Department of Environment and Conservation
and
Related Environmental Boards

March 2000

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March 13, 2000

The Honorable John S. Wilder
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The Honorable Jimmy Naifeh
Speaker of the House of Representatives
The Honorable Kenneth N. (Pete) Springer, Chair
Senate Committee on Government Operations
The Honorable Mike Kernell, Chair
House Committee on Government Operations
and
Members of the General Assembly
State Capitol
Nashville, Tennessee 37243

Ladies and Gentlemen:

Transmitted herewith is the performance audit of the Department of Environment and Conservation and Related Environmental Boards. This audit was conducted pursuant to the requirements of Section 4-29-111, *Tennessee Code Annotated*, the Tennessee Governmental Entity Review Law.

This report is intended to aid the Joint Government Operations Committee in its review to determine whether the department and boards should be continued, restructured, or terminated.

Sincerely,

John G. Morgan
Comptroller of the Treasury

JGM/dww
99-044

State of Tennessee

Audit Highlights

Comptroller of the Treasury | Division of State Audit

Performance Audit

Department of Environment and Conservation

March 2000

AUDIT OBJECTIVES

The objectives of the audit were to determine the authority and responsibility mandated to the department and the related regulatory boards by statute and the extent to which the department and boards have fulfilled that mandate and complied with applicable laws and regulations; to determine the department's progress in correcting the problems identified in the August 1997 Sunset audit of the department; and to make recommendations that might result in more efficient and effective operation of the department and boards.

FINDINGS

The Division of Radiological Health Needs to Implement Changes to Improve the X-ray Inspection Process

The Division of Radiological Health estimates that it did not complete 29 percent of its scheduled inspections for 1998 and has not implemented changes recommended in the prior audit to plan for more efficient and effective use of staff resources. When the division does not complete inspections in a timely manner, it cannot provide assurance to X-ray machine operators and consumers that X-ray machines are safe and effective (page 18).

The Tennessee Underground Storage Tank Fund May Become Insolvent

The Tennessee Underground Storage Tank Fund has a larger amount of claims pending processing than fund balance available to pay the claims. The State of Tennessee *Comprehensive Annual Financial Report* has reported a declining balance for the fund, from $10.7 million on June 30, 1996, to a zero fund balance on June 30, 1999 (page 23).

Inspections of Underground Storage Tanks Are Not Completed in a Timely Manner

The Division of Underground Storage Tanks has not met its goal of 1,500 inspections per year. In addition, the department has not completed its compliance verification surveys to determine how many operating underground storage tanks are not meeting December 1998 federal and state leak detection requirements (page 27).

Standardization of Data and Method to Record Enforcement Activities and to Monitor Timeliness Is Lacking

The department does not have written policies and procedures for the regulatory divisions specifying the data they should use when recording enforcement activities and the method to be used to communicate the data to the enforcement coordinator. The department does not have a policy indicating the type and frequency of analyses that management should use to assess that data (page 30).

Park Boundary Survey Efforts Can Be Improved

The Division of Real Property is responsible for identifying and marking boundary lines for parks, natural areas, and historical and archaeological sites owned by the state and for documenting encroachments of those boundaries. According to staff of the division, 32 out of 52 state parks have unmarked boundaries. Surveys could identify possible encroachments. Encroachments occur when individuals or companies use state land as if it belonged to them (page 32).

All Indirect Costs Are Not Allocated to State Parks and Food Costs Need Monitoring

Administrative costs of the Division of State Parks central office and costs for major maintenance are not included in the total costs of the parks (page 36).

More Could Be Done to Address the Public Interest

The department does not have guidelines stipulating how to weigh economic benefit against environmental concerns. In addition, the related environmental boards do not require members to submit conflict-of-interest statements disclosing financial, personal, and professional interests that might conflict with board responsibilities. Also, three boards lack public members and a State Compliance Advisory Panel to assist small businesses with the federal Clean Air Act has not been established (page 39).

OBSERVATIONS AND COMMENTS

Observations and Comments from the August 1997 Sunset audit have been updated and included in this audit. They address the Environmental Protection Fund, the department's oversight of the Department of Energy's cleanup activities, Superfund Cleanup Standards, the Superfund Voluntary Program, a computerized reservation system for state parks, and the State Parks Foundation (page 8).

PRIOR AUDIT FINDINGS

The audit discusses the resolution of the following findings from the August 1997 audit: using case information to improve regulatory programs, coordinating division enforcement orders, department response to an environmental advocacy report, protecting the public interest, calculating the economic benefit of noncompliance, the state parks' maintenance system, management of state parks, coordination of public education efforts, and the Division of Internal Audit (page 12).

"Audit Highlights" is a summary of the audit report. To obtain the complete audit report which contains all findings, recommendations, and management comments, please contact

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Performance Audit
Department of Environment and Conservation
and Related Environmental Boards

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Performance Audit
Department of Environment and Conservation
and Related Environmental Boards

INTRODUCTION

PURPOSE AND AUTHORITY FOR THE AUDIT

This performance audit of the Department of Environment and Conservation and related regulatory boards was conducted pursuant to the Tennessee Governmental Entity Review Law, *Tennessee Code Annotated*, Title 4, Chapter 29. Under Section 4-29-221, the Department of Environment and Conservation is scheduled to terminate June 30, 2000. The Air Pollution Control Board, Board of Groundwater Management, and Solid Waste Disposal Control Board are scheduled to terminate June 30, 2000 (Section 4-29-221); and the Petroleum Underground Storage Tank Board is scheduled to terminate June 30, 2001 (Section 4-29-222). Under Section 4-29-223, the Water Quality Control Board is scheduled to terminate June 30, 2002. The Comptroller of the Treasury is authorized under Section 4-29-111 to conduct a limited program review audit of the department and the related regulatory boards and to report to the Joint Government Operations Committee of the General Assembly. The audit is intended to aid the committee in determining whether the department should be continued, restructured, or terminated.

OBJECTIVES OF THE AUDIT

The objectives of the audit were

1. to determine the authority and responsibility mandated to the department and to the related regulatory boards by the General Assembly;

2. to determine the extent to which the department and boards have fulfilled their legislative mandates and complied with applicable laws and regulations;

3. to determine the department's progress in correcting the problems identified in the August 1997 Sunset audit of the department; and

4. to develop possible alternatives for legislative and administrative actions that could result in more efficient and effective operation of the department and the boards.

SCOPE AND METHODOLOGY OF THE AUDIT

The activities and procedures of the Department of Environment and Conservation and related regulatory boards were reviewed with a focus on procedures in effect during field work (February 1999 to April 1999). The audit was conducted in accordance with generally accepted government auditing standards and included

1. review of applicable statutes and rules and regulations;
2. examination of the department's files, documents, policies, and procedures;
3. reports from the federal Environmental Protection Agency (EPA) on the department's divisions;
4. review of prior performance audit and financial and compliance audit reports and audit reports from other states; and
5. interviews with department staff, staff of the federal Environmental Protection Agency, and advocacy groups.

ORGANIZATION AND RESPONSIBILITIES

The Tennessee Department of Environment and Conservation was created when Executive Order Number 42, dated February 4, 1991, joined the Department of Health's Bureau of Environment with the Department of Conservation. The organization of the department and the authority of the commissioner are contained in Section 11-1-101, *Tennessee Code Annotated.* The department administers the implementation and enforcement of state and federal laws involving environmental activities and manages the state parks system and other programs related to conservation of natural resources. It is organized into five sections, all reporting to the commissioner: State Parks, Conservation, Finance and Systems, Marketing Development, and Environment. An organizational chart of the Department of Environment and Conservation is on page 3.

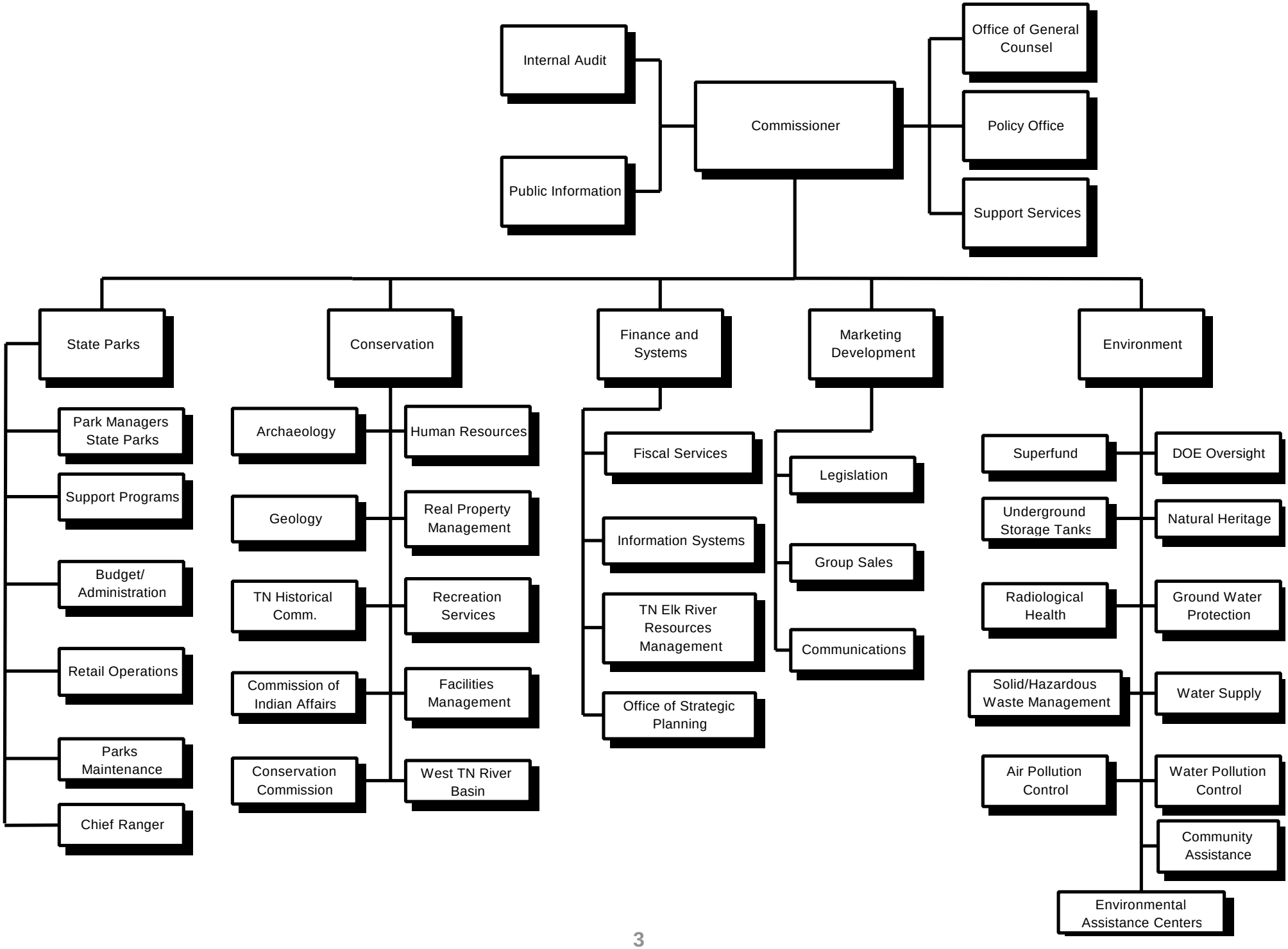
The department's mission is to

- promote, protect, and improve the quality of Tennessee's air, land, and water;
- provide an understandable and responsive regulatory system;
- conserve and promote Tennessee's natural and cultural resources; and
- provide a variety of quality recreation experiences.

State Parks is responsible for the management, protection, and maintenance of state parks and facilities.

Conservation has the following divisions:

Tennessee Department of Environment and Conservation



- Archaeology (*Tennessee Code Annotated*, Section 11-6-101) – responsible for identification and preservation of archaeological sites and artifacts.
- Geology (*Tennessee Code Annotated*, Section 11-5-101) – studies the state's geologic formations and publishes geologic, topographical, and economic maps.
- Tennessee Historical Commission – oversees state historic sites, assists publications on Tennessee history, and maintains the Tennessee Register of Historic Places.
- Commission of Indian Affairs – coordinates government resources to provide programs for Indian citizens and works with Indian communities in social and economic development.
- Conservation Commission – studies and makes recommendations concerning the conservation program and policies.
- Human Resources – provides personnel support services to the department.
- Real Property Management – responsible for the identification of boundary lines at state parks and historical sites, land acquisition, and obtaining property insurance for structures and contents at state parks.
- Recreation Services – administers grants and provides technical assistance to local governments for local parks and recreation facilities, trails, and greenways.
- Facilities Management – responsible for office space management and maintenance.
- West Tennessee River Basin Authority – responsible for conservation and environmental issues related to West Tennessee rivers.

Finance and Systems provides fiscal and computer services and support to the department, and includes the Tennessee Elk River Resources Management Division and the Office of Strategic Planning.

Marketing Development is responsible for increasing the state parks' revenue through group sales and advertising.

Environment has the following divisions:

- Division of Superfund – discovers, investigates, abates, and cleans up hazardous substance sites as authorized in the Hazardous Waste Management Act (*Tennessee Code Annotated*, Section 68-212-2016). Funding is a combination of fees, federal grants, cost recovery, and state appropriations. The division also oversees a voluntary cleanup program with responsible parties paying costs for state oversight.
- Division of Underground Storage Tanks – regulates underground storage tanks through inspections of existing tanks, cleanup of leaking tanks, and inspecting and monitoring the cleanups.
- Division of Radiological Health – regulates the use and possession of radioactive materials and radiation-producing machines through inspections and registration.

- Division of Solid and Hazardous Waste Management – responsible for regulating the processing and disposal of nonhazardous solid waste and the generation, recycling, storage, transportation, treatment, and disposal of hazardous waste within the state. Regulation of hazardous waste is a federal responsibility under the Resource Conservation and Recovery Act (RCRA). Tennessee has been authorized by the U.S. Environmental Protection Agency to administer the majority of their federal program in lieu of EPA. The Tennessee Solid Waste Disposal Control Board (*Tennessee Code Annotated,* Section 68-211-111) promulgates regulations regarding the Solid Waste Management Program, the Hazardous Waste Management Program, and the State Superfund program.
- Division of Air Pollution Control – derives its authority from the Tennessee Air Quality Act (*Tennessee Code Annotated,* Section 68-201-101, et seq.). The division establishes emission standards and produces requirements to monitor industries in the state through the issuance of construction and operating permits. Other duties include conducting source visits and compliance inspections, developing enforcement cases on violations, and maintaining the purity of the air resources of the state. The division is staff for the Air Pollution Control Board (Section 68-201-104), which adopts regulations, holds hearings, and initiates court actions to enforce regulations.
- Division of DOE Oversight – implements the department's responsibilities under the Tennessee Oversight Agreement with the U.S. Department of Energy to clean up the Oak Ridge DOE facilities.
- Division of Natural Heritage – protects Tennessee's natural biological diversity through identification, conservation, and communication. The division administers the Tennessee Natural Areas Preservation Act of 1971, the Tennessee Scenic Rivers Act of 1968, the Rare Plant Protection and Conservation Act of 1985, the Ginseng Dealer Registration Act of 1983, and the Ginseng Harvest Season Act of 1985.
- Division of Ground Water Protection – responsible for ensuring that the ground water of Tennessee is safe and usable by regulating subsurface sewage disposal. The division's authority comes from *Tennessee Code Annotated,* Section 68-221-401. The division permits, inspects, and approves underground septic systems. The division samples private springs and wells, performs soil evaluations for subsurface systems, and provides consultation and project approval for subdivision developments. The Board of Ground Water Management (Section 69-11-107) works with the division and assists the commissioner in writing rules pertaining to water well drillers and pump installers. The board also reviews license applications for these two groups.
- Division of Water Supply – responsible for carrying out the provisions of the Tennessee Safe Drinking Water Act (*Tennessee Code Annotated,* Section 68-22-701, et seq.), the Safe Dams Act (Section 69-12-101, et seq.) and the Water Resources Act (Section 69-8-101, et seq.). The division licenses well drillers and pump installers.

- Division of Water Pollution Control – administers the Tennessee Water Quality Control Act of 1977 (Section 69-3-101, *Tennessee Code Annotated*) and the surface mining program. The division issues and monitors permits under the National Pollutant Discharge Elimination System (NPDES) for stream channel modification, wetland alterations, and gravel dredging. Hearings on division issues are conducted by the Tennessee Water Quality Control Board (Section 69-3-104). Industrial discharge into municipal sewer systems is regulated by the division, including approval of pretreatment programs and wastewater construction plans and specifications for municipal and industrial facilities.
- Division of Community Assistance – provides loans to local governments for water and wastewater facilities; coordinates recycling events; and maintains a database of used oil, antifreeze, and battery collection sites and transporters.

In addition, there are eight regional Environmental Assistance Centers that respond to requests about environmental issues.

The five regulatory boards included in this audit are described below. Each of the boards is attached to an environmental division. The director of the environmental division, acting as the technical secretary for the board, attends all board meetings, supervises board staff, and issues formal notices of complaints and other actions in order to attain compliance within the regulated community.

Related Environmental Boards

Board Name	TCA Section	Assigned To	Purpose	No. of Members
Air Pollution Control Board	68-201-104	Division of Air Pollution	Prevention, abatement, and control of air pollution	14
Board of Ground Water Management	69-11-107	Division of Water Supply	Reviews license applications of well drillers and installers	5
Petroleum Underground Storage Tank Board	68-215-112	Division of Underground Storage Tanks	Investigation and redemption of leaking petroleum underground storage tanks	9
Solid Waste Disposal Control Board	68-211-111	Division of Solid Waste Management	Responsible for solid waste disposal facilities, hazardous waste treatment, and solid waste management programs.	11
Water Quality Control Board	69-3-104	Division of Water Pollution Control	Establishes standards of quality for all waters of the state	10

REENGINEERING EFFORTS

In January 1997 the commissioner initiated a major effort to change the way Tennessee delivers services and provides overall protection of the environment. Over 50 staff were temporarily reassigned from their existing jobs to reengineering evaluation teams. According to the department, these teams produced recommendations that have largely been implemented or are being implemented. These process evaluation teams have evaluated operations including enforcement, employee advancement, public participation, fee assessment and collection, and strategic planning.

One result of the reengineering efforts is the establishment of eight regional Environmental Assistance Centers (EACs) that opened in February 1998. The public contacts the regional EACs for information about the department's environmental services, meetings and public hearing notifications, publications, and access to technical staff. Also, as part of reengineering, an information technology team is working on an environmental database, the Integrated Resource Information System (IRIS). It will include enforcement activities, permitting activities, and fee assessment and collection for all environmental divisions.

The department also established a web site that provides the public with information about environmental divisions, state park events, public hearings, and the EACs.

The department developed a four-year Strategic Plan containing the department's vision and mission statements as well as their objectives and measures. In order to obtain public input into the plan, the department placed copies of a draft plan at the eight Environmental Assistance Centers and at State Parks; they also posted it on the department's web site. The final plan was completed in January 1999. The department's plan will be integrated with the State of Tennessee Executive Branch Strategic Plan.

REVENUES AND EXPENDITURES

For the fiscal year ending June 30, 1998, the Department of Environment and Conservation had general fund expenditures of $145.8 million. The special revenue funds (the Abandoned Land Program, the Environmental Protection Fund, the Hazardous Waste Fund, the Solid Waste Fund, the Underground Storage Tank Fund, the Drycleaner's Environmental Response Fund, and the Parks Acquisition Fund) had a combined balance of $48.4 million at June 30, 1998.

FOLLOW-UP OF PRIOR AUDIT OBSERVATIONS AND COMMENTS

The August 1997 performance audit had six observations and comments for which information has been updated.

UPDATE ON ENVIRONMENTAL PROTECTION FUND BALANCES

The prior audit stated that the department did not have formal procedures for reviewing the funds and balances in the Environmental Protection Fund. The fund, established in 1991 by statute (Section 68-203-101, *Tennessee Code Annotated)*, provides funding for administration of the regulatory programs. It is supported through fees and penalties charged to regulated entities and from interest income. There are nine subaccounts within the fund: Air Pollution Control, Title V Clean Air, Radiological Health, Water Pollution Control, Water Supply, Solid Waste Management, Ground Water Protection, Fleming Training Center, and Hazardous Waste Management. Funds remaining in each subaccount at the end of a fiscal year are carried forward and expended for the program's use. As of June 30, 1998, the subaccounts for Air Pollution Control and Water Pollution Control had zero balances. Department management indicated that it continues to informally monitor these and all subaccount balances periodically to maintain a level of expenditures within the amount of revenues.

The fund had an ending balance of $12.099 million in fiscal year 1996; $12.879 million in fiscal year 1997; and $13.784 million in fiscal year 1998 (see Exhibit 1).

CLEANUP OF THE OAK RIDGE RESERVATION FACES SUBSTANTIAL DELAYS

The Tennessee Oversight Committee Agreement between the State of Tennessee (through the Department of Environment and Conservation) and the U.S. Department of Energy (DOE) assures Tennessee citizens that the DOE is cleaning up the environmental hazards on and around the Oak Ridge Reservation near Oak Ridge, Tennessee. The Federal Facilities Agreement (FFA) is an agreement among the State of Tennessee (through the department), DOE, and the U.S. Environmental Protection Agency to ensure that the environmental impacts resulting from past DOE activities at the Oak Ridge Reservation are thoroughly investigated and that appropriate remedial action is taken to protect the public's health and the environment. The department oversees DOE cleanup activities and does its own monitoring of air, water, and soil quality. A December 1998 report by the department stated that its monitoring had found no public health threats. The department's expenses for these oversight activities are reimbursed through a grant from the U.S. Department of Energy.

Cleanup of radioactive and hazardous wastes on the Oak Ridge Reservation is mandated by the federal Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA). Although law mandates the cleanup, state oversight is required only through the Tennessee Oversight Agreement.

Exhibit 1
Department of Environment and Conservation

Environmental Protection Fund Activity

July 1996 Through July 1998
(Expressed in Thousands)

Fiscal Year	Air Pollution Control	Title V Clean Air	EPF Administrative*	Radiological Health	Water Pollution Control	Water Supply	Solid Waste Management	Groundwater Protection	Fleming Training Center	Hazardous Waste Management	Total
1996 Ending Balance	$ 763	$2,709		$ 1,341	$ -	$ 40	$ 1,028	$ 2,624	$ -	$ 2,894	$ 12,099
1997 Collections	1,377	5,451		2,698	2,879	2,217	1,379	4,214	108	1,543	21,866
1997 Penalties	61	-		-	135	34	59	-	-	317	606
1997 Interest	29	199		75	-	38	44	134	-	156	675
1997 Expenditures	1,913	3,714		2,676	3,014	2,381	1,898	4,629	108	2,034	22,367
1997 Ending Balance	317	4,645		1,438	-	648	612	2,343	-	2,876	12,879
1998 Collections	1,346	5,513		2,790	2,816	2,195	1,263	4,088	111	1,684	21,806
1998 Penalties	32	-		-	250	25	77	-	-	301	685
1998 Interest	9	316		73	-	32	35	119	-	154	738
1998 Expenditures	1,704	3,701		3,110	3,066	2,385	1,342	4,578	111	2,327	22,324
1998 Transfers	-	(2,709)	$ 2,709	-	-	-	-	-	-	-	-
1998 Ending Balance	$ -	$ 4,064	$ 2,709	$ 1,191	$ -	$ 515	$ 645	$ 1,972	$ -	$ 2,688	$ 13,784

* The federal law for issuing Title V permits was effective 8/28/96. States that collected fees prior to that time were allowed to use them for administrative purposes related to air pollution programs.

The prior audit stated that since 1991, DOE had spent approximately $600 million annually on cleanup operations at the Oak Ridge Reservation. At that time, DOE had indicated to division management that proposed federal budget cuts could affect the schedule for cleanup activities.

In 1999, division personnel reported that the total expenditures by DOE for cleanup in fiscal year 1997-98 were $547 million and that the reduction in federal allotments has indeed resulted in an extension of the estimated date of completion for scheduled CERCLA cleanup activities from 2006 to 2015.

DEVELOPMENT OF SITE-SPECIFIC STANDARDS FOR CLEANUP OF SUPERFUND SITES

The prior audit reported that the Division of Superfund did not have uniform standards to define levels of cleanup for Superfund sites and that this lack of standards could result in inconsistencies and inequities in Superfund requirements for sites with similar characteristics. At that time, the division was using standards promulgated in the National Contingency Plan, a set of Environmental Protection Agency (EPA) regulations that establish general methods and criteria for determining the appropriate response to hazardous substance contamination. The EPA was in the process of developing uniform standards, but had not set a completion date.

The Division of Superfund continues to use the National Contingency Plan standards. The EPA is no longer working on uniform standards, although EPA staff said the lack of standards could result in inconsistencies in Superfund requirements for sites with similar characteristics. EPA staff said the National Contingency Plan has been adopted by a majority of states to assist in cleaning their Superfund sites. The division is developing general cleanup standards for less threatening sites. This seems appropriate because it will allow the division to develop site-specific standards for larger, more complicated sites that pose the greatest threat.

IMPROVEMENTS TO THE SUPERFUND VOLUNTARY PROGRAM HAVE SHORTENED THE DEPARTMENT'S CONSENT AGREEMENT NEGOTIATION PERIOD

The prior audit reported that, of 48 participants in the Voluntary Cleanup Oversight and Assistance Program on January 1996, only one site had been completely cleaned up as of August 1996. The report said that a standardized approach and clearer explanation of program requirements might decrease the average six-month timeframe for negotiating consent agreements between program participants and the Division of Superfund.

As of May 1999, the program had 98 participants and 11 completely cleaned sites. Written guidelines are in place to clarify program requirements. The guidelines are posted on the department's web site for easy access. We reviewed 14 files of participants added to the program since the previous audit. Of those 14 reviewed, the average time to negotiate a consent agreement was four months.

DEVELOPMENT OF A COMPUTERIZED RESERVATION SYSTEM FOR STATE PARKS HAS STILL NOT BEGUN

The prior audit stated the State Parks system needed a computerized reservation system. During the fall of 1998, the Parks Division issued a Request for Proposal (RFP) for a park reservation system. However, no bids were received. Parks Division management said vendors were reluctant to offer a bid because the proposed system required working with the state's ORACLE database management software. Tennessee's Office of Information Resources (OIR) management indicated that private vendors feel that the ORACLE system is restrictive and limited. The Parks Division received permission from OIR to permit vendors to establish and use their own system contingent upon the vendor maintaining its own system. Parks Division management plans to issue a new RFP and receive bids in the fall of 1999 so that a vendor may be chosen by the winter of 1999.

UPDATE ON STATE PARKS FOUNDATION ACTIVITIES

The prior audit stated that the State Parks Foundation, established in 1994 to provide financial and other support to state parks, had received less than $10,000 in contributions as of February 1996. The Tennessee General Assembly appropriated $50,000 to the foundation for a consultant's study that would determine the best method of raising contributions. The consultant's study suggested that the foundation conduct local fund-raising campaigns.

In September 1997, the State Parks Foundation merged with the Tennessee Conservation Fund to form the Tennessee Parks and Greenways Foundation. The merger between the two organizations was intended to facilitate the foundation's original mission of providing support to Tennessee's state parks. To assist the newly formed organization, the Tennessee General Assembly appropriated $100,000 in 1998 for operational start-up costs.

According to an annual report published by the Parks and Greenways Foundation, it had raised over $70,000 in donations and acquired 400 active sponsors. Other accomplishments since the merger include

- assisting the state in acquiring 419 additional acres for the Fall Creek Falls State Park near Pikeville;
- working with Duck River Greenway Program in Maury County to secure joint purchase of a 10-acre tract by the Tennessee Wildlife Resources Agency and Maury County for a downtown greenway corridor;
- completing an eco-tourism study for Carter County and Elizabethton;
- speaking to community groups about initiating community greenway projects; and
- receiving a grant from the Urban Forestry Program to begin the "Landowner Options" program to teach landowners how to preserve their land.

FOLLOW-UP OF PRIOR AUDIT FINDINGS

The August 1997 performance audit had 14 findings. The department has resolved the following 7 prior audit findings or has initiated actions to implement the recommendations. The department has resolved part of an eighth finding on protecting the public interest which concerned the department's response to an environmental advocacy report. The remainder of the finding remains unresolved and is discussed in Finding 7. A brief description of each prior finding and the department's resolution follows.

USING CASE INFORMATION TO IMPROVE REGULATORY PROGRAMS

The prior audit reported that central office management of the divisions of Air Pollution Control, Water Pollution Control, and Solid/Hazardous Waste Management did not appear to be using available information to evaluate and direct field offices and to improve the regulatory programs. The report stated that several analyses could be conducted with information already reported by the field offices and if some additional information was reported, more effective monitoring could result. The audit recommended that management adopt formal policies at the division level to facilitate the collection and analysis of data from the field offices.

The divisions still do not have specific written guidelines requiring the collection and review of information necessary to assess field office operations. However, central office division staff do collect and review information to monitor and evaluate the activity and productivity of field offices as part of their normal operations. Further, the department is in the process of developing a computer system, the Integrated Resource Information System (IRIS), that will facilitate the acquisition and review of information from the field offices. The new system will allow central office staff to conduct a variety of different analyses to better evaluate field office activity.

COORDINATION OF DIVISION ENFORCEMENT ORDERS

The prior audit recommended that department management develop and implement a formal policy of interdivisional cooperation including the use of the multimedia checklist as a means of communicating information about violations between the regulatory divisions.

According to the enforcement coordinator, the inspectors began using the multimedia checklist in November 1998 for 25 percent of their inspections. The department should evaluate the use of the multimedia checklist and consider increasing its use in more than 25 percent of inspections. The managers of the Environmental Assistance Centers (which opened in February 1998) provide the inspectors guidance on using the checklist. Because of their role in coordinating multiple programs, the EAC managers should foster interdivisional cooperation.

The enforcement coordinator indicated that the department is developing a training program that will cross train inspectors in several regulatory programs. While the multimedia checklist only allows for general cursory inspections, the multimedia training program would provide for the development of inspectors who are experts in more than one regulatory area.

DEPARTMENT RESPONSE TO ENVIRONMENTAL ADVOCACY REPORT

The prior audit recommended that the department complete corrective actions resulting from the November 1995 study released by the Save Our Cumberland Mountains environmental advocacy group. The Division of Solid/Hazardous Waste Management has taken steps to implement the recommendation. In 1998 the division developed a manual specifying enforcement policies and procedures for division staff to follow. It sends enforcement staff to courses provided by the Environmental Protection Agency in Atlanta because division management believes this training is of the highest quality. Finally, the division has taken and continues to take steps to improve its data management system. It is directly linked with the EPA's national database system so that staff may communicate enforcement activities directly to the EPA and will be using the Integrated Resource Information System (IRIS) being developed by the department (see Finding 4).

CALCULATING THE ECONOMIC BENEFIT OF NONCOMPLIANCE

The prior audit reported that several environmental regulatory divisions had the statutory authority to consider economic benefits when assessing civil penalties for violations of environmental laws and regulations. However, none of the divisions had established formal procedures for calculating the economic benefit for such violations. Some divisions used informal methods to calculate the benefits, while others made no attempt. While the Environmental Protection Agency (EPA) maintained a computer model to calculate the benefit of delaying correction of violations, division staff stated that the EPA model was too difficult to use. Therefore, the audit recommended that the department develop formal guidelines to calculate economic benefit when assessing civil penalties.

The department is developing a penalty assessment matrix to calculate economic benefits when assessing civil penalties. According to department staff, the matrix will be applied to all enforcement divisions. The draft matrix takes into account any economic benefit violators gain through noncompliance with environmental laws and regulations. The matrix is scheduled to be completed and implemented by the end of calendar year 1999.

STATE PARKS' MAINTENANCE SYSTEM

The prior audit identified the following weaknesses in the maintenance of state parks:

- Only a small proportion of major maintenance needs were funded.

- The process for identifying and ranking needs tends to neglect preventive maintenance.
- The practice of restricting the geographic range of regional centers' work puts outlying parks at a disadvantage.

Funding of Maintenance Needs

The prior audit stated that funds for major maintenance at state parks declined from $4.4 million in 1988 to $2.5 million in 1996 while estimated costs for maintenance needs remained constant at about $8 million annually. Funding has increased since 1996. The State of Tennessee's budget for fiscal year 1999 provided a one-time $12 million funding for major maintenance for state parks. The Division of State Parks allocated the $12 million for use over three years, beginning in fiscal year 1999.

In addition, $7 million of capital maintenance projects were funded in the budget for fiscal year 1999 and $4 million was funded in the fiscal year 2000 budget for capital maintenance projects.

Closing of Regional Maintenance Centers

In order to provide more funding for maintenance projects, the Division of State Parks closed two regional maintenance centers during fiscal year 1999 and plans to close the remaining two regional maintenance centers in the next fiscal year. As the centers are closed, funds allotted for salaries of the regional centers' staff will be used for maintenance needs. As an example, in fiscal year 1997, only $1.9 million of the major maintenance funds were used for materials. In fiscal year 1999, $3.4 million will be available for materials because salaries are no longer funded in the major maintenance budget.

Direct Order Contracting

Due to the closing of the regional maintenance centers and in order to provide outlying parks with major maintenance, the Division of State Parks began Direct Order Contracting with maintenance projects between $2,000 and $100,000 for Middle Tennessee parks in fiscal year 1999. Division management stated that it would be more efficient and cost effective when contracting for minor construction, repairs, and renovations. A contractor was awarded a contract through the Request for Proposal (RFP) process. The potential annual value of the contract is up to $1.5 million in the first year. The contractor uses an industry guide for bidding materials cost and often uses a local subcontractor. This allows outlying parks to receive needed maintenance attention. In addition, division management deals only with the contractor while the contractor is responsible for project progress and supervision. According to park management, the contractor has not encountered any problems in obtaining subcontractors to work on projects for the outlying parks. The Director of Parks Maintenance monitors the contractor and visits sites where maintenance projects are in process. The Division of State Parks began using Direct Order Contracting across the state in fiscal year 2000.

Preventive Maintenance

The Master Plan for State Parks requires the Division of State Parks to itemize facilities for preservation and maintenance purposes. The Parks Division has inventoried all assets and identified maintenance needs. However, a formal system to predict and plan needed maintenance has not been developed.

MANAGEMENT OF PARKS

The prior audit stated that the Division of State Parks had neither used strategic management plans prepared for parks to monitor their progress nor updated the plans. Management had not compiled a comprehensive list of needs identified in each park's plan to determine priorities. Also, management could not document a park's compliance with park standards.

Park Master Plan

Tennessee Code Annotated, Section 11-3-120, directs the department to prepare a Master Plan for state parks by March 1, 1999. Funding requirements, facilities preservation, maintenance and utilization, management staffing and training, preservation and expansion, education programming, land acquisitions, and goals and projections are to be included in the plan. The plan, completed in September 1999, contains the items required by the statute.

Park Standards

Park Standards have been replaced with a Policy Manual. The policies in the manual are more detailed than the Park Standards. The policies include purpose, scope, authority, background, and procedures with a date of implementation. They are dated and signed by the Commissioner and the Assistant Commissioner for Parks. In addition, the Office of General Counsel reviews the policies before they are signed.

On a daily basis, park managers are responsible for adherence to the park policies. In addition, several staff in the central office periodically travel to the parks to ensure adherence to policies. They contact individual park management to remedy any problems and informally make a report to the assistant commissioner if they feel it is needed. According to Parks management, all parks were inspected in 1997 for compliance with these policies. However, staff did not make formal reports of their inspections. The division should require a written report of each inspection to track any problems and their solutions.

Managing for Development

At the time of the prior audit, a hotel advisory firm studied the financial feasibility for developments at four state parks. Their projections assumed that park management would provide the new facilities with

- computerized management information systems,
- energy-efficient heating and air conditioning systems, and
- adequate upkeep and maintenance.

Parks management issued a Request for Proposal (RFP) for a state park reservation system that would be part of a hospitality management system. The department has approval in the fiscal year 2000 Budget to spend up to $599,000 for such a system; however, the funds must be provided by the department from its own revenues. Currently, some parks are using stand-alone systems with equipment that can be connected to a hospitality management system. The four developments have new energy-efficient heating and air conditioning systems. Upkeep and maintenance have been addressed through the $12 million maintenance appropriation provided in fiscal year 1999 (see Follow-up on Prior Audit Observations and Comments on Computerized Reservations System for State Parks and Follow-Up on Prior Audit Findings on Park Maintenance).

The division has hired experienced hospitality managers to oversee inns and resorts, a shift of duties that will allow park managers to focus on park management. The division should monitor this change to determine if it improves park operations.

COORDINATION OF PUBLIC EDUCATION EFFORTS

The August 1997 performance audit found that the Tennessee Department of Environment and Conservation had not coordinated public information, outreach, and education efforts of its various divisions, and the audit recommended that the department develop an overall public information policy.

By November 1997, the department had developed a departmental handbook outlining guidelines for handling media contacts. The Public Information Officer coordinates media relations. The department's Public Information Office also develops a weekly media report. These reports are used to track news stories about the department and allow division directors to track issues that may impact their division and the department as a whole.

To coordinate the public information, education, and outreach efforts of all its divisions, the department is developing a Community Outreach Program. Developed in partnership with the Division of Community Assistance and the Environmental Assistance Centers (EACs), this program is intended to identify community concerns and priorities, to communicate the department's mission and activities, to elevate community awareness of environmental issues, and to improve education and training programs. Community outreach activities will be

conducted by each regional EAC under the supervision of an environmental coordinator. Until the environmental coordinators can assume these responsibilities, the current EAC staff will use existing departmental resources for outreach material. The department should evaluate the Community Outreach Program once it is implemented to determine if it is accomplishing the goals listed above.

DIVISION OF INTERNAL AUDIT

In the prior audit we recommended that the department's Division of Internal Audit report directly to the commissioner. At the time the audit report was printed, management had complied with the recommendation. Based on the current organizational chart and interviews with department management and the Director of Internal Audit, the division continues to report directly to the commissioner.

FINDINGS AND RECOMMENDATIONS

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1. The Division of Radiological Health needs to implement changes to improve the X-ray inspection process

Finding

The Division of Radiological Health estimates that it did not complete 29 percent of its scheduled inspections for 1998 and has not implemented changes recommended in the prior audit to plan for more efficient and effective use of staff resources. When the division does not complete inspections in a timely fashion, it cannot provide assurance to X-ray machine operators and consumers that X-ray machines are safe and effective.

The division regulates the use of X-ray machines, including mammography machines, by registering X-ray tubes, registering private inspectors, and requiring periodic inspections of each tube by department staff or a registered inspector. Section 68-202-503, *Tennessee Code Annotated*, requires that tubes be inspected every one to four years, according to their classification (see Exhibit 2). Inspection of X-ray tubes can be performed by a state inspector or a registered inspector certified by the department, whichever the facility chooses. Facilities that use registered inspectors receive a discount on their tube registration fees because the department does not have to schedule a state inspector to inspect the facility. Mammography X-ray tubes are inspected by department staff under a contract with the U.S. Food and Drug Administration.

Number of Tubes Registered

As of December 31, 1998, there were 13,319 X-ray tubes registered with the department. This amount compares with 12,317 tubes registered as of February 1996, an

increase of 1,002. The largest increase is in the four-year cycle of dental office X-ray tubes (see Exhibit 2).

State Inspections Not Performed

The prior performance audit found that in calendar year 1995, the division had not completed one-third of its scheduled inspections. For the calendar year 1998, the division estimates that it did not perform 29 percent of the required inspections in the cycle for that year (see Exhibit 3). The division completed 2,387 inspections in 1998, 562 more than in 1995, but had 987 overdue inspections in 1998 as compared to 880 in 1995. According to division staff in charge of mammography inspections, all 185 registered facilities with 353 tubes were inspected in 1998. Mammography X-ray tubes are subtracted from the overdue calculations because they are monitored on a separate database. There were 46 registered inspectors as of January 1999 and 12 state inspectors. This compares to 40 registered inspectors and 6 state inspectors in March 1996.

Exhibit 2
Department of Environment and Conservation
X-ray Tube Classification, Number of Tubes Registered, and Required Inspection Cycle
February 1996 and December 1998

Classification	Description	Inspection Cycle	Number of Tubes Registered		Increase (Decrease)
			December 1998	February 1996	
Class I	Dental	4 years	7,129	6,699	430
Class II	Medical Diagnostic X-ray, Medical or Veterinary, Priority 2 Mammography	2 years	2,324	2,067	257
Class III	Radiologist Office, Hospitals, Orthopedic Surgeon Office, Priority 1 Mammography	1 year	3,175	2,902	273
Class IV	Therapy Medical Radiation, Medical & Veterinary Therapy	1 year	16	18	(2)
Class V	Priority 2 Industry & Education (closed beam)	2 years	496	454	42
Class VI	Priority 1 Industry & Education (open beam)	1 year	84	88	(4)
Class VII	Accelerator	1 year	95	89	6
	Total Number of Tubes		**13,319**	**12,317**	**1,002**

Exhibit 3
Inspection of X-ray Tubes by State Inspectors (1)
Inspections Performed and Overdue for Calendar Year 1998

Total Tubes Inspected	2,387	
Inspections Overdue (Not Inspected in 1998)	1,340	(2)
Total Mammography Tube Inspections	-353	(3)
Total Inspections	3,374	
Percent Overdue	29%	

Notes:

(1) Exhibit does not include tubes inspected by registered private inspectors because these are not recorded on a database.
(2) An estimate provided by the division.
(3) Adjustment for mammography tubes; mammography tube inspections are reported on an FDA database.

Estimate of Inspections Overdue

The division has a computerized database that tracks the number and class of tubes registered, provides an estimated state workload, number of inspections completed, and number of inspections remaining due at the end of a period. Data entered from current inspections replaces data from prior inspections. Therefore, staff cannot use the database for historical data on a tube or facility to help identify any recurring problems and division management does not rely on the calculation of the number of inspections due.

The division estimated the number of inspections overdue at December 31, 1998, at 1,340. Through analysis of a January 1997 database printout of registered tubes, the division found 2,210 tubes that had overdue inspections for calendar year 1996. Of those 2,210 tubes, the division identified 834 tubes as those in an annual inspection cycle. According to division staff, the 834 tubes were deducted from the overdue because the division would only inspect them once in the calendar year—i.e., one inspection in calendar year 1997 for the annual inspection due that year and for the overdue inspection from 1996.

The same method of analysis was carried forward and used to compute the estimate of 1,340 overdue inspections at December 31, 1998. Although the division's database can provide a number of inspections overdue, division management believes the methodology it used to compute the estimate is a more accurate assessment of tubes with overdue inspection. In March 1998, the database indicated that 2,047 inspections remained to be completed at the end of 1998 as compared to the 1,340 the division staff identified through its own review.

According to division management, Class I inspections are easier and less time-consuming than Class II or III inspections. Often Class III tubes are in hospitals where registered inspectors inspect several tubes at a time. Also, urban facilities often use registered inspectors, leaving the state staff to travel to the outlying, more rural facilities. Therefore, the

state is performing inspections that require more travel time for the staff inspectors. In addition, division management said that during the years in which the four-year dental tube cycle inspections are due, the workload increases because of the number of tubes in that category. In addition to inspections of tubes, state inspectors have other duties, including licensing inspections, emergency responses, and radioactive materials inspections.

In 1997, state inspectors found 342 tubes of the 2,282 inspected (15 percent) in noncompliance, and in 1998, they found 352 tubes of the 2,387 (15 percent) inspected in noncompliance. The division's database does not record the number of X-ray tubes registered inspectors found in noncompliance.

Follow-up of Inspections by Registered Inspectors

According to *Tennessee Code Annotated*, Section 68-202-503, facilities inspected by registered inspectors are subject to random survey inspections by division staff inspectors. Division management indicated that they are not meeting their goal of following up on 10 percent of inspections performed by registered inspectors. However, division management said some follow-up is being done. If staff inspectors are in a facility shortly after a registered inspector, staff members will perform a follow-up inspection. Management could not provide a percentage of follow-up inspections that division staff inspectors performed.

Recommended Changes to Registered Inspector Program and Division's Database

The prior audit recommended that changes be made to the registered inspector program and the division's database in order to improve the inspection process and to plan for more efficient and effective use of staff resources.

The recommended changes included

- requiring X-ray facilities to indicate the use of a state inspector or a registered inspector when paying annual registration fees on April 1 of each year;
- setting a deadline for registered inspectors to submit reports of their inspections and specifying a number of days for owners to submit corrective actions; and
- providing software that would track historical data (dates of inspections, corrective actions, etc.) and would analyze trends in compliance for all X-ray inspections.

A committee, appointed by the division, identified ways to implement the recommendations and issued a report on March 5, 1999. The report states that instituting the changes will result in more timely compliance and inspections and more useful information.

According to division management, after several tests, the X-ray tube registration component of a new database is complete and will be implemented in August 1999. A component that will schedule and track inspections, including those performed by registered inspectors, will be implemented soon afterward.

Recommendation

The Division of Radiological Health should implement the recommendations of the prior audit and its own committee in order to perform scheduled inspections in a timely manner. The division management should require X-ray facility management to inform the division about the type of inspection they will use when paying annual fees, require registered inspectors to submit reports by a particular date, and require facility management to correct deficiencies within a specified number of days. The division should record the number of X-ray tubes registered inspectors found in noncompliance. The division should meet its goal of following up on 10 percent of inspections performed by registered inspectors and the follow-ups should be performed within three months. It should compile and review the results of those follow-ups.

Division management should continue to implement database and software changes that will improve the use of staff resources and determine the number of overdue inspections. It should work with the Division of Information Systems to develop a timetable for completing the component to schedule and track all inspections.

Management's Comment

We concur in part. The department is committed to making improvements in the radiological health inspection process. Changes are planned in the Registered Inspector (RI) program, consistent with recommendations of the division's RI Committee, and the development of an upgraded information database system will be pursued.

The first step in implementing the changes recommended by the division's RI Committee is amending the regulations to provide for more timely submission of non-state inspectors' (or RI) reports. The current regulations that require submission of these reports with the annual fee payment must be changed to require submission within a specified period following completion of the inspection.

The division will revise its approach so that the x-ray facility will be required to submit the inspection report, with a statement of corrective actions taken, to the division promptly after the inspection. This will necessitate that the RI promptly submit the report to the facility, which will achieve the desired result. It may take until the end of calendar year 2000 to develop the support and to promulgate the necessary regulations.

The division will pursue a requirement that x-ray facilities indicate their intent with regard to use of an RI versus a state inspector no later than the cycle for calendar year 2001 fees. Initially the division plans to use the fee invoice as an information dissemination and collection tool but this method may change as the department's reengineering effort for fee collection proceeds.

The division is committed to meeting its goal for follow-up of RI inspections; however, it is faced with an issue of competing priorities. On one hand is its ten percent follow-up policy, and on the other are the legally-mandated inspection frequencies for facilities due inspection by state inspectors. Since the follow-up inspections are not mandated by law the division must first comply with statutory obligations, and then to the extent possible see that all facilities receive an inspection by either a division inspector or an RI. When the backlog of overdue inspections has been eliminated and the division is able to meet the legally-mandated inspection frequencies for facilities due inspection by state inspectors, the division will fully implement its ten percent RI follow-up policy. In the meantime, the division will commit to acquiring and maintaining information beginning in calendar year 2000 to assess progress toward achieving its goal.

The division in conjunction with our Information Systems Division has made substantial progress toward developing a new X-ray information database meeting the needs of both the registration and the inspection programs. The first component of the new information database, an upgrade for the registration program, became operational in July 1999. The software needed to track historical inspection data and trends, to facilitate the scheduling of state inspections on a basis more precise than annually, and to track the performance and compliance trends of RI inspections, is still in development. The division and Information Systems staff will coordinate their project with other Information Systems projects. The division will work with Information Systems to develop a timetable for completing the software component necessary to track data relating to all inspections, including the ability to accurately determine the number of due/overdue inspections. The schedule will be included in the department's *Information Systems Plan*.

Because the information database currently used by the division to plan inspections keeps track only of the latest inspection data, complete historical data needed to improve the accuracy of the numbers cited in Exhibit 3 are not available. For comparison to the 1998 data, the division has analyzed its current level of performance from inspection data currently available for calendar year 1999. The actual backlog of tubes not inspected in 1998 (thus overdue for 1999) was 630. Inspection data through the 3rd quarter of 1999 shows the division having already inspected 1,737 of the estimated 2,733 tubes (630 overdue + 2,103 estimated coming due) requiring inspection in 1999. Therefore, it is expected that fewer overdue tubes will be carried forward into calendar year 2000.

This information demonstrates the current and near-term-future ability of the division to meet its current workload and to cut significantly into the backlog of overdue inspections. The division will focus on eliminating any remaining backlog of overdue inspections, meeting legal-mandated x-ray inspection goals, and meeting performance goals under the terms of its Agreement State status with the U.S. Nuclear Regulatory Commission. Toward that end, the division will complete a work analysis/plan by the end of calendar year 2000 to identify and predict expected workload changes with sufficient foresight to plan the acquisition of resources necessary to meet these requirements.

2. The Tennessee Underground Storage Tank Fund may become insolvent

Finding

For fiscal years 1998 and 1999, the Tennessee Underground Storage Tank (UST) Fund had a larger amount of claims pending processing than fund balance. The prior performance audit projected that the fund could become insolvent if fund revenues did not increase. The General Assembly addressed the fund's solvency issue by amending the Tennessee Petroleum Underground Storage Tank Act to allow the annual UST fees and environmental fees to be used to service the debt of a bond issue up to $15 million. Bonds were not issued in fiscal year 1999.

The Tennessee Comprehensive Annual Financial Reports (CAFR) for fiscal years 1996 through 1999 have reported a declining balance for the fund, down from $10 million on June 30, 1996, to a balance of zero on June 30, 1999. Accounting procedures require that the amount of claims pending processing be included as expenses; however, the total of those claims is computed and presented by UST division staff prior to division staff reviewing the claim for eligibility and allowable reimbursement. Because of that, the fund has a balance that consists of those claims pending processing and ongoing collections of fees allocated for fund use.

Underground Storage Tank Fund Balances

	Fiscal Year 1995-96	Fiscal Year 1996-97	Fiscal Year 1997-98	Fiscal Year 1998-99
Beginning Fund Balance *	$19,125,000	$10,775,000	$ 6,732,000	$ –
Revenue *	21,152,000	20,898,000	21,569,000	21,336,000
Expenditures *	29,502,000	24,941,000	28,301,000	21,336,000
Ending Fund Balance *	$10,775,000	$ 6,732,000	$ –	$ –
Claims Pending Processing **	$14,166,000	$11,233,000	$18,357,000	13,937,000
Fund Balance Per UST Division***	$24,941,000	$17,965,000	$13,802,000	$11,772,000

* Source: Amounts obtained from the Comprehensive Ann ual Financial Reports, Fiscal Years 1996 through 1999.

** Source: Dollar amount of claims pending processing as reported by the Division of Underground Storage Tanks

*** Source: UST Division records

Claims Pending Processing

As of June 1999, the Tennessee Underground Storage Tank (UST) Division reported that the UST Fund had approximately $14.0 million in pending claims for reimbursement for

that the UST Fund had approximately $14.0 million in pending claims for reimbursement for actual cleanup costs resulting from leaking tanks. Of the $14.0 million in pending claims, approximately $2.3 million were payments to state facilities that were on hold. According to department management, the decision to hold the payments was made by a prior administration and continued by the current administration. Department management explained that the dollar amount listed for claims pending processing does not take into consideration claims that may be deemed ineligible, claims that may not recover the full amount claimed, or claims where the tank owner/operator must still pay the required deductible. According to department personnel, the amount the division actually pays in claims is usually less than the dollar amount listed for claims pending processing. They said that past experience indicates that approximately 60 to 70 percent of the amounts of claims pending processing are actually paid. As of June 30, 1999, the division had received 11,229 claims totaling over $200 million and had processed (as of December 31, 1999) 9,155 claims totaling approximately $147 million since fiscal year 1991.

Under Section 68-215-111, *Tennessee Code Annotated,* tank owners who pay the annual registration fee and comply with division rules and regulations may apply to the fund for reimbursement of cleanup costs. Tank owners may also apply to the fund for reimbursement for third-party claims, which are any civil actions charging damages to person or property as a result of contamination from leaking tanks. The fund will provide coverage for such claims involving bodily injury and/or property damage caused by leaking tanks. Fund liability is limited to $1 million per site per occurrence. Owners must pay deductibles, based on the number of tanks owned, before receiving compensation.

Deductible to Be Paid by the Tank Owner

Number of Tanks Owned	Cleanup Claims	Third-Party Claims
1 to 12	10% of cost, maximum $10,000	$10,000
13 to 999	20% of cost, maximum $20,000	$25,000 to $50,000
1,000 and above	$50,000	$150,000 to $300,000

Source: Section 68-215-111, *Tennessee Code Annotated*

Although the fund acts as an insurance policy against damages caused by leaking tanks, its fee structure does not take into consideration the risk factors such as the age of the tanks, occurrences of tank leakage, tank materials, or geological factors (e.g., soil type). If the fund was priced like an insurance policy, fees would be based on the amount of risk tanks posed to the fund.

Transition of State Insurance Funds

In 1988 the United States Congress passed legislation establishing the underground storage tank (UST) program. Federal rules required UST owners to ensure that their tanks had spill, overfill, and corrosion protections by December 22, 1998. The federal Environmental Protection Agency reported in July 1998 that more than 317,000 releases from regulated tanks

in the United States had been identified as of September 1996. In the vast majority of cases, state funds were used to pay for the cleanup of these releases. The EPA report also said that as owners and operators comply with the provisions of the 1998 deadline, states can expect to confirm a significant number of new releases. That would result in an increased demand on state fund resources. In some states, this demand might lead to consideration of phasing out the state fund and/or transitioning from state funds to private insurance. Department management is assessing the feasibility of the fund and other alternatives including phasing out the fund and transitioning to private insurance.

Recommendation

The Underground Storage Tank Board, in conjunction with the department, should propose a long-term solution that will maintain the solvency of the fund and provide for a regulatory program to ensure ongoing compliance.

Management's Comment

Department of Environment and Conservation:

We concur in part. In theory, if all reimbursement claims on hand were paid immediately, the UST fund would become insolvent. A comparison of current levels of revenue versus expenditures shows that it is not likely that the fund will become insolvent in the near future. The General Assembly approved an additional $15 million in bonds in 1995 and these have not been needed to date.

The department has a number of options to ensure the long-term solvency of the fund. Each option listed below would require legislative action and would only be necessary if the fund approaches a balance of less than $1 million. The fund balance as of June 30, 1999, was $11.8 million.

1. Increase the amount of deductible that the responsible party must pay before the fund would start incurring cost;
2. Increase the amount of revenues coming into the Fund by increasing the annual tank fee or the petroleum assurance fee;
3. Request further bonds from the Legislature; or
4. "Sunset the fund" at a date certain in the future.

The department would use the $15 million in bonds at its disposal to bridge the gap until a long-term solution could be implemented. T he Petroleum Board, along with the UST Division, is continuously reviewing the expenditures versus the revenues and the viability of the UST Fund. Both know that the interpretation of laws may change and require either greater or lesser use of the fund.

In fiscal year 1998 the division notified all possible claimants that invoices older than one year would not be paid. This caused an influx of approximately $15 million in reimbursement claims in May and June of 1998, double the amount received in the prior ten months. We do not anticipate a repeat of this one-time significant event. In fact, for fiscal year 1999, the division has received a decrease in the amount of claims submitted for the first time in more than five years, which resulted in revenues actually out-pacing expenditures and a reduction in the deficit from $4.6 million to $2.1 million at June 30, 1999.

The September 1999 Willis Actuarial Report indicates that claim submittals will outpace revenues by approximately $1 million for the Fiscal Years 2000 through 2003. (Based on $93 million in estimated claims for this period and a 25% reduction for disallowed costs and deductibles, the anticipated claim pay-out approximates $70 million for the period 2000 through 2003. This compares to an estimated fee collection of $69 million during that same time.) Thus, an additional $1 million would be added to the $2.1 million deficit at the end of fiscal year 1999. However, for fiscal years 2004 and beyond, it is anticipated that revenue collections will outpace reimbursement claims and the UST Fund balance should continue to grow.

Petroleum Underground Storage Tank Board:

The board concurs with the department's response.

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3. Inspections of underground storage tanks are not completed in a timely manner

Finding

The August 1997 performance audit found that the division had inspected only a small proportion of Tennessee's underground storage tanks (USTs) for compliance with operating and leak detection requirements. The department has not met its goal of 1,500 inspections per year. In addition, the department has not completed its compliance verification surveys to determine how many operating USTs are not meeting December 1998 federal and state leak detection requirements.

Section 68-215-107, *Tennessee Code Annotated*, gives the Division of Underground Storage Tanks the authority to regulate petroleum underground storage tanks in Tennessee. The previous audit reported that in 1995, there were 52,865 petroleum underground storage tanks at over 19,000 facilities. Of those 52,865 tanks, slightly more than half (27,246 tanks) were operational, and the remainder were closed. The division's 11 inspectors performed compliance inspections of 497 facilities in calendar year 1994 and 816 facilities in 1995.

As of March 1999, the division reported that there were 44,245 petroleum underground storage tanks at 6,486 facilities across the state. Of the 15,928 operational tanks, 13,441 (84 percent) were equipped to meet the 1998 EPA leak detection requirements. The division provided the information listed below.

Underground Storage Tank System Information
March 1999

Number of Tanks	44,245
Number of Operational Tanks	15,928
Number of Tanks in Compliance with 1998 EPA Guidelines	13,441

The division reported that its 11 inspectors completed 997 inspections in 1996; 1,248 inspections in 1997; 1,063 inspections in 1998; and 350 inspections during January through June of 1999. The number of compliance inspections completed during the first two quarters of 1999 is lower because division inspectors are working to complete compliance verification surveys. Although the number of compliance inspections has increased since the prior performance audit, the division has yet to meet its stated goal of 1,500 inspections per year.

Number of Compliance Inspections Conducted
1996 Through 1998

1996	1997	1998
997	1248	1063

Calculated for inspection year September through August

As reported in the August 1997 performance audit, the division's schedule for completing compliance inspections provides little incentive for tank owners/operators to adequately prevent and detect operating problems. With approximately 6,500 facilities to be inspected and an average of 1,103 inspections completed annually from 1996 to 1998, it will take the division's 11 inspectors approximately six years to complete all of the facility inspections. Even though Section 68-215-107, *Tennessee Code Annotated* (pertaining to the division's supervision, inspection, and enforcement responsibilities) contains no language specifying how often USTs are to be inspected, leaking underground storage tanks represent a serious and pervasive threat to the state's groundwater resources. The purpose of the regulatory program is to identify violations and attempt to achieve compliance before leaks become a threat to groundwater.

Compliance Verification Surveys

The deadline established by the federal Resource Conservation and Recovery Act for underground storage tank (UST) owners/operators to comply with federal and state leak detection standards for operation of petroleum underground storage tanks was December 22, 1998. Division personnel reported that from January through September 1999, the division's inspectors suspended regular compliance inspections so that they could complete compliance verification inspections of operating USTs that may not meet federal and state leak detection requirements.

Compliance verification surveys ensure that underground storage tanks have specific equipment needed to meet the December 22, 1998, federal and state leak detection requirements. Compliance inspections are more thorough and time consuming. They may require soil or water testing to detect leaks.

The division advised the EPA that all compliance verification surveys would be completed by June 30, 1999. Although the division did not meet this deadline, of 1,706 compliance verification surveys completed by November 30, 1999, division staff report that 1,628 (95.42%) were completed by June 30, 1999. As of November 30, 1999, division management indicated that inspectors were still completing compliance verification surveys and that they could not guarantee that all of them were completed. Division management stated that the total number of surveys to be completed could not be predicted because of inaccurate data in the division's central database.

Section 68-215-121, *Tennessee Code Annotated*, states that UST owners/operators who fail to comply with state and federal leak detection requirements may be subject to a civil penalty not to exceed $10,000 per day for each day of violation. As of September 1999, the department had issued 18 enforcement orders against the 42 tank owners/operators who were identified as having noncompliant facilities and were in the process of issuing 24 orders.

Recommendation

Department management should evaluate the allocation of staff for inspections of underground storage tanks to ensure adequate staffing. Department management should also take steps to ensure that the information contained in the division's database accurately reflects the number of inspections to be completed. When the compliance verification surveys are completed, the department should develop a schedule for inspections based on the number and priority of tanks for inspections and on inspection frequency needed.

Management's Comment

Department of Environment and Conservation:

We concur in part. The department agrees with the recommendation that the number of inspections required must be firmly established. Steps are being taken to insure that the number of required inspections is known as of a specific date.

The division agrees that the goal of 1,500 inspections per year was not met. However, this number was based upon the availability of 11 full-time compliance inspectors to cover the entire state. The state has now been divided into eight Environmental Assistance Centers (EACs), each one having its own staffing pattern and facility population. Therefore, it is more appropriate to look at the number of inspections by inspector. Each of the 11 inspectors would need to complete approximately 136 inspections annually to conduct the goal of 1,500

inspections. This number is being used in developing an inspection plan for each EAC with a further goal of inspecting all of the active UST facilities every four years. The target date for finalizing the plan is the spring of 2000 with a projected commencement date of July 1, 2000.

Petroleum Underground Storage Tank Board:

The board concurs with the department's response.

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4. The department lacks a standard method of getting enforcement data from divisions

Finding

The department does not have written policies and procedures for the regulatory divisions specifying the data they should use when recording enforcement activities and the method to be used to communicate the data to the enforcement coordinator. The department does not have a policy indicating the type and frequency of analyses that management should conduct to assess that data.

The prior audit found that the department had not responded promptly to field office requests for enforcement action against violators. In 1994, the department's central office took an average of 227 days to issue an enforcement order and, in 1995, took an average of 200 days. That average included four environmental divisions: Solid Waste Management, Hazardous Waste Management, Water Pollution Control, and Water Supply. We recommended that the department take steps to improve timeliness of enforcement actions, develop time guidelines for each regulatory area, and periodically review their performance. We also recommended that management consider granting authority to issue enforcement orders at the program level.

As a result, the Commissioner delegated authority to environmental program directors to issue enforcement orders. Management also established a time guideline requiring divisions to respond within 180 days to a field office's request for an enforcement order. However, if a division has a time guideline issued by the U.S. Environmental Protection Agency (EPA) that is less than 180 days, the division is required to abide by the EPA guidelines.

In addition, the department's enforcement coordinator, using a database program, began tracking enforcement data in 1997 for regulatory divisions. Individual enforcement order information from each division is entered in the database: name of the violator, penalty assessed, type of order, date of enforcement action request, date the enforcement order is signed, etc.

Using the information in the database, the department calculated that the central office took an average of 147 days in 1997 to process an enforcement order and an average of 128 days in 1998. We reviewed the enforcement files for 94 orders (from 1997 and 1998) in the

database to verify the accuracy of the process time. We found that information in the enforcement files in the regulatory divisions did not always correlate with information in the database.

One of the reasons that the information does not match is that the data used to record enforcement activities is not consistent for all divisions. The database indicates that process days equal the number of days from the date of the Enforcement Action Request (EAR) to the signed order. All divisions but two use the date a written EAR is received from a field office. The Division of Superfund and the Division of Underground Storage Tanks use the date the field office telephones the central office to initiate an enforcement action.

According to staff of the various regulatory divisions, the department does not have a consistent method of obtaining enforcement action information from the divisions. Sometimes the enforcement coordinator's office sends a staff person to the divisions to obtain information from division files. However, the divisions vary in the methods used to record file information such as logbooks, paper files, and card indexes, and the information may not be transferred accurately. On other occasions, division staff send written information for the database to the enforcement coordinator. The department does not verify the accuracy of the information submitted by the divisions.

In its calculation of process days, the department included dates for the Superfund Voluntary Cleanup Oversight and Assistance Program. Division staff said that because the program is voluntary, enforcement orders are not issued. Neither division staff nor the enforcement coordinator could ascertain how beginning dates were determined when the department calculated process days. Division staff and the enforcement coordinator indicated that process days are not relevant for this program.

Of 16 database entries reviewed, 12 entries did not match the dates in the enforcement files for the Division of Water Pollution Control. (The division issued 79 orders in 1997 and 1998.) The dates in the files had discrepancies of 7 to 385 days less than the entries in the database. Of the 20 database entries reviewed for the Division of Air Pollution Control, 10 files had dates of 16 days less to 32 days more than the entries in the database. (The division issued 66 orders in 1997 and 1998.)

The Division of Radiological Health issued one order in 1998. The enforcement file did not contain an EAR; therefore, the beginning date of the process could not be determined. Division staff and the enforcement coordinator could not determine the starting date.

The Division of Underground Storage Tanks does not issue EARs but calculates process days from the date case information is submitted to the central office from field offices. (The division issued 91 orders in 1997 and 1998.) We reviewed a total of 18 files and were able to determine the date of referral to the central office for only 6 of the 18 files. The process days for 2 of those 6 files matched the process days in the database. The process days for the 4 remaining files had differences of 7 days less to 8 days more than the database. For the 12 files that did not contain a referral date, we could not determine process days.

The department is developing a computer system called the Integrated Resource Information System (IRIS) that will replace the current method of recording and tracking enforcement activities in a database. In addition to the information now entered in the database, department staff said IRIS will calculate process times, perform workload studies, and analyze the type and number of violation orders by geographic region. The regulatory divisions and field offices will be networked to the IRIS system and will enter their information directly.

Recommendation

The department should develop written policies and procedures to specify the data to be used to record enforcement activities and how to communicate the data to the enforcement coordinator. It should verify the dates for a sample of enforcement orders to ensure that data is accurate. The department should develop a policy stating the type and frequency of analyses management should conduct to assess that data.

Management's Comment

We concur in part. The department will develop written policies and procedures to specify the data used to record enforcement activities, and to subsequently communicate the data to the enforcement coordinator. The information gathered in the current manual enforcement tracking database will be included in the policy.

The department is developing an Integrated Resource Information System (IRIS) which will integrate all of the environmental program's enforcement tracking needs and will allow management to analyze the data on a continual basis as required by the *Strategic Business Plan* (effective, January 1999). Entry of the enforcement data into IRIS will be directly communicated to the coordinator and will allow all managers with network access to use this tracking database in real time. The scheduled completion date of the enforcement component of IRIS will be made a part of the department's *Information Systems Plan,* which will be submitted to Finance and Administration on July 1, 2000.

We also agree that an effort is needed to insure data quality not only in the enforcement database, but also in all aspects of data management. Validity of data is being addressed by the department's *Quality Management Plan* (effective, June 22, 1999). Furthermore, the programs' enforcement staff will verify the dates for a sample of enforcement orders currently in the database against the file copy.

5. Park boundary survey efforts can be improved

Finding

The Division of Real Property is responsible for identifying and marking boundary lines for parks, natural areas, and historical and archaeological sites owned by the state, and for documenting encroachments on those boundaries. Although department management has taken steps to address the previous audit's recommendations, more improvement could be made. Specifically, the department and the division have not determined the time needed to survey different terrain or conducted trend studies to determine types or locations of encroachments.

Boundary Surveys

According to staff of the Division of Real Property, as of March 1999, 32 of 52 state parks have unmarked boundaries. Boundaries must often be established by surveys because deeds cannot always be used. Original deeds may describe boundaries in terms of a fence, rock, or other changeable feature. Surveys are performed to determine the area of a tract of land and the lengths and directions of bounding lines so that ownership can be clearly determined.

The department employs one three-person survey team to survey and mark park boundaries. However, the department is considering contracting out surveying projects and has established a strategic plan which specifies that 15 parks will be surveyed by 2003. A list of 15 parks to be surveyed has been developed. In addition, the department has established a basic surveying class for park rangers to help them quickly identify possible cases of encroachment where formal surveys could be conducted.

Despite these efforts, improvements could be made. The division and the department have not determined the amount of time and staff needed to survey terrain such as wooded, swampy, or hilly areas. A study appears to be appropriate considering the variation in the number of linear feet surveyed and the number of linear feet surveyed per work hour in the past three calendar years (see table below).

Calendar Year	Linear Feet Surveyed	Work Hours	Linear Feet Per Hour
1996	145,207	1,065	136
1997	212,593	1,048	203
1998	149,497	1,175	127

Source: Data for 1996 through 1998 from Division of Real Property Management staff

The previous audit found that the number of linear feet surveyed per hour was 118 in 1992, 175 in 1993, 163 in 1994, and 118 in 1995.

Developing estimates of the amount of time a survey of particular terrain should take would assist the department in predicting the ability of its survey staff to meet the goals in the strategic plan.

Further, the department's ranger survey course is beneficial and should be maximized. The training course was offered for the first time in December 1998 as a professional development class for park rangers. However, since it is not a required course, not all rangers have attended. Requiring rangers to take the course would raise awareness and assist surveying efforts and identification of possible encroachment cases.

Encroachment

Encroachment occurs when individuals or companies use state land as if it belonged to them. The encroachment, whether intentional or unintentional, deprives the state's citizens of the intended use of state land and can endanger the natural environment and affect wildlife and vegetation. Park staff cited construction as an example of ongoing encroachment. During the prior audit, 35 encroachment cases were found in 1995. Only 9 cases—all occurring in 1998—have been identified since.

When an encroachment is found, the division contacts the encroaching landowner in person, or by letter, or posts a notice on the property if the encroacher is unknown. Some landowners voluntarily remove their encroaching structures from state land after this notification. If not, the division may remove and/or impound the encroaching structure, after giving proper notice. If the division cannot resolve the case, the matter is referred to the department's Office of General Counsel, which refers the case to the Attorney General's Office if litigation is necessary. In settlement, an encroacher could be allowed to substitute another tract of land (with the approval of the State Building Commission). According to department management, as of April 1999, 20 of the 35 cases identified in 1995 have been resolved. The other 15 are awaiting action by the State Attorney General. Two of the 9 cases identified in 1998 have been resolved and the department is addressing the remaining 7.

However, despite the previous audit's recommendation that the department develop written policies and processes for handling encroachment violations, no such guidelines have been established. Although the department previously concurred with the finding, staff now state that such guidelines would be difficult to establish since each case is unique in nature. Similarly, the department has not compiled data on encroachment violations to identify trends in types and locations of encroachment and methods of resolution. Such a study might help the department better identify potential problem areas so that they could use limited resources more effectively.

Recommendation

The department, in conjunction with the Division of Real Property, should develop estimates for the time a survey of a particular terrain should take. Further, the department

should formalize the ranger survey training program to require the class for all rangers or for a representative group of rangers from each park.

The department should develop a policy and process for handling encroachment violations, and they should compile and track data identifying trends in types, locations of violations, and methods of resolution. Such data should be reported to and reviewed by department management on a periodic basis in order to help determine what other intervention may be required. The data could also be used in the ranger surveying training program.

Management's Comment

We concur that the department could improve its park boundary survey efforts. However, we do not concur with all of the individual recommendations.

Boundary Survey Improvements

The Tennessee State Parks Master Plan, approved May 1999, calls for the completion of boundary surveys on 15 parks by June 30, 2003, and an additional 10 parks by June 30, 2008.

The department intends to meet the objectives outlined in the State Parks Master Plan. However, as noted in the audit report, the nature of some property descriptions (marking boundaries by fences, rocks, or trees that may no longer exist) can significantly complicate and slow the survey process. Therefore, the department must have the flexibility to address any unforseen occurrences that might interfere with the schedule. We do not believe accuracy should be sacrificed for speed.

Boundary Survey Time Studies

In theory, a survey time study could help the department reach the goals identified above. However, conducting such a time study will be complicated and time consuming since each of the 54 State Parks is unique geographically and no particular type of terrain is prevalent. Also, complicating the study will be the way the state came into possession of the property and the fact that parks are often composed of many separate tracts of property. Thus, a study might be required for each individual park and may show no commonality.

Since it is not clear that the study benefits will outweigh its cost and complexity we believe our resources are better spent actually conducting the surveys. However, we will consider the development of such a study.

Ranger Boundary Survey Training

The ranger survey training program will be formalized and required of all rangers responsible for boundary line monitoring. The Office of General Counsel will assist in this training.

Encroachment Trends

The department does not believes that there is a "trend" in the location or nature of boundary encroachments given the few instances noted. Since each piece of property and each situation is unique, there is no mold into which all boundary issues can be placed and, therefore, written procedures for resolution of boundary issues may not be useful.

The only commonality observed thus far is that boundary issues may arise as land is developed around the parks. But even in this commonality each parcel of property is unique and each type of encroachment is unique. Some boundary issues are simple, such as the placement of an easily movable piece of personal property while others are quite complex, such as the use of a driveway which crosses a strip of state property, but which is the only existing means of accessing a residence. The issues vary in terms of the other property owner's motive. Regardless of the reason for the encroachment it is important to recognize that adjoining property owners are park neighbors.

Our Office of General Counsel has utilized a specific format for gathering and retaining data regarding boundary disputes (location, type of issue, resolution of issues) which can be easily researched when a new boundary concern arises. The Division of State Parks will develop a formal policy and process for its use in handling and reporting encroachment violations.

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6. All indirect costs are not allocated to state parks and food costs at parks need improvement

Finding

The prior audit recommended that the department develop a system to allocate indirect costs and overhead to individual parks and retail activities. In addition, the food costs at some park facilities continue to be above industry averages.

Park Revenue and Expenditures

The Parks Division annually produces a report titled "Revenue Sources by Park Types." This report lists each park individually, identifies its expenditures and revenues, and indicates a percentage of revenues to expenditures for all parks in total. For the fiscal year ending June 30, 1998, that collective percentage was 59.7 percent.

The amounts used in the report are taken directly from the state's accounting system that categorizes financial information by divisions within departments. We identified three other divisions of the department with expenditures benefiting state parks that are not allocated individually to parks and are not included in this report. Those divisions and amounts of expenditures for fiscal year 1998 are:

- Administrative Costs of the Parks Central Office — $3.8 million
- Parks Major Maintenance — $4.6 million
- Administrative Costs for TDEC — $6.9 million

The Parks Major Maintenance is categorized by parks and those amounts could be included in costs as categorized.

In June 1999 the department revised the "Revenue Sources by Park Type" report for fiscal year 1998 and allocated $4.9 million in indirect costs to the parks. This amount was determined by applying an indirect cost of 20.4% to payroll expenses of the parks. However, while this is an indication that the department considers indirect costs as part of park expense, the administrative costs of the parks central office and parks major maintenance totals $8.4 million without any department administration.

While the report may be useful for internal management purposes, when reported externally as an indicator of the financial condition of the parks, it provides an incomplete picture of the parks' financial position.

Food Costs

The prior audit cited a consultant's study of four park restaurants that reported food costs exceeded the food industry's average food cost of 35 percent of total revenues. Information provided by the department indicates the food costs of three of the four inns (one was closed during the year for renovation) for fiscal year June 1998:

Comparison of Food Costs

Park Restaurant	Food Costs in 1995 Study	Food Costs FY 1998	Difference
Natchez Trace	45%	52%	7%
Fall Creek Falls	40%	41%	1%
Paris Landing	51%	45%	(6%)

The total food costs for all restaurants in the park system for fiscal year 1998 were 42 percent of total revenues.

Contracted Retail Operations

Staff of the Division of State Parks indicated that the division does consider maintenance costs when awarding contracts for retail operations. However, it does not consider administrative costs. According to staff, due to budget constraints, the Parks Division could not operate some concessions.

Recommendation

Park management should account for all costs when assessing the financial condition of state parks and determining the costs of retail operations. While some costs are direct and can be easily identified, it is important to account for related indirect costs to assess the condition of the park system. The department should develop a method to assign or allocate indirect costs incurred by other divisions on behalf of the parks.

Park management should review the management of restaurants to determine methods to lower food costs.

Management's Comment

Park Revenue and Expenditures

We concur in part. Recently State Parks were reorganized into a "retail section" and a "natural resource section." The focus of this reorganization was to maximize the revenue producing potential of the parks and to attempt to make the parks more self-sufficient. A secondary result of that reorganization was to allocate administrative costs to those individual retail operations to determine the operations' true profitability. Although the department made an initial step to accomplish this in 1999 by allocating $4.9 million of indirect costs to the parks, we will look at ways to better assign or allocate administrative costs to the individual park operations. A more accurate allocation of administrative costs will be a positive step in helping assess the financial condition of our parks.

Food Costs

We concur that more could be done to lower food costs, although there are several mitigating factors that contribute to the state park food costs being higher than the consultant prepared industry average. The focus on the retail operations in the parks and a resolve to make those operations profitable is forcing the restaurants to be more conscious of food costs and to search for new and innovative ways to lower the ratio of those costs to revenue.

Those factors include lower guest checks at state parks as compared to the private sector resort hotels; state mandated purchasing limitations; more expensive yet popular buffet style meals; labor costs; and the fact that some locations are remote, resulting in a lack of guest volume and thus lower revenues. (As pointed out in the 1995 Highland Group study, private sector resort hotels have guest checks on average 25% to 50% higher than the State Park restaurants. The Highland study stated that "food cost ratio was higher in part because the average guest check was low compared to private resort hotels.")

The department is studying several options to address these factors. The options under review are changing our pricing structure and obtaining purchasing relief from Finance & Administration and General Services to allow us more flexibility to negotiate the lowest food costs with our suppliers (similar to the flexibility private sector enterprises enjoy). The

Department is considering legislation to obtain changes in purchasing procedures for the upcoming session.

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7. More could be done to address the public interest

Finding

The prior audit reported that department and environmental boards could do more to protect the public interest. The audit recommended that the department (1) establish guidelines to help staff members find a proper balance between environmental protection and economic development, (2) complete corrective actions resulting from the report of Save Our Cumberland Mountains (SOCM), (3) revise conflict-of-interest policies, and (4) establish the State Compliance Advisory Panel. The audit also recommended that the General Assembly evaluate the membership of environmental boards. The department has implemented or is in the process of implementing changes resulting from the SOCM report. (See Follow-up of Prior Audit Findings section.) The other recommendations have not been implemented or have been only partially implemented. Also, the General Assembly has not changed the boards' representation requirements.

Environmental Protection Versus Economic Development

We found that the department has not established guidelines stipulating how to weigh economic benefit against environmental concerns. However, it has resolved the disagreement between the Division of Air Pollution Control and the U.S. Department of Interior on the air quality standards in the Great Smoky Mountains National Park, a problem cited as an example in the 1997 report illustrating the need for such guidelines. In April 1999 the State of Tennessee, the U.S. Department of Interior, U.S. Department of Agriculture, and the State of North Carolina signed an agreement to address air quality standards in the Southern Appalachian Mountains. The agreement stipulates that Tennessee, through the Air Pollution Control Board, provides state and federal air quality guidelines to any business that is expanding or relocating in the area. The business is also encouraged to contact the Federal Land Manager (a U.S. Department of Interior or U.S. Department of Agriculture staff person) for input regarding air quality standards. The agreement requires the business to conduct a study of the potential impact of the expansion or relocation on air pollution. Based on the results of that study, the department's Division of Air Pollution Control may or may not issue permits allowing the business to begin operations.

Conflict-of-Interest Policies

The August 1997 performance audit found that although the department and three environmental boards attached to the department had conflict-of-interest standards in either statute or policies, the standards did not require initial or periodic disclosure of financial, personal, and professional interests that might conflict with job and board responsibilities. The

department changed its policy for staff, but the five environmental boards in this audit do not require members to submit written conflict-of-interest statements.

The department amended its policy for staff in December 1997 to include a disclosure statement that is completed and signed upon employment. The department also has a committee that reviews employee disclosure statements. However, the disclosure statements are not periodically updated.

Conflict-of-interest policies are intended to ensure that the public interest is protected and that board members are independent of the entities they regulate. No statute requires written disclosure, and nothing came to our attention during the scope of the audit to indicate any personal, professional, or financial interests influenced board member decisions. However, disclosure of conflicting interests could alert the board to potential conflicts that could be discussed and resolved before the conflicts have an impact on decisions.

Public and Conservation Interests in Board Membership

The 1997 performance audit recommended that the General Assembly consider making statutory changes to ensure that the boards have a balance of public, conservation, and industry interests. Because this change has not been implemented, the overall status of the board composition remains the same as it was during the prior audit. The following chart illustrates the composition of board membership.

Environmental Board Membership by Group Representation
April 1999

Board	State Ex Officio	Business/ Agriculture	Local Gov't.	Consumer/ Public	Academic/ Professional	Conservation	Totals
Air Pollution Control	2 (14%	5 (36%)	2 (14%)	-	3 (21%)	2 (14%)	14 (100%)
Water Quality Control	3 (30%)	3 (30%)	2 (20%)	1 (10%)	-	1 (10%)	10 (100%)
Solid Waste Disposal Control	2 (18%)	5 (45%)	2 (18%)	-	1 (9%)	1 (9%)	11 (100%)
Petroleum Underground Storage Tanks	1 (11%)	4 (44%)	1 (11%)	2 (22%)	-	1 (11%)	9 (100%)
Ground Water Management	2 (40%)	3 (60%)	-	-	-	-	5 (100%)
Totals	10 (20%)	20 (41%)	7 (14%)	4 (8%)	4 (8%)	5 (10%)	49 (100%)

Membership of the five environmental boards included in this audit was reviewed to determine whether the membership composition requirements had changed since the 1997 performance audit. The 1997 audit noted that three boards (Air Pollution Control, Solid Waste Disposal Control, and Ground Water Management) had no consumer/public members, and one board (Ground Water Management) had no member specifically representing conservation interests.

Advisory Panel Not Established

The Division of Air Pollution Control has not established a State Compliance Advisory Panel as required by the 1990 amendments to the federal Clean Air Act as reported in the prior audit. The panel is intended to review and render advisory opinions on the effectiveness of the department's Small Business Assistance Program and work with the Small Business Advocate. Federal statute says the panel is to have four owners or representatives of small businesses, chosen by the leadership of the state legislature; two members representing the public, chosen by the Governor; and one member representing the Division of Air Pollution Control, appointed by the commissioner. In September 1998, the Governor's office requested the nominations of the legislature. As of April 1999, no legislative members have been nominated.

Recommendation

The department should establish guidelines for staff stipulating how to weigh economic benefit against environmental concerns.

The department should require its employees to periodically update their conflict-of-interest disclosure statements. The environmental boards should consider revising their conflict-of-interest policies to require initial and periodic disclosure of personal, professional, and financial interests that could conflict with regulatory responsibilities.

The department should work with the Governor's office and General Assembly to get members appointed to the State Compliance Advisory Board. The commissioner should appoint a member representing the Division of Air Pollution Control.

The General Assembly may wish to evaluate the membership of the Air Pollution Control Board, the Solid Waste Disposal Control Board, and the Ground Water Management Board to determine if the boards have balanced public, conservation, and industrial representation.

Management's Comment

Department of Environment and Conservation:

We concur in part. The department's mission is to enhance the quality of life for all Tennesseans and to be stewards of our natural environment. We are completely and firmly committed to that mission and work continually at addressing the public's interest in that goal.

As stated in response to the previous audit, the department and the boards are charged with carrying out the public policy set by the legislature. Neither the department nor the boards have the legal authority to carry out some of the suggestions made in this finding and recommendation.

Environmental Protection Versus Economic Development

The *Tennessee Code Annotated* addresses several instances where economic growth and environmental protection must be jointly considered. Those include improving the economy through interstate cooperation on management of nuclear materials (TCA 68-202-601, Article I); requiring solid waste planning to facilitate economic and industrial development (TCA 68-211-602 (c.)); promoting markets for solid waste recyclables (TCA 68-211-803 (c.)); and providing financial assistance for local government for wastewater treatment works for economic growth (TCA 68-221-802). Also, *Tennessee Code Annotated* 68-201-103 specifically directs the Department and the Air Pollution Control Board to "*. . . maintain the purity of the air resources of the state consistent with the . . . maximum employment and the full industrial development of the state*."

The department is looking at the following areas as potential opportunities for improvement.

- Our Policy Office is examining policies, guidelines, and procedure models used by other states and the U.S. Environmental Protection Agency that might be applicable.
- A new Technical Training Program for all environmental positions was instituted in March 1999. A "needs analysis" will be conducted by our Technical Training Staff to determine the level of training needed to better guide regulatory program managers.
- Our Reengineering initiative developed new Standard Operating Procedures for our permitting and enforcement activities. Staff assigned to coordinate permitting and enforcement efforts will examine these processes to determine how they may affect balancing economic and environmental considerations.

Conflict of Interest

The department will require employees who have filed conflict of interest disclosure statements to notify the department of any change in that disclosure within ten days of the change.

The department will recommend to the boards that members disclose in writing when they have a "direct substantial financial" interest in a matter and that, in such a case, they should not participate in the decision making process. To go further would be in contravention of the legislative will since the various boards are not intended to be made-up like or behave as impartial juries. The legislature determined that it is appropriate for the boards to have members with personal, professional, and financial interest that influence their decisions. The intent of the board composition of conflicting interest groups seems to be forcing decisions that no single interest would endorse by itself. The statutes prohibit participation by a board member only "in making any decision… in which the municipality, firm, or organization which the member represents, or by which the member is employed, or in which the member has a direct substantial financial" interest. (This is the language used in Section 68-211-111(I), *Tennessee Code Annotated*; the statutes establishing other boards have similar language.)

Public and Conservation Interests in Board Membership

The composition of each board is governed by statute and only the legislature has the power change it. The department will appoint members to the boards as directed by the General Assembly. We will continue to make every effort to ensure that board meetings are held in accordance with the Open Meetings Act and to include public comment in their actions.

Advisory Board Not Established

The department has requested assistance from the legislature on several occasions to establish this advisory board without results thus far. We will continue our efforts.

Water Quality Board:

Tennessee's legislature has determined that it is appropriate for the boards to have members with personal, professional, and financial interests that influence their decisions. Clearly, the legislature intends this mix of interests to be joined in decision making so as to force consensus that no single interest would endorse by itself. The statutes prohibit participation by a board member only in making decisions involving the municipality, firm, or organization that the member represents, or by which the member is employed or otherwise has a direct substantial financial interest. TDEC will recommend to the boards that members disclose in writing when they have direct substantial financial interest in a matter and that, in such case, they should not participate in the decision making process. To go further would be in contravention of the legislative will.

Air Pollution Control Board:

The Comptroller's concern is appreciated and the board concurs in part. As stated in response to previous audits, the composition of the board was established in TCA 68-201-104 with certain seats designated for industry representatives. The members of the board believe

that the representation is appropriate. The Tennessee Air Quality Act would need to be amended by the legislature if it should be determined that the Board makeup is not appropriate.

Concerning the findings of the Comptroller about the department and the Division of Air Pollution Control the following responses are offered:

Environmental Protection Versus Economic Development – The Tennessee Air Quality Act, TCA 68-201-106, addresses six matters to be considered by the Board and Department in determining the appropriate action to take in maintaining a proper balance between environmental protection and economic development. Also, it is pointed out that Section 68-201-101 of the Act, Intent and Purpose, it is stated that a balance must be maintained between economic development and environmental protection. The general reference to "any business" should be changed to "air contaminant source subject to the Permitting Procedure." These guidelines don't apply to just "any business."

Public and Conservation Interests in Board Membership – At least two of the board members represent the public according to our interpretation of the Act, TCA 68-201-104 (I) and (L).

Advisory Panel Not Established – The Division of Air Pollution Control does not have the authority to establish a State Compliance Advisory Panel. The Compliance Advisory Panel was required as part of the 1990 Clean Air Act Amendments, 42 USC 7661f(e), to oversee the activities of the Small Business Assistance Program (SBAP) and SBAP Ombudsman Division Title V fees are required to pay for the SBAP. Some of the authority to establish this Panel exists within the executive branch and some within the legislative branch of government.

Board of Ground Water Management:

The board concurs with the response made by the department.

Petroleum Underground Storage Tank Board:

The board concurs with the department's response.

Solid Waste Disposal Control Board:

The board concurs with the department's response.

RECOMMENDATIONS

LEGISLATIVE

This performance audit identified one area in which the General Assembly may wish to consider statutory changes to improve the efficiency and effectiveness of the boards' and the Department of Environment and Conservation's operations.

1. The General Assembly may wish to evaluate the membership of the Air Pollution Control Board, the Solid Waste Disposal Control Board, and the Ground Water Management Board to determine if the boards have balanced public, conservation, and industrial representation.

ADMINISTRATIVE

The following areas should be addressed to improve the efficiency and effectiveness of the Department of Environment and Conservation's and the related boards' operations.

1. The Division of Radiological Health should implement the recommendations of the prior audit and its own committee in order to perform scheduled inspections in a timely manner. The division management should require X-ray facility management to inform the division about the type of inspection they will use when paying annual fees, require registered inspectors to submit reports by a particular date, and require facility management to correct deficiencies within a specified number of days. The division should record the number of X-ray tubes registered inspectors found in noncompliance. The division should meet its goal of following up on 10 percent of inspections performed by registered inspectors and the follow-ups should be performed within three months. It should compile and review the results of those follow-ups. Division management should continue to implement database and software changes that will improve the use of staff resources and determine the number of overdue inspections. It should work with the Division of Information Systems to develop a timetable for completing the component to schedule and track all inspections.

2. The Underground Storage Tank Board, in conjunction with the department, should propose a long-term solution that will maintain the solvency of the fund and provide for a regulatory program to ensure ongoing compliance.

3. Department management should evaluate the allocation of staff for inspections of underground storage tanks to ensure adequate staffing. Department management should also take steps to ensure that the information contained in the division's database accurately reflects the number of inspections to be completed. When the compliance verification surveys are completed, the department should develop a schedule for inspections based on the number and priority of tanks for inspections and on inspection frequency needed.

4. The department should develop written policies and procedures to specify the data to be used to record enforcement activities and how to communicate the data to the enforcement coordinator. It should verify the dates for a sample of enforcement orders to ensure that data is accurate. The department should develop a policy stating the type and frequency of analyses management should conduct to assess that data.

5. The department should develop estimates for the time a survey of a particular terrain should take. Further, the department should formalize the ranger survey training program to require the class for all rangers or for a representative group of rangers from each park.

6. The department should develop a policy and process for handling encroachment violations, and it should compile and track data identifying trends in types, locations of violations, and methods of resolution. Such data should be reported to and reviewed by department management on a periodic basis in order to help determine what other intervention may be required. The data could also be used in the ranger surveying training program.

7. Park management should account for all costs when a ssessing the financial condition of state parks and determining the costs of retail operations. While some costs are direct and can be easily identified, it is important to account for related indirect costs to assess the condition of the park system. The department should develop a method to assign or allocate indirect costs incurred by other divisions on behalf of the parks.

8. Park management should review the management of restaurants to determine methods to lower food costs.

9. The department should establish guidelines for staff stipulating how to weigh economic benefit against environmental concerns.

10. The department should require its employees to periodically update their conflict-of-interest disclosure statements. The environmental boards should consider revising their conflict-of-interest policies to require initial and periodic disclosure of personal, professional, and financial interests that could conflict with regulatory responsibilities.

11. The department should work with the Go vernor's office and General Assembly to get members appointed to the State Compliance Advisory Board. The commissioner should appoint a member representing the Division of Air Pollution Control.