of Title III of the Federal 1990 Clean Air Act Amendments. Initiate implementation of EPA's Residual Risk standards.

1. Regulated Products:	Chemical Substances/Pollutants
2. Responsible Agency:	Department of Environmental Quality
3. Code of Virginia Citation:	§ 10.1-1425.10 et seq.
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	Pollution Prevention Act of 1990; Resource Conservation and Recovery Act; Superfund Amendments and Reauthorization Act.
6. Program Identification:	
a. Budget Code:	440 516-14-00
b. Source of Funds:	General Funds; Federal
c. Contact:	Robert G. Burnley, Director Department of Environmental Quality P. O. Box 10009 Richmond, VA 23240-0009 804-698-4000
d. Support Agencies:	Department of Health; Department of General Services, Division of Consolidated Laboratory Services.
7. Control Strategies:	Technical assistance and incentive programs for Virginia industries, governments, and institutions on pollution prevention and environmental management systems.
8. Legal Remedies:	None
9. Status:	
a. Reports:	DEQ produces an annual report on its pollution prevention activities. In 2005, DEQ produced "The Environmentally Responsible Dental Office: A Guide to Pollution Prevention and Proper Waste Management in Dental Offices." The program also maintains a website containing information on various outreach initiatives and links to other pollution prevention resources.
b. Current Status:	Continued promotion of the National Partnership for Environmental Priorities (NPEP) in cooperation with the Environmental Protection Agency. NPEP is a voluntary program that promotes the reduction of hazardous waste generation, especially waste containing highly toxic chemicals. The program's primary goal is a reduction in 31 priority chemicals. EPA has established a goal of reducing the amount of priority chemicals reported to the Toxics Release Inventory by 10% by 2008, using the year 2001 as the baseline. Continued promotion and implementation of the Virginia Environmental Excellence Program, which seeks to encourage facilities to adopt environmental management systems and pollution prevention plans through regulatory incentives and recognition.

	Continued promotion of sector-based pollution prevention initiatives such as Virginia Hospitals for a Healthy Environment and Environmental Lodging.
c. Major Future Plans:	Expanded outreach in the area of energy efficiency and energy alternatives as a means of reducing air pollution.

1. Regulated Products:	Chemical Substances/Releases Designated as Hazardous, Extremely Hazardous, Toxic
2. Responsible Agency:	Department of Environmental Quality, Virginia Emergency Response Council
3. Code of Virginia Citation:	§ 44-146.40; § 10.1-1402; § 10.1-1186.1
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	Superfund Amendments and Reauthorization Act of 1986 (P.L. 99-499), Title III, Emergency Planning and Community Right-to-Know Act.
6. Program Identification:	
a. Budget Code:	440 512-08-00; 440 516-14-00; 400 512-16-00
b. Source of Funds:	General Funds
c. Contact:	Robert G. Burnley, Director Department of Environmental Quality P. O. Box 10009 Richmond, VA 23240-0009 804-698-4000
d. Support Agencies:	Department of Fire Programs; Department of Health; Department of State Police; Department of Labor and Industry; Department of Emergency Management; and Department of Mines, Minerals, and Energy.
7. Control Strategies:	Facility outreach and technical assistance, LEPC outreach and technical assistance, education and information provided to the public, publication of reports, and cross-referencing of reports.
8. Legal Remedies:	Citizen suits; EPA enforcement actions.
9. Status:	
a. Reports:	Lists of Extremely Hazardous Substances (EHS) facilities, Section 302; written follow-up reports of accidental EHS and/or CERCLA hazardous substance releases, Section 304; MSDSs/Lists, Section 311; Tier II Emergency and Hazardous Chemical Inventory Reports, Section 312; Toxics Release Inventory (TRI)/Form R/A, Section 313 - with an annual publication of VA TRI Summary Report in March of each year.
b. Current Status:	All hard copy facility reports for Sections 312 and 313 are filed alphabetically, by local emergency planning committee district or jurisdiction, for the reporting year. Sections 302, 304, and 311 hard copy reports are available and are filed by facility. Hard copy of facilities' emergency response plans for EHS chemical releases are on file with the SARA Title III Program, in the Department of Environmental Quality. Sections 302, 304, 311 and 312 hard copy reporting are also available at respective local emergency planning committee (LEPC). Electronic databases of 1998 to most recent reporting year for Section 313 reporting are also available from the Department of Environmental Quality SARA Title III Program.

	The SARA Title III Program has begun electronic cataloging of Section 312 reporting and is planning for and designing an on-line reporting capability for Section 312 reporting.
c. Major Future Plans:	Since April 22, 2005, DEQ has been able to receive SARA § 313 Toxic Release Inventory (TRI) reports via EPA's Central Data Exchange (CDX) as part of a pilot program to ease the regulatory burden on facilities who report to their states as well as EPA. DEQ and EPA through outreach meetings would like to encourage facilities to report electronically thru CDX and reduce the paper submissions in future.

1. Regulated Products:	Hazardous Wastes
2. Responsible Agency:	Department of Environmental Quality
3. Code of Virginia Citation:	§ 10.1-1402, et seq.
4. Virginia Rules and Regulations:	Hazardous Waste Management Regulations (9 VAC 20-60-10 et seq.); Regulations Governing the Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.); Schedule of Fees for Hazardous Waste, Facility Site Certification (9 VAC 20-20-10 et seq.); Technical Assistance Fund Administration Procedure (9 VAC 20-30-0 et seq.); Administrative Procedures for Hazardous Waste Facility Site Certification (9 VAC 20-40-10 et seq.); Hazardous Waste Facility Siting Criteria (9 VAC 20-50-10 et seq.)
5. Related Federal Statutes:	Resource Conservation and Recovery Act, 42 USC § 6901 et seq., as amended.
6. Program Identification:	
a. Budget Code:	440 512-18-00; 440 516-14-00; 440 512-16-00
b. Source of Funds:	General Funds, Federal Funds.
c. Contact:	Robert G. Burnley, Director Department of Environmental Quality P. O. Box 10009 Richmond, VA 23240-0009 804-698-4000
d. Support Agencies:	Department of Health; Department of General Services, Division of Consolidated Laboratory Services; Department of State Police; Department of Emergency Management.
7. Control Strategies:	Technical assistance to regulated facilities; permits; reports; financial assurance; record keeping; manifest system; assumption of responsibility for perpetual custody and maintenance of hazardous waste management facilities; user and permit fees; inspections; enforcement; technical assistance for waste minimization, including special efforts to control mercury from crushing fluorescent lamps, and by outreach to dentists and schools.
8. Legal Remedies:	Inspection warrants; orders; injunctions; civil penalties; civil charges; Mandamus; criminal charges; fines.
9. Status:	
a. Reports:	Biennial Hazardous Waste Report
b. Current Status:	Implement delegated hazardous waste management program; regulator of generators, transporters and hazardous waste management facilities, including corrective action at facilities.
c. Major Future Plans:	Continued implementation of hazardous waste management program. Continued updating of authorized status.

1. Regulated Products:	Toxic Chemicals in the Environment
2. Responsible Agency:	Department of Environmental Quality
3. Code of Virginia Citation:	§ 10.1-1400 et seq.
4. Virginia Rules and Regulations:	Brownfield Restoration and Land Renewal Act (10.1-1230 to 1237 et seq.)
5. Related Federal Statutes:	Comprehensive Environmental Response, Compensation, and Liability Act (P. L. 96-510) as amended by the Superfund Amendments and Reauthorization Act of 1986 (P. L. 99-499), as amended by the Small Business Liability Relief and Brownfields Revitalization Act (P.L. 107-118)
6. Program Identification:	Executive Order 12580 (1987)
a. Budget Code:	440 518-04-00
b. Source of Funds:	Federal Funds.
c. Contact:	Robert G. Burnley, Director Department of Environmental Quality P. O. Box 10009 Richmond, VA 23240-0009 804-698-4000
d. Support Agencies:	Virginia Department of Game and Inland Fisheries, Virginia Department of Conservation and Recreation, Virginia Marine Resources Council, Department of Historic Resources, Virginia Health Department, Virginia Economic Development Partnership.
7. Control Strategies:	Site inspections; sampling; report review ; severity ranking; removals; as well as provide cleanup incentives
8. Legal Remedies:	Administrative Orders; consent decrees.
9. Status:	
a. Reports:	Virginia Compendium of Superfund
b. Current Status:	Provide oversight for remediation of National Priorities List (NPL) CERCLA sites; as well as other waste management sites not specifically addressed by other DEQ programs.
c. Major Future Plans:	Continue implementing the programs and incorporation of the preremedial sampling component of CERCLA.

1. Regulated Products:	Waters of the State
2. Responsible Agency:	Department of Environmental Quality
3. Code of Virginia Citation:	Title 62.1, Chapters 3.1, 3.4, 20, and 22
4. Virginia Rules and Regulations:	Policy for Protection of Water Quality in Virginia's Shellfish Growing Areas (VR 680-11-01); Wetlands Policy (VR 680-11-02); Water Resources Policy (VR 680-11-03); Policy for Waste Treatment and Water Quality Management for Dulles Area Watershed (VR 680-11-04); Occoquan Policy (VR 680-11-05); Underground Storage Tank Technical Standards and Corrective Action Requirements (9 VAC 25-580-10, et seq.); Petroleum Underground Storage Tank Financial Responsibility Requirements (9 VAC 25-590-10, et seq.); ; VPDES Permit Regulation (9 VAC 25-31-10); VPA Permit Regulation (9 VAC 25-12-10*;* State Water Control Board Policy for Nutrient Enriched Waters (VR 680-14-02); Sewage Collection and Treatment Regulation (9 VAC 25-790*;* Oil Discharge Contingency Plan and Administrative Fees Regulation (9 VAC 25-90-10 et esq.); VPDES General Permit for Domestic Sewage Discharges of Less Than or Equal to 1,000 Gallons Per Day (VR 680-14-09); Aboveground Storage Tank Pollution Prevention Requirements (9 VAC 25-140-10 et esq.); Facility and Aboveground Storage Tank Registration Requirements (9 VAC 25-130-10, et esq.) VPDES General Permits for Storm Water Discharges (VR 680-14-16 through VR 680-14-19); VPDES General Permit for Nonmetallic Mineral Mining (VR 680-14-20); Virginia Water Protection Permit (VR 680-15-02); Water Quality Standards (VR 680-31-00).
5. Related Federal Statutes:	Clean Water Act, P.L. 92-500, as amended; Resource Conservation and Recovery Act of 1976, P.L. 94-850, as amended.
6. Program Identification:	
a. Budget Code:	440 512-04-00; 440 512-08-00; 440 512-13-00; 440 513-05-00; 440 513-06-00; 440 514-06-00; 440 515-03-00; 440 515-05-00; 440 518-02-00; 440 518-03-00
b. Source of Funds:	General Funds; Virginia Petroleum Storage Tank Fund; Special Revenue (Fees); Federal Funds.
c. Contact:	Robert G. Burnley Director Department of Environmental Quality P. O. Box 10009 Richmond, VA 23240-0009 804-698-4000
d. Support Agencies:	Department of General Services, Division of Consolidated Laboratory Services; Department of Health, Division of Water Programs and Division of Health Hazards Control; Virginia Resources Authority; Office of the Attorney General.

7. Control Strategies:	Water quality standards and policy development; water quality management plan development; waste treatment requirements development; complaint investigation; monitoring; VPDEM, VPA and VWPP permits; financial assistance for municipal wastewater treatment facilities; remediation of leaking underground storage tanks; pollution prevention for vessels and aboveground storage tank facilities; compliance inspections and audits; enforcement actions, including consent and emergency special orders. Registration of aboveground storage tanks.
8. Legal Remedies:	Initiation, through the Attorney General, of civil actions for alleged violations of statute, regulations, permits, or orders that can result in injunctions, writs of mandamus, and referral of violations, as provided in § 19.2-8.
9. Status:	
a. Reports:	"Virginia Water Quality Assessment, 2004 305(B) Report To The EPA Administrator and Congress For The Period January 1, 1998 To December 31, 2002" Richmond, Virginia, August 2004. "Virginia Water Quality Assessment, 2002 305(B) Report To The EPA Administrator and Congress For The Period January 1, 1996 To December 31, 2000" Richmond, Virginia, August 2002. "Virginia Water Quality Assessment, 2002 305(B) Report To The EPA Administrator and Congress For The Period January 1, 1994 To December 31, 1998" Richmond, Virginia, August 2000.
b. Current Status:	Monitoring; construction assistance for publicly-owned treatment works; standards; regulation and policy development; permit issuance; pretreatment oversight; compliance inspections and audits; enforcement.
c. Major Future Plans:	Continued implementation of federal and state mandated programs for the protection of water quality.

1. Regulated Products:	Waters of the State, Specifically the Chesapeake Bay and Its Tributaries
2. Responsible Agency:	Department of Environmental Quality
3. Code of Virginia Citation:	Title 62.1, Chapter 3.1
4. Virginia Rules and Regulations:	Policy for Protection of Water Quality in Virginia's Shellfish Growing Areas (VR 680-11-01); Wetlands Policy (VR 680-11-02); Water Resources Policy (VR 680-11-03); Policy for Waste Treatment and Water Quality Management for Dulles Area Watershed (VR 680-11-04); Occoquan Policy (VR 680-11-05); Underground Storage Tank Technical Standards and Corrective Action Requirements (9 VAC 25-580-10, et seq); Petroleum Underground Storage Tank Financial Responsibility Requirements (9 VAC 25-590-10, et seq); VPDEM/VPA Permit Regulation (VR 680-14-01); State Water Control Board Policy for Nutrient Enriched Waters (VR 680-14-02); Toxics Management (VR 680-14-03); Sewerage Regulations - Regulation No. 8 (VR 680-14-06); Oil Discharge Contingency Plan and Administrative Fees Regulation (9 VAC 25-90-10, et seq); VPDEM General Permit for Domestic Sewage Discharges of Less Than or Equal to 1,000 Gallons Per Day (VR 680-14-09); Corrective Action General Permit (VR 680-14-11); Aboveground Storage Tank Pollution Prevention Requirements (9 VAC 25-140-10, et seq); Facility and Aboveground Tank Registration Requirements (9 VAC 25-130-10, et seq) VPDEM General Permits for Storm Water Discharges (VR 680-14-16 through VR 680-14-19); VPDEM General Permit for Nonmetallic Mineral Mining (VR 680-14-20); Virginia Water Protection Permit (VR 680-15-02); Water Quality Standards (VR 680-31-00); Chesapeake Bay Agreement.
5. Related Federal Statutes:	Clean Water Act, P.L. 92-500, as amended.
6. Program Identification:	
a. Budget Code:	440 513-06-00; 440 514-05-00
b. Source of Funds:	General Funds; Federal Funds.
c. Contact:	Robert G. Burnley, Director Department of Environmental Quality P. O. Box 10009 Richmond, VA 23240-0009 804-698-4000
d. Support Agencies:	Virginia Institute of Marine Science; Old Dominion University; Department of General Services, Division of Consolidated Laboratory Services; U.S. Environmental Protection Agency; U.S. Geological Survey.
7. Control Strategies:	Toxics reduction strategy activities including monitoring and data analysis, discussions with stakeholders, and action plan development; water quality and living resources monitoring for toxics-impacted areas; Point and non-point source voluntary reductions; Kepone monitoring.

8. Legal Remedies: 9. Status: a. Reports:	Referral to permitting and enforcement programs where legal remedies are available. Chlorine Control in Municipal Wastewater Discharges: A Chesapeake Bay Success Story, July 1990, 21 pp. The State of the Chesapeake Bay 1995, 45 p. Produced by the Chesapeake Bay and Watershed Management Administration, MD Dept. Of the Env. on behalf of the Monitoring Subcommittee. Elizabeth River Restoration and Conservation: A Watershed Action Plan. September 2002. The Elizabeth River Project. State of the River 2003. January 2003. Elizabeth River Project. 15 pp. Chemical and Toxicological Characterization of the Lower Mobjack Bay, York River, Virginia Segment of the Chesapeake Bay. Roberts, MH, MA Richards, and PF DeLisle. Final Report to DEQ. December 2003. 46 pp plus appendices. Chemical and Toxicological Characterization of Tidal Freshwater Areas in the James River, Virginia Between Jordan Point and Richmond. Roberts, MH, MA Richards, and PF DeLisle. Final Report to DEQ. September 2002. 49 pp plus appendices. Chemical and Toxicological Characterization of Tidal Freshwater Areas in the James River, Virginia. Roberts, MH, MA Volgelbein, MA Richards, L Seivard, and PF DeLisle. Draft Final Report to EPA, Chesapeake Bay Program, 2002. 123 pp plus Appendices. US EPA. 1999. Targeting Toxics: A Characterization Report. A Tool for Directing Management and Monitoring Actions in the Chesapeake Bay's Tidal Rivers. CB/TRS 222/103, US EPA, Chesapeake Bay Program, Annapolis, MD. US EPA. 1999. Chesapeake Bay Basin Toxics Loading and Release Inventory. CB/TRS 222-100, US EPA, Chesapeake Bay Program, Annapolis, MD. “Chesapeake Bay and its Tributaries: Results of Monitoring Programs and Status of Resources”, 2002 Biennial Report of The Secretary of Natural Resources to The Virginia General Assembly, January 2002. “Chesapeake Bay and its Tributaries: Results of Monitoring Programs and Status of Resources”, 2004 Biennial Report of The Secretary of Natural Resources to The Virginia General Assembly, January 2004. “Virginia Water Quality Assessment, 2004 305(B) Report To The EPA Administrator and Congress For The Period January 1, 1998 To December 31, 2002” Richmond, Virginia, August 2004. “Virginia Water Quality Assessment, 2002 305(B) Report To The EPA Administrator and Congress For The Period January 1, 1996 To December 31, 2000” Richmond, Virginia, August 2002.

	"Virginia Water Quality Assessment, 2002 305(B) Report To The EPA Administrator and Congress For The Period January 1, 1994 To December 31, 1998" Richmond, Virginia, August 2000. Benthic Biological Monitoring Program of the Elizabeth River Watershed (2002). Dauer, DM. Final Report to DEQ. November 2003. 56 pp. Benthic Biological Monitoring Program of the Elizabeth River Watershed with a study of Paradise Creek. Dauer, DM. Final Report to DEQ. October 2002. 45 pp. Evaluation of the Use of SPMDs for the Analysis of Hydrophobic Organics Contaminants in Water of the Elizabeth River. Huckins, JN, JD Petty, WL Cranor, JA Lebo, DA Alvarey, and RC Clark. Final Report to DEQ. June 2001. 80 pp. Ambient Toxicity of Water Samples from Four Locations in the Elizabeth River - A Comparison of Species Sensitivities. Roberts, MH and PF DeLisle. A report to DEQ. Aug. 2000. 33 pp. Elizabeth River TBT Monitoring Report on TBT Methodology Detection Limit, Precision and Linearity. Unger, MA. A report to DEQ. May 1999. 51 pp. An Assessment of Ambient Toxicity in Sediment from Three Strata in the Elizabeth River, Virginia. Vol 1. Winfield, J. AMRL Technical Report No. 3119. May 2000. 110 pp.
b. Current Status:	Monitoring and research activities related to water quality and living resources; action area planning; toxics loading and release inventory; Kepone monitoring; revised toxics characterization.
c. Major Future Plans:	Continuation of above activities.

1. Regulated Products:	Wildlife
2. Responsible Agency:	Department of Game and Inland Fisheries
3. Code of Virginia Citation:	§ 29.1-103
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	None
6. Program Identification:	
a. Budget Code:	777-xxx-100
b. Source of Funds:	License Revenue, Boat Registration, Nongame Donations, Select Federal Grants
c. Contact:	Mr. Robert W. Duncan, Chief Wildlife Division Department of Game & Inland Fisheries P.O. Box 11104 Richmond, VA 23230 804-367-9588
d. Support Agencies:	Southeastern Cooperative Wildlife Disease Study, Athens, GA; Department of General Services, Division of Consolidated Laboratory Services; National Wildlife Health Center, WI.
7. Control Strategies:	Reports of wildlife mortality are investigated. Causes of death are determined by the Southeastern Cooperative Wildlife Disease Study or other qualified cooperating laboratories.
8. Legal Remedies:	None
9. Status:	
a. Reports:	None
b. Current Status:	Wildlife Health Program Manager: Jonathan Sleeman Wildlife Veterinarian Department of Game & Inland Fisheries 4010 West Broad Street Richmond, VA 23230 804-367-9492
c. Major Future Plans:	Continue routine operations

1. Regulated Products:	Analytical Services (Chemical, Microbiological and Consulting)
2. Responsible Agency:	Department of General Services, Division of Consolidated Laboratory Services
3. Code of Virginia Citation:	§ 2.1-426 et seq.
4. Virginia Rules and Regulations:	None related to toxic substances control.
5. Related Federal Statutes:	None directly.
6. Program Identification:	
a. Budget Code:	194-xxx-0100-726-00 194-xxx-0250-726-00 194-xxx-0500-726-00
b. Source of Funds:	General Fund; Special Funds; Enterprise Fund.
c. Contact:	Thomas L. York, Ph.D., Director Bureau of Analytical Services Division of Consolidated Laboratory Services 1 North 14th Street Richmond, VA 23219-3691 804-786-3767
d. Support Agencies:	Department of Health; Department of Labor and Industry; Department of Environmental Quality; Department of Agriculture and Consumer Services
7. Control Strategies:	Provide laboratory support services to local, state, and federal environmental and health programs; prepare for and respond to emergencies and disasters; develop new technologies to improve laboratory services; improve the quality of laboratory services being performed throughout the Commonwealth; formulate policies that assure the health and safety of communities.
8. Legal Remedies:	None
9. Status:	
a. Reports:	No general reports made.
b. Current Status:	Continue routine support for state agencies. Provide analytical support for agency programs with internal service funds or enterprise funds.
c. Major Future Plans:	Continuing routine operations and emergency services. Planning for upgrade and addition to technical and personnel resources to support state agencies laboratory needs.

1. Regulated Products:	Public Drinking Water
2. Responsible Agency:	Department of Health
3. Code of Virginia Citation:	§ 32.1-167 through 31.1.176
4. Virginia Rules and Regulations:	12 VAC 5-590; 12 VAC 5-600.
5. Related Federal Statutes:	Safe Drinking Water Atct (PL 93-523); Safe Drinking Water Act Amendments of 1986 (PL 95-339); Safe Drinking Water Act Amendments of 1996.
6. Program Identification:	
a. Budget Code:	601-103xxxx-512-07
b. Source of Funds:	General Fund, EPA Grant, Waterworks Fees.
c. Contact:	Wes Kleene, Ph.D., Director Office of Drinking Water VA Department of Health 109 Governor Street, 6th fl. Richmond, VA 23219 804-864-7488
d. Support Agencies:	Department of General Services, Division of Consolidated Laboratory Services; Department of Health.
7. Control Strategies:	Providing engineering evaluation and technical support for review of the process design of all public water works in Virginia. Inspection and surveillance including extensive water quality monitoring of all Virginia waterworks. Participation in Pollution Response Emergency Program with the Department of Environmental Quality and Department of Emergency Management involving inspections, notification and technical assistance of pollution events and waste spills.
8. Legal Remedies:	Orders, injunctions; mandamus; civil penalties, criminal penalties; administrative penalties.
9. Status:	
a. Reports:	Memorandum of Understanding with the Department of Housing and Community Development to provide coordination of cross connection control devices. HD-30 (1990).
b. Current Status:	All Federal Regulations currently incorporated in the VAC.
c. Major Future Plans:	Revising the Waterworks Regulations to keep up with changes in Safe Drinking Water Act (federal) regulations and to keep up with new technologies and processes.

1. Regulated Products:	Sewage (Wastewater)
2. Responsible Agency:	Department of Health; Department of Environmental Quality, State Water Control Board.
3. Code of Virginia Citation:	§ 32.1-164 and 246; 62.1-44.19 et seq.
4. Virginia Rules and Regulations:	Biosolids Use Regulations (12VAC 5-585), effective October 15, 1997. Sanitary Regulations for Marinas and Boat Moorings (12 VAC 5-570), effective October 1, 1990.
5. Related Federal Statutes:	Public Health Service Act (P.L. 78-410); Water Pollution Control Act Amendments of 1972 (P.L. 92-500); Clean Water Act (P.L. 95-217, P.L. 97-117).
6. Program Identification:	
a. Budget Code:	601-650-xxxx-512-05 and 601-xxx-xxxx-425-02
b. Source of Funds:	General Fund.
c. Contact:	C. M. Sawyer, Ph.D., Director Division of Wastewater Engineering VA Department of Health P.O. Box 2448, Room 516 West Richmond, VA 23218 804-864-7463
d. Support Agencies:	Department of Environmental Quality; Department of Conservation and Recreation; Department of General Services, Division of Consolidated Laboratory Services.
7. Control Strategies:	Coordination of the review of sludge management, biosolids use and septage disposal plans and proposals including the arrangement of public meetings. Inspection and surveillance of specific permitted sites related to agricultural use of biosolids. Investigation of complaints concerning land application of biosolids and other sludge management operations. Inspections of marinas and other places where boats are moored to determine if adequate, on shore, sanitary facilities for boaters exist.
8. Legal Remedies:	Inspection warrants; orders; injunction; mandamus; civil penalties; civil charges; Class 1 Misdemeanor.
9. Status:	Presentations on the State Regulations for Biosolids Use. Developed public information materials and demonstration projects to encourage boaters to refrain from discharging wastes overboard.

a. Reports:	Amended the Biosolids Use Regulations to provide for a land application fee program that would support reimbursement of local monitoring expenses. Developed additional draft and proposed amendments to the Biosolids Use Regulations to be adopted in 2004 and 2005.
b. Current Status:	Implementing the Clean Vessel Act Federal Grant Program for Virginia marina facilities to provide grants for installation of boat sewage receiving equipment. Implementing the Boater Infrastructure Grant Program to help provide improved services for transient boaters using Virginia boat mooring facilities. Prepared report for the State Board of Health and the Virginia General Assembly concerning the EPA response to the NRC Report on Biosolids Applied to Land. Proceed with development of a new regulation to replace the Sanitary Regulations for Marinas and Boat Moorings in accordance with the recommendations of the Regulations Advisory Committee.
c. Major Future Plans:	Establish a database and GIS information system for the land application of biosolids to store permit and operational report information, thereby promoting efficient information exchange and retrieval of permit compliance status.

1. Regulated Products:	Shellfish and Crustacea
2. Responsible Agency:	Department of Health, Division of Shellfish Sanitation
3. Code of Virginia Citation:	§ 28.1-175 thru 28.1-183.2
4. Virginia Rules and Regulations:	Rules and Regulations Governing the Sanitary Control of Oysters, Clams and Other Shellfish; Rules and Regulations for the Sanitary Control of the Picking, Packing and Marketing of Crab Meat for Human Consumption; Regulations for the Repacking of Crab Meat.
5. Related Federal Statutes:	National Shellfish Sanitation Program (NSSP), Guide for the Control of Molluscan Shellfish, 1997 Revision.
6. Program Identification:	Voluntary Program: Interstate Shellfish Sanitation Conference (ISSC).
a. Budget Code:	601-051-5540400
b. Source of Funds:	General Fund.
c. Contact:	Robert E. Croonenberghs, Ph.D. Division of Shellfish Sanitation VA Department of Health 109 Governor St, Room 614 Richmond, VA 23218 804-864-7477
d. Support Agencies:	VA Marine Resources Commission; Dept. of Environmental Quality, Water Division; VA Institute of Marine Science; Department of General Services, Division of Consolidated Laboratory Services; VPI & SU, Dept. of Food Science and Technology.
7. Control Strategies:	Provide quality control for the shellfish and crustacea industry through plant inspections and laboratory support in the examination of raw and finished products. Perform sanitary and bacteriological surveys for the classification of the shellfish growing areas. As part of the classification activities, collect heavy metal, radiological and pesticide samples, all of which are examined at the Division of Consolidated Laboratory Services.
8. Legal Remedies:	Inspection warrants; orders; injunctions; mandamus; civil penalties; civil charges; Class I Misdemeanor.
9. Status:	
a. Reports:	Memorandum of Understanding with the Department of Environmental Quality, State Water Control Board, the VA Marine Resources Commission, the VA Dept. of Agriculture and Consumer Services, and U.S. Food and Drug Administration.
b. Current Status:	On-going program.
c. Major Future Plans:	To apply new classification procedures and maintain NSSP and ISSC approval and conforming status to allow Virginia dealers to continue marketing their product interstate. To enhance the classification of shellfish growing waters using newly developed GIS capabilities.

1. Regulated Products:	Onsite Sewage Treatment and Disposal
2. Responsible Agency:	Department of Health
3. Code of Virginia Citation:	§ 32.1-12 and 32.162-166
4. Virginia Rules and Regulations:	Virginia Administrative Code (12 VAC 5-610-10 et seq.) Sewage Handling and Disposal Regulations
5. Related Federal Statutes:	Clean Water Act
6. Program Identification:	
a. Budget Code:	601-44001200
b. Source of Funds:	General Fund
c. Contact:	Donald J. Alexander Director, Division of Onsite Sewage and Water Services Virginia Department of Health 109 Governor Street Richmond, Virginia 23219 804-864-7452
d. Support Agencies:	Department of Environmental Quality Department of Conservation and Recreation
7. Control Strategies:	Provide protection of groundwater and public health through proper site evaluation, design, permitting, and inspection of onsite sewage systems. Investigate complaints of malfunctioning systems and regulate sewage handlers who pump and haul septage.
8. Legal Remedies:	Notice of Violation, inspection warrants, orders, injunctions, mandamus, Class I misdemeanor, informal and formal hearing, permit revocation.
9. Status:	
a. Reports:	Report to the Governor and General Assembly every five years.
b. Current Status:	On-going program.
c. Major Future Plans:	To promulgate performance-based regulations. Facilitate expedient and fair assimilation of new technology into the program while encouraging use of advanced treatment systems with monitoring and maintenance.

1. Regulated Products:	Radioactive Materials and Radiation Producing Machines
2. Responsible Agency:	Department of Health
3. Code of Virginia Citation:	§ 32.1-227 et seq.
4. Virginia Rules and Regulations:	Ionizing Radiation Rules and Regulations, effective July 6, 1988.
5. Related Federal Statutes:	Atomic Energy Act (U.S. Nuclear Regulatory Commission), and Radiation Control for Health and Safety Act (U.S. Food & Drug Administration).
6. Program Identification:	
a. Budget Code:	601-631-0100-557-05
b. Source of Funds:	General, Federal, and Special Funds
c. Contact:	Khizar Wasti, Ph.D., Director Division of Health Hazards Control Virginia Department of Health 109 Governor Street, Room 341 P.O. Box 2448 Richmond, VA 23218 804-864-8182
d. Support Agencies:	Department of General Services, Division of Consolidated Laboratory Services; Department of Emergency Management.
7. Control Strategies:	Record keeping; inspections; leak tests; labeling; certification of generally licensed physicians; certification of generally licensed clinical or laboratory personnel for in vitro testing; specific licensing for human use, industrial radiography, and broad use; specific licensing of manufacture, assembly, repair or distribution of exempt quantities in products/devices; reports of transfer; orders for bioassay; notification of thefts, loss, over-exposure, and excessive levels; posting of notices; notification of radiation exposure; registration, inspection and certification of radiation producing machines.
8. Legal Remedies:	Inspection warrants; orders; injunction; mandamus; civil penalties; civil charges; Class 1 Misdemeanor.
9. Status:	
a. Reports:	Annual report, 2002. Environmental monitoring for ionizing radiation currently consists of the collection and analysis of 212 samples annually. Facilities under surveillance include the Newport News Shipbuilding and Dry Dock Company, Norfolk Naval Shipyard, Babcock and Wilcox Naval Nuclear Fuel Division in Lynchburg, North Anna Nuclear Power Plant and the Surry Nuclear Power Plant. Diagnostic and therapeutic X-ray machine registration, inspection and certification activities currently list a total of 17,000 tubes registered. Radioactive materials licensing program, which regulates the use of naturally occurring and accelerator produced radioisotopes has issued 215 state licenses. The program is maintaining an emergency response capability by providing a duty officer rotation

	system with 24 hours a day coverage and participation in four training exercises annually at the state's two nuclear power facilities. The program maintains a mobile radiation laboratory. Indoor radon activities are continuing. Toll-free hotline inquiries are averaging 1,500 annually.
b. Current Status:	Revise the Radiation Protection Regulations and fee schedule. Study the feasibility of entering into an agreement with the U.S. Nuclear Regulatory Commission for the regulation of certain radioactive materials.
c. Major Future Plans:	Seek funding to replace mobile radiation laboratory equipment and vehicles.

1. Regulated Products:	Toxicologic Information
2. Responsible Agency:	Department of Health
3. Code of Virginia Citation:	§ 32.1-239, et seq.
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	None
6. Program Identification:	
a. Budget Code:	601-632-0100-5570700
b. Source of Funds:	General Fund.
c. Contact:	Khizar Wasti Ph.D., Director Division of Health Hazards Control Toxic Substances Information Virginia Department of Health P.O. Box 2448, Room 338C Richmond, VA 23218 804-864-8182
d. Support Agencies:	Department of Health, Office of Epidemiology; Department of General Services, Division of Consolidated Laboratory Services; Department of Environmental Quality; Department of Game and Inland Fisheries.
7. Control Strategies:	Providing toxicologic information, health hazard evaluations, risk assessments, and on-site health risk evaluations.
8. Legal Remedies:	None
9. Status:	
a. Reports:	Annual Monitoring of Ongoing Research on the Health Effects of High Voltage Transmission Lines; 1984 through 1998 and 2000; Annual/ Biennial Reports to the General Assembly and Governor on the Status of Control of Toxic Substances in the Commonwealth; Annual Report on Summary of Surveillance Data for Virginia Children with Elevated Blood Lead Levels.
b. Current Status:	Toxicologic evaluations; continued routine operations by responding to intra- and inter-agency requests; preparing press releases, advisories, information sheets, and reports and disseminating them. Database/Information searching: retrieval of toxicologic, chemical, and medical information using commercial on-line sources such as Toxline; MedlinePlus; Hazardous Substance Data Base; and Integrated Risk Information System for numerous state agencies and programs. Maintain statewide computerized database for the surveillance of children with elevated blood lead levels. Disseminate information and reports based on statistical analysis of data. Maintain statewide database for the surveillance of adult toxic substances exposures based on reports from

	physicians, hospitals, and laboratories. Generate reports based on analysis of data.
c. Major Future Plans:	Continue to provide health hazard evaluations and disseminate information concerning toxic substances to state agencies, health professionals, and the public.

1. Regulated Products:	*Pfiesteria* species and *Pfiesteria*-like organisms (PLOs).
2. Responsible Agency:	Department of Health
3. Code of Virginia Citation:	None
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	None
6. Program Identification:	
a. Budget Code:	601-617-1000-4050500-93294
b. Source of Funds:	Federal Funds - Centers for Disease Control and Prevention (CDC).
a. Contact:	Michele M. Monti Waterborne Hazards Control Program Division of Zoonotic and Environmental Epidemiology Office of Epidemiology Virginia Department of Health P.O. Box 2448 Richmond, VA 23218 804-864-8111
d. Support Agencies:	Department of Health, Office of Epidemiology and Office of Water Program, Division of Shellfish Sanitation; Department of General Services, Division of Consolidated Laboratory Services; Department of Environmental Quality; Virginia Institute of Marine Sciences; Old Dominion University; Virginia Commonwealth University; Virginia Marine Resources Commission.
7. Control Strategies:	Monitor Virginia tributaries to the Chesapeake Bay for *Pfiesteria* and harmful algae. Collect water samples for analysis; conduct active and enhanced passive surveillance for *Pfiesteria*-related illness, Vibrio and atypical mycobacterium infections. Participate on a statewide team to respond to a potential *Pfiesteria* outbreak.
8. Legal Remedies:	State Health Commissioner can close river to fishing or recreation if there is evidence of human health risk.
9. Status:	
a. Reports:	Six-month Program Reports are sent to CDC in April and October; Annual reports are prepared in January as part of the grant continuation process.
b. Current Status:	Water monitoring is conducted from May through November; passive surveillance is ongoing throughout the year. Fish kills and fish lesion events are sampled for *Pfiesteria* and PLOs as they occur. The putative *Pfiesteria* toxin has not been isolated at this time. Research to isolate the toxin is ongoing.
c. Major Future Plans:	Continue to sample the estuarine waters of the Commonwealth for *Pfiesteria* species and PLO to provide information concerning possible toxic outbreaks of the organism to the public.

1. Regulated Products:	Chemical, biological and radiological agents (Emergency Preparedness and Response)
2. Responsible Agency:	Department of Health
3. Code of Virginia Citation:	None
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	None
6. Program Identification:	
a. Budget Code:	601-619-1000-4050500
b. Source of Funds:	Federal Funds
c. Contact:	Lisa G. Kaplowitz, MD, MSHA Emergency Preparedness and Response, 13th Floor Virginia Department of Health P. O. Box 2448 Richmond, VA 23218 804-864-8181
d. Support Agencies:	Department of Health, Office of Epidemiology, Office of Emergency Medical Services, Office of Medical Examiner, Office of Information Management, Division of Health Hazards Control, Emergency Preparedness and Response Programs; Department of General Services, Division of Consolidated Laboratory Services; Department of Emergency Management; Department of State Police; Federal Bureau of Investigation; Centers for Disease Control and Prevention (CDC); Virginia Hospital and Healthcare Association; US Health Resources and Services Administration.
7. Control Strategies:	Statewide disaster and terrorism planning, preparedness and response training for local health affiliates.
8. Legal Remedies:	None
9. Status:	
a. Reports:	Annual Progress Report to CDC and HRSA
b. Current Status:	The Virginia Department of Health was awarded a Bioterrrorism Preparedness and Response Program Cooperative Agreement Grant by the CDC to upgrade state and local health department preparedness and response capabilities relative to natural disasters and terrorism events, especially bioterrorism. The grant has strengthened health department infrastructure in the areas of epidemiologic surveillance and development of a statewide communication and training network designed to provide local health departments training on disaster and terrorism preparedness and response. Additional progress has been made in developing relationships with private healthcare.

c. Major Future Plans:	These grants have also allowed the state public health laboratory in the Department of General Services, Division of Laboratory Consolidated Services, to enhance their capacity to identify biological and chemical terrorism agents. Further grant monies have been provided to hospitals to assist them in preparing for mass casualty response to bioterror events. The Emergency Preparedness and Response Programs will enhance the existing statewide epidemiologic surveillance system and create a statewide VDH health alert network (HAN) for the 35 Virginia health districts. Improving disease surveillance will help state health officials to identify and respond more quickly to outbreaks of infectious communicable diseases and possible bioterrorism events. The statewide HAN will provide rapid fax communication to all 35 health districts, physicians, pharmacists, media and emergency response agencies, and allow access to archived health information by all 35 health districts. Through the Division of Consolidated Laboratory Services, laboratory analysis techniques will be established to aid in the rapid identification of possible chemical and biological terrorism agents.

1. Regulated Products:	Drugs and Devices
2. Responsible Agency:	Department of Health Professions
3. Code of Virginia Citation:	§ 54-1.3400 et seq.
4. Virginia Rules and Regulations:	Board of Pharmacy Regulations 18VAC 110-20 et seq.
5. Related Federal Statutes:	Food, Drug and Cosmetic Act (U.S. Food and Drug Administration) & C. F. R. Tile 21.
6. Program Identification:	
a. Budget Code:	223-xxx-0900-560-44
b. Source of Funds:	Fees.
b. Contact:	J. Samuel Johnson, Jr. Deputy Director of Enforcement 6603 W. Broad Street, 5th Floor Richmond, VA 23230-1712 804/662-9902 Scotti Russell, Executive Director Board of Pharmacy 6603 West Board Street, 5th Floor Richmond, VA 23230-1712 804/662-9911
d. Support Agencies:	Department of General Services, Division of Forensic Science Services.
7. Control Strategies:	Examination and licensing of pharmacists; licensing of physicians; permitting of pharmacies, humane societies, medical equipment suppliers, warehousers, and manufacturers; licensing of wholesalers and distributors; registration of controlled substances; inventory loss reports; inspection; sampling.
8. Legal Remedies:	Suspension, revocation, restriction; denial, or refusal to review a license, permit or registration; monetary penalty; injunction; embargo; seizure; forfeiture; destruction.
9. Status:	
a. Reports:	Biennial Report, Fiscal Year 2002-2004.
b. Current Status:	Continuing routine operations.
c. Major Future Plans:	Continuing routine operations.

1. Regulated Products:	Chemicals and Safety in the Workplace
2. Responsible Agency:	Department of Labor and Industry; Safety and Health Codes Board
3. Code of Virginia Citation:	§ 40.1-1 et seq.; § 40.1-22; § 40.1-40 et seq.
4. Virginia Rules and Regulations:	Safety and Health Codes Board regulations. Virginia Occupational Safety and Health Administrative Regulations Manual as adopted by the Commissioner of the Department of Labor and Industry and the Virginia Safety & Health Codes Board. Standards for General Industry, with amendments as of November 15, 2003. Virginia Occupational Safety and Health Standards for Agriculture, July 1, 1998. Virginia Occupational Safety and Health Standards for the Construction Industry, with amendments as of November 15, 2003.
5. Related Federal Statutes:	Occupational Safety and Health Act (P.L. 91-596) (U.S. Departments of Labor and Health and Human Services).
6. Program Identification:	
a. Budget Code:	181-xxxx-555-01
b. Source of Funds:	General Funds, Federal Funds
c. Contact:	Ronald L. Graham Division of Occupational Health Compliance Virginia Occupational Safety & Health Program Department of Labor and Industry 13 S.13th Street Richmond, VA 23219 804-786-0574
d. Support Agencies:	Department of General Services, Division of Consolidated Laboratory Services; Department of Health.
7. Control Strategies:	Inspections; investigations; variances from standards; sampling; abatement determinations.
8. Legal Remedies:	Order to compel entry or inspection; inspection warrants; orders of abatement; injunctions; citations; civil penalties; misdemeanor.
9. Status:	
a. Reports:	Statistics gathered and reported on a quarterly basis by Management Information Systems, Department of Labor and Industry; participating in unified Federal Management Information System.
b. Current Status:	Continuing inspection and training operations, since September 1981, assuming responsibilities previously held by the Federal OSHA program.
c. Major Future Plans:	Administer an effective Occupational Safety and Health program within existing resources.

1. Regulated Products:	Coal Mine Safety
2. Responsible Agency:	Department of Mines, Minerals and Energy, Division of Mines
3. Code of Virginia Citation:	Title 45.1, Chapters 14.1-14.4., 14.7, and 18.
4. Virginia Rules and Regulations:	Board of Coal Mining Examiners Certification Requirements (4 VAC 25-20); Rules and Regulations Governing the Installation and Use of Automated Temporary Roof Support Systems (4 VAC 25-60); Rules and Regulations Governing Disruption of Communication in Mines (4 VAC 25-70); Rules and Regulations Governing the Use of Diesel-Powered Equipment in Underground Coal Mines (4 VAC 25-90); Regulations Governing Vertical Mine Ventilation Holes and Mining Near Gas and Oil Wells (4 VAC 25-101); Rules and Regulations Governing Blasting in Surface Mining Operations (4 VAC 25-110); Rules and Regulations Governing the Installation and Use of Cabs and Canopies (4 VAC 25-120); Regulations Governing Coal Stockpiles and Bulk Storage and Handling Facilities (4 VAC 25-125).
5. Related Federal Statutes:	Federal Mine Safety and Health Act of 1977, 30 CFR Parts 1 to 199
6. Program Identification:	
a. Budget Code:	409-55500-55503 and 55504
b. Source of Funds:	General Funds; Special Funds; Federal Funds.
c. Contact:	Frank A. Linkous, Chief Division of Mines Department of Mines, Minerals, and Energy P.O. Drawer 900 Big Stone Gap. VA 24219 276-23-8226
d. Support Agencies:	U.S. Mine Safety and Health Administration.
7. Control Strategies:	Inspection and enforcement; investigation of deaths, serious injuries, fires and explosions; mine rescue and recovery; examination and certification of mine employees; mine licensing; education and training; Coal Mine Operator Technical Assistance.
8. Legal Remedies	Notice of violation; closure orders; Class 1 misdemeanor; injunction; Class 6 felony.
9. Status:	
a. Reports:	Statistics of fatal accidents and serious injuries; coal production. Inspection and related reports.
b. Current Status:	Routine inspection and enforcement; certification of mine employees; training; and technical assistance.
c. Major Future Plans:	Continue current operations.

1. Regulated Products:	Coal Surface Mining and Reclamation
2. Responsible Agency:	Department of Mines, Minerals and Energy, Division of Mined Land Reclamation
3. Code of Virginia Citation:	Title 45.1, Chapter 17, 18 and 19
4. Virginia Rules and Regulations:	Virginia Coal Surface Mining Reclamation Regulations (4 VAC 25-130); Virginia Coal Surface Mining Regulations (4 VAC 25-140).
5. Related Federal Statutes:	Surface Mining Control and Reclamation Act of 1977 (30 CFR Parts 700 to End).
6. Program Identification:	
a. Budget Code:	409-50300-50304
b. Source of Funds:	General Fund; Federal Funds; Special Funds; and Trust and Agency Funds.
c. Contact:	Acting Director Division of Mined Land Reclamation Department of Mines, Minerals, and Energy P.O. Drawer 900 Big Stone Gap, VA 24219 276-523-8100
d. Support Agencies:	U.S. Office of Surface Mining, Reclamation and Enforcement.
7. Control Strategies:	Permitting; inspection; certification; and reclamation of abandoned mined lands.
8. Legal Remedies:	Notices of violation; cessation orders; show-cause orders; permit revocation; bond forfeiture; civil penalties; Class 1 misdemeanor.
9. Status:	
a. Reports:	Permits and inspection reports.
b. Current Status:	Routine inspection and enforcement; permitting of new activities.
c. Major Future Plans	Continue to study previously mined lands to determine impact of reclamation on non-point sources of pollution and acid-mine drainage. Assist mine operators with projects to remine previously mined lands.

1. Regulated Products:	Oil and gas production; geothermal energy production
2. Responsible Agency:	Department of Mines, Minerals and Energy, Division of Gas and Oil
3. Code of Virginia Citation:	Title 45.1, Chapters 15.1 and 22.1
4. Virginia Rules and Regulations:	Virginia Gas and Oil Regulations (4 VAC 25-150); Virginia Gas and Oil Board Regulations (4 VAC 25-160); Geothermal Energy Regulations (4 VAC 25-170).
5. Related Federal Statutes:	U.S. Geothermal Steam Act of 1970.
6. Program Identification:	
a. Budget Code:	409-50600-50603
b. Source of Funds:	General Funds; Special Funds; Dedicated Special Revenue Funds.
c. Contact:	B. R. Wilson, Division Director Division of Gas and Oil Department of Mines, Minerals, and Energy P.O. Box 1416 Abingdon, VA 24212 276-676-5423
d. Support Agencies:	U.S. Environmental Protection Agency
7. Control Strategies:	Permitting; inspection; well spacing; and pooling.
8. Legal Remedies:	Notice of violation; closure orders; permit revocation; bond forfeiture; civil charges, civil penalties; Class 1 misdemeanor; injunction.
9. Status:	
a. Reports:	Statistics on permitted operations and gas and oil production inspection reports; production reports.
b. Current Status:	Routine inspection and enforcement activities; permitting of new operations.
c. Major Future Plans:	Continue reclamation of orphaned well sites throughout Virginia.

1. Regulated Products:	Mining of Minerals Other Than Coal
2. Responsible Agency:	Department of Mines, Minerals and Energy, Division of Mineral Mining
3. Code of Virginia Citation:	Title 45.1, Chapters 14.1, 14.4:1, 14.5, 14.6, 14.7:1, 16, 18.1
4. Virginia Rules and Regulations:	Reclamation Regulations for Mineral Mining (4 VAC 25-31); Certification Requirements for Mineral Miners (4 VAC 25-35); Safety and Health Regulations For Mineral Mining (4 VAC 25-40).
5. Related Federal Statutes:	Federal Mine Safety and Health Act of 1977, 30 CFR Parts 0 to 199.
6. Program Identification:	
a. Budget Code:	409-50600-50602
b. Source of Funds:	General Fund; Federal Funds; Special Funds; Dedicated Special Revenue Funds.
c. Contact:	Conrad T. Spangler, III, Division Director Division of Mineral Mining Department of Mines, Minerals, and Energy 900 Natural Resources Drive P.O. Box 3727 Charlottesville, VA 22903 434-951-6310
d. Support Agencies:	U.S. Mine Safety and Health Administration
7. Control Strategies:	Permitting; inspection; identification and reclamation of orphaned lands.
8. Legal Remedies:	Orders; notices of noncompliance; closure orders; permit revocation; bond forfeiture; Class 1 misdemeanor.
9. Status:	
a. Reports:	Statistics of permitted operations; inspection reports; production reports.
b. Current Status:	Routine permitting and enforcement activities; investigate complaints; reclaim orphaned lands; certification of mine employees; and training.
c. Major Future Plans:	Continue current operations.

1. Regulated Products:	Asbestos
2. Responsible Agency:	Department of Professional and Occupational Regulation
3. Code of Virginia Citation:	§ 54.1-500 et seq.
4. Virginia Rules and Regulations:	Virginia Asbestos Licensing Regulations (18 VAC 15-20-10 et seq.), Effective January 2, 2002.
5. Related Federal Statutes:	Asbestos School Hazard Abatement Reauthorization Act (ASHARA).
6. Program Identification:	
a. Budget Code:	222-506-0900-560-44-00
b. Source of Funds:	Fees.
c. Contact:	Ms. Louise Fontaine Ware, Director Department of Professional & Occupational Regulation 3600 West Broad Street Richmond, Virginia 23230 804-67-8519
d. Support Agencies:	Department of Labor & Industry; Department of General Services; Department of Environmental Quality.
7. Control Strategies:	Licensing; Training Course Approval; Investigation.
8. Legal Remedies:	Class 3 Misdemeanor; Class 1 Misdemeanor; Civil Penalties.
9. Status:	
a. Reports:	Biennial Report 2002-04.
b. Current Status:	Continuing operations.
c. Major Future Plans:	Review and revise regulatory provisions for licensing and training courses.

1. Regulated Products:	Lead-Based Paint
2. Responsible Agency:	Department of Professional and Occupational Regulation
3. Code of Virginia Citation:	§ 54.1-500 et seq.
4. Virginia Rules and Regulations:	Virginia Lead-Based Paint Activities (18 VAC 15-30-10 et seq.), Effective September 8, 2004.
5. Related Federal Statutes:	Toxic Substances Control. Act (TSCA), Section 402.
6. Program Identification:	
a. Budget Code:	222-507-0900-560-44-00
b. Source of Funds:	Fees.
c. Contact:	Ms. Louise Fontaine Ware, Director Department of Professional & Occupational Regulation 3600 West Broad Street Richmond, Virginia 23230 804-367-8519
d. Support Agencies:	Department of Labor & Industry; Department of Environmental Quality; Department of Health.
7. Control Strategies:	Licensing; training course approval; investigation.
8. Legal Remedies:	Class 3 Misdemeanor; Class 1 Misdemeanor; Civil Penalties.
9. Status:	
a. Reports:	Biennial Report 2002-04.
b. Current Status:	Continuing operations.
c. Major Future Plans:	Review and revise regulatory provisions for licensing and training courses.

1. Regulated Products:	Waterworks and Wastewater Works Operators
2. Responsible Agency:	Department of Professional and Occupational Regulation
3. Code of Virginia Citation:	§ 54.1-2300 et seq.
4. Virginia Rules and Regulations:	Board For Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.), effective February 15, 2001.
5. Related Federal Statutes:	None
6. Program Identification:	
a. Budget Code:	222-019-0900-560-00
b. Source of Funds:	Fees.
c. Contact:	Ms. Louise Fontaine Ware, Director Department of Professional & Occupational Regulation 3600 West Broad Street Richmond, Virginia 23230 804-367-8519
d. Support Agencies:	Department of Health; Department of Environmental Quality.
7. Control Strategies:	Examination; licensure investigation.
8. Legal Remedies:	Class 3 Misdemeanor; Class 1 Misdemeanor; civil penalties.
9. Status:	
a. Reports:	Biennial Report 2002-04.
b. Current Status:	Continuing routine operations.
c. Major Future Plans:	Review and revise regulatory provisions for licensing.

1. Regulated Products:	Transportation of Hazardous Materials
2. Responsible Agency:	Department of State Police; all law enforcement and peace officers.
3. Code of Virginia Citation:	§ 10.1-1450, et seq.
4. Virginia Rules and Regulations:	Regulations Governing the Transportation of Hazardous Materials, July 4, 2003.
5. Related Federal Statutes:	Hazardous Materials Transportation Act (U.S. Department of Transportation).
6. Program Identification:	
a. Budget Code:	605-05
b. Source of Funds:	Federal Grant and Special Funds
c. Contact:	Lieutenant Colonel Eugene A. Stockton Director, Bureau of Field Operations Department of State Police P.O. Box 27472 Richmond, VA 23261-7472 804-674-2013
d. Support Agencies:	Department of Environmental Quality; Department of General Services, Division of Consolidated Laboratory Services.
7. Control Strategies:	Inspections
8. Legal Remedies:	Inspection warrants; orders; injunctions; mandamus; civil penalties; civil charges; Class 1 Misdemeanor.
9. Status:	
a. Reports:	Transportation of Hazardous Materials and Motor Carrier Safety, Annual Report Information, 2003/2004.
b. Current Status:	Commercial Vehicles Inspected a. Violations b. Placed Out-of-Service The Motor Carrier Safety/Hazardous Materials Enforcement Program continues to focus on roadside safety/hazardous materials inspections throughout the Commonwealth. The number of authorized trooper positions is 58 with 12 vacancies due to retirements and promotions. There are three (3) troopers conducting Compliance Reviews in conjunction with the Federal Motor Carrier Safety Administration and six (6) conducting safety audits.
c. Major Future Plans:	Increase traffic patrol program coupled with Level 2 and 3 inspections, and equip each Motor Carrier Safety Trooper with new computers for recording inspections. Wireless communications equipment is being installed and new entrant safety audits will be increased.

1. Regulated Products:	Waters of the State
2. Responsible Agency:	Virginia Institute of Marine Science
3. Code of Virginia Citation:	§ 28.1-195
4. Virginia Rules and Regulations:	None
5. Related Federal Statutes:	Water Pollution Control Act, Amendments of 1972 (P.L. 92-500); Clean Water Act (P.L. 95-217 & 97-117) U.S. EPA.
6. Program Identification:	
a. Budget Code:	268-xxx-0100-505-04 (General Fund).
b. Source of Funds:	General Fund, Federal Grants and Contracts, limited corporate/private grants and contracts.
b. Contact:	John T. Wells, Dean/Director School of Marine Science Virginia Institute of Marine Science College of William & Mary P.O. Box 1346 Gloucester Point, VA 23062-1346 804-684-7103
d. Support Agencies:	Department of Environmental Quality; Department of Health
7. Control Strategies:	Research and monitoring studies to determine the fate and effects of toxic organic chemicals in Virginia waters. The Institute's Office of Safety and Environmental Programs manages hazardous and toxic wastes according to state and federal regulations.
8. Legal Remedies:	Advise appropriate regulatory agencies of results.
9. Status:	
a. Reports:	Researchers at VIMS produce a substantial quantity of technical reports that are available in the peer-reviewed literature and in unreviewed technical and contract reports many of which concern toxic substances in the environment. Listings of publications are available from the Institute's Library.
b. Current Status:	Research continues to improve the understanding of organic pollutants in atmospheric deposition, sediments, water, and aquatic biota in the Bay and its tributaries from which researchers can infer information about transport and fate. Studies are coupled with research to examine effects of exposure to organic contaminants on immuno-response, enzyme activity, histology, DNA adduct formation, carcinogenesis in fishes, and a number of other endpoints.

c. Major Future Plans:	Continue studies of effects of chemical pollutants using biochemical, immunological, molecular, histological, and other markers. Study interactions of chemical contaminants and other types of stressors on the health of aquatic organisms.

1. Regulated Products:	Marine Fisheries/All State-owned Submerged Land/Wetlands and Coastal Primary Sand Dunes
2. Responsible Agency:	Virginia Marine Resources Commission
3. Code of Virginia Citation:	Title 28.2
4. Virginia Rules and Regulations:	Various Fisheries and Habitat Regulations.
5. Related Federal Statutes:	Rivers and Harbors Act 1899; Clean Water Act; Magnuson Fishery Conservation and Management Act.
6. Program Identification:	
a. Budget Code:	402-510-02
b. Source of Funds:	General Funds.
c. Contact:	Mr. Tony Watkinson Deputy Chief, Habitat Management Division Virginia Marine Resources Commission P.O. Box 756 Newport News, VA 23607 757-247-2200
d. Support Agencies:	Virginia Institute of Marine Science, Local Wetlands Boards.
7. Control Strategies:	Permits for encroachment in, on, or over state-owned bottoms, wetlands or coastal primary sand dunes; enforce closures of condemned shellfish growing areas; inspect for illegal use of TBT paints.
8. Legal Remedies:	Orders to comply; stop work orders; local court injunctions; court summons; action by Office of the Attorney General.
9. Status:	
a. Reports:	Virginia Landings Bulletin; Monthly Permit Report; Annual Reports of Subaqueous Permits/Wetlands; and Sand Dune Permits.
b. Current Status:	Close coordination with local/state and federal regulatory agencies to assure to the maximum extent practicable a wholesome habitat for living resources of the Commonwealth.
c. Major Future Plans:	Development of Fisheries Management Plans.