

Audit Report

Department of the Environment

January 2008



OFFICE OF LEGISLATIVE AUDITS
DEPARTMENT OF LEGISLATIVE SERVICES
MARYLAND GENERAL ASSEMBLY

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Karl S. Aro
Executive Director

DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

Bruce A. Myers, CPA
Legislative Auditor

January 18, 2008

Senator Verna L. Jones, Co-Chair, Joint Audit Committee
Delegate Steven J. DeBoy, Sr., Co-Chair, Joint Audit Committee
Members of Joint Audit Committee
Annapolis, Maryland

Ladies and Gentlemen:

We have audited the Maryland Department of the Environment (MDE) for the period beginning July 1, 2004 and ending March 31, 2007.

Our audit disclosed that MDE failed to fully inform the General Assembly's budget committees or obtain Board of Public Works approval for significant computer system development and implementation issues and modifications related to a permit and penalty monitoring system which is under development by MDE. For example, MDE did not disclose contract scope reductions of approximately \$912,000 to offset cost overruns and three additional contracts totaling approximately \$398,000 relating to system implementation. We also noted that MDE, in conjunction with the Maryland Environmental Trust, deposited funds totaling \$1.8 million in a bank that loaned the funds to a private foundation for the purchase of certain land. MDE did not obtain two appraisals for the property, and the loan agreement did not require the foundation to immediately record a conservation easement on the property, and did not provide legal remedies if the easement was not eventually recorded.

Our audit also disclosed noncompliance with State laws and regulations relating to various special fund programs. For example, MDE did not reevaluate exemptions from paying into the Bay Restoration Fund granted to wastewater facilities, and MDE did not update its database with revisions to property and owner information for lead paint properties.

We also identified numerous computer security weaknesses. For example, MDE's internal network was not adequately secured and its firewall controls need improvement. Additionally, our audit also disclosed various matters that will require corrective action by MDE relating to lack of compliance with State law provisions, and control deficiencies related to purchasing and disbursements, corporate purchasing cards, and payroll incentive awards.

Respectfully submitted,

Bruce A. Myers, CPA
Legislative Auditor

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* Denotes item repeated in full or part from preceding audit report

Executive Summary

Legislative Audit Report on the Maryland Department of the Environment
(MDE)
January 2008

- **MDE did not fully disclose to the General Assembly’s budget committees various implementation issues, the existence of three additional contracts, and significant project cost overruns related to the Enterprise Environmental Management System (EEMS) contract that could ultimately reduce the system’s functionality. In addition, project scope modifications were not referred to the Board of Public Works.**

MDE should fully report the status of the EEMS project to the General Assembly’s budget committees, including the three additional contracts and any future additional contracts necessary for the implementation of EEMS. MDE should also ensure the functionality of the EEMS and implement alternative monitoring procedures for programs not included in EEMS. Additionally, MDE should obtain Board of Public Works approval for the contract scope modifications.

- **MDE lacked department-wide guidelines to help ensure consistent determination and imposition of penalties for violations of environmental laws.**

MDE should develop guidelines for penalties, including requirements related to the imposition and reduction of penalties.

- **MDE, in conjunction with the Maryland Environmental Trust, deposited funds totaling \$1.8 million in a bank that loaned the funds to a private foundation for the purchase of land without obtaining two independent property appraisals. In addition, although the primary purpose of the land purchase was for environmental conservation, the loan agreement did not require the foundation to immediately record a restrictive conservation easement on the property, and did not provide legal remedies if the easement was not eventually recorded.**

MDE should obtain two independent property appraisals as the basis for amounts provided for land purchases, require the immediate recording of conservation easements, and provide sufficient legal remedies in loan agreements.

- **MDE had not established procedures to periodically reevaluate payment exemptions granted to wastewater facilities under the State law pertaining to the Bay Restoration Fund.**

MDE should establish procedures to periodically (for example, annually) reevaluate the payment exemptions.

- **MDE did not timely update its database with revisions to property and owner information, and did not always document its calculation of reimbursement payments made from the Underground Oil Tank Reimbursement Program.**

MDE should establish procedures to identify and pursue property owners who fail to register affected lead paint properties and pay the annual registration fee and record revisions to property and owner information in the property database timely. MDE should also maintain documentation supporting its calculation of underground oil storage tank reimbursement payments and only pay for costs that are eligible under State regulations.

- **MDE had not established security standards for hazardous material facilities in accordance with the time frame established by State law causing delays in conducting required security audits of the facilities.**

MDE should adopt regulations as required by State law. Additionally, MDE should independently verify the exempt status claimed by facilities and maintain documentation to support the exemptions, obtain the security analyses from facilities that have not yet submitted them, and review all security analyses on a timely basis to ensure compliance with adopted security standards. Finally, MDE, in conjunction with the Department of State Police, should conduct security audits of hazardous material facilities in accordance with State law.

- **Numerous security and control deficiencies were noted with MDE's information systems. In addition, numerous internal control deficiencies were noted with respect to MDE's operations, including purchasing and disbursements, corporate purchasing cards, and payroll incentive awards.**

MDE should take the recommended actions to improve controls and security in these areas.

Background Information

Agency Responsibilities

The Maryland Department of the Environment (MDE) was created to protect and restore the quality of the State's land, air, and water resources and safeguard the public from health risks associated with pollution. MDE's duties and responsibilities include enforcing applicable laws and regulations, conducting long-term planning and research, and assisting industry and communities in their efforts to handle pollution, waste disposal, and emergency spills of waste or oil. MDE's main programs include Air and Radiation Management, Waste Management, Water Management, and Technical and Regulatory Services.

According to the State's records, during fiscal year 2007, MDE's operating and capital expenditures totaled approximately \$281.4 million. These expenditures were funded by general funds totaling approximately \$50.3 million, special funds totaling approximately \$163.1 million, federal funds totaling approximately \$63.5 million, and reimbursable funds totaling approximately \$4.4 million. MDE's capital expenditures related to various funds, including the Water Quality Revolving Loan Fund, Drinking Water Revolving Loan Fund, and Bay Restoration Fund.

Financial Statement Audits

MDE engaged an independent accounting firm to perform audits of the Maryland Water Quality Financing Administration's financial statements for the fiscal years ended June 30, 2005, 2006, and 2007. In the related audit report for the fiscal year ended June 30, 2007, the firm stated that the Administration's financial statements presented fairly, in all material respects, the financial position of the Administration as of June 30, 2007, and the results of its operations and its cash flows for the year then ended in conformity with the accounting principles generally accepted in the United States of America. According to the financial statements, as of June 30, 2007, the Water Quality Financing Administration's net assets totaled approximately \$1 billion.

In the related audit reports for the fiscal years ended June 30, 2006 and 2005, the firm issued qualified opinions for the Administration's financial statements due to a scope limitation related to certain record keeping deficiencies. These deficiencies were resolved which allowed the firm to issue an unqualified opinion for the fiscal year ended June 30, 2007, as previously mentioned.

Federal Audits

In our preceding audit report, we commented that four federal audit reports issued between January 18 and July 14, 2000 by the U.S. Environmental Protection Agency (EPA) indicated that MDE had a serious problem supporting certain charges that were previously paid with federal funds. Specifically, the reports, which included the results of cost documentation reviews related to several Superfund sites within Maryland, indicated that MDE charges totaling \$2.3 million were not adequately supported. On September 7, 2000, MDE responded to these audit reports indicating the corrective actions that would be undertaken to ensure the situation would not recur in the future, and has since advised us that those actions have been implemented. During our prior audit, MDE was verbally notified by the EPA that cost recoveries relating to certain Superfund sites were complete, thus reducing MDE's potential liability by approximately \$1 million. MDE requested the EPA to submit a written confirmation reducing or releasing MDE's potential liability. However, the EPA declined this request. As of June 2007, we were advised by management personnel of EPA's Office of Enforcement that the EPA still considers this matter unresolved and a decision has not been made as to whether the EPA will attempt to recover all or a portion of the questioned costs.

Current Status of Findings From Preceding Audit Report

Our audit included a review to determine the current status of the twelve findings contained in our preceding audit report dated April 4, 2005. We determined that MDE had satisfactorily resolved eight findings. The remaining four findings are repeated in this report.

Findings and Recommendations

Enterprise Environmental Management System Contract

Background

In January 2004, MDE entered into a multi-year contract totaling approximately \$6.8 million with a vendor to acquire and integrate an Enterprise Environmental Management System (EEMS). In November 2006, the contract was reduced from \$6.8 million to \$6.4 million because of a mathematical error. EEMS is intended to provide MDE with a centralized database to replace 177 separate legacy databases, and enhance electronic processing of environmental permitting, reporting, enforcement, and compliance activities. For example, EEMS will include a comprehensive centralized reporting mechanism to readily monitor the status of permits (such as wastewater discharge) and inspections, as well as, penalties imposed for violations of the State's environmental laws.

During our three preceding audit reports, we commented upon MDE's lack of a comprehensive centralized reporting mechanism for permits, inspections, and penalties. As a consequence, MDE management has not been able to effectively review, on a department-wide basis, the status of permits and inspections or penalties imposed for violations of environmental laws and take appropriate action when necessary.

As of March 2007, MDE had paid the vendor approximately \$3.2 million under this contract. In a status report submitted to the General Assembly's budget committees, MDE noted that, as of December 1, 2006, certain programs had implemented EEMS, and MDE projected that EEMS would be fully implemented by December 2008.

Finding 1

MDE did not fully disclose to the General Assembly's budget committees significant EEMS development and implementation issues which could ultimately affect the usefulness of the system, and did not obtain Board of Public Works approval for contract scope modifications, as required.

Analysis

MDE did not fully disclose significant EEMS development and implementation issues to the General Assembly's budget committees, and obtain Board of Public Works (BPW) approval for material contract scope modifications. In this regard, the General Assembly's budget committees, through the annual State budget law, required MDE to report on the status of the EEMS project no later than December 1, 2005 and 2006, and to obtain authorization to move forward with the next stage

of the contract. However, we noted that the following EEMS issues were not disclosed in the annual status reports:

- The majority of planned project expenditures were to implement EEMS in 32 MDE programs at a cost of \$5.6 million. However, cost overruns in certain areas (such as expanded testing of EEMS functionality that was not originally planned) forced MDE to reduce the scope of the project to remain within the project budget. MDE initially determined in August 2004 that estimated costs to complete the project exceeded available funding, and that reductions to the scope of the project would be necessary. However, this was not disclosed in the December 2005 or December 2006 status reports submitted to the budget committees. As of April 2007, implementation of EEMS in 18 MDE programs – over half of the programs intended to use EEMS – with budgeted project development costs of approximately \$912,000 had been removed from the project scope. Additionally, although State Procurement Regulations require BPW approval for contract modifications that materially change the scope of the original contract, MDE did not obtain BPW approval for this material scope change. We were advised by MDE management personnel that future implementation of EEMS in certain of the 18 removed programs is being considered by either further modifying the existing contract or entering into a new contract once the current contract is completed.
- The budget committees were not advised of certain operational deficiencies related to EEMS. We were advised by management personnel that, of the four programs that have implemented EEMS, the functionality of EEMS is limited and is not operating as specified in the contract. Specifically, for one program, system reports needed for ongoing monitoring and reporting purposes cannot always be generated, and two programs are currently entering information into both their legacy database (old system) and EEMS in order to meet their need for ongoing monitoring and reporting. Additionally, two programs were not using EEMS for certain activities (such as permit enforcement) as the necessary State regulatory requirements were not contained in EEMS. For one of these programs, the regulatory requirements contained in EEMS were applicable to another state. These operational difficulties were not disclosed to the budget committees in the December 2006 status report despite being experienced from the time of initial implementation in August 2006.
- In addition to the annual status reports, the General Assembly's budget committees required MDE to have an Independent Verification & Validation (IV&V) performed to assess the progress of the project. The IV&V was primarily conducted during the period from March 2006 to May 2006 by information technology personnel from other State agencies. However, MDE did not provide the budget committees with the detailed findings of the IV&V

report. Rather, MDE only provided a general summary of the report's findings and outlined MDE's planned corrective action to address the report's concerns. The report identified issues similar to those commented on above.

Recommendation 1

We recommend that MDE report the status of the EEMS project to the General Assembly's budget committees, including the aforementioned project scope modifications and operational deficiencies. We further recommend that, to the extent that EEMS continues to be implemented, MDE ensure that EEMS maintains its intended functionality and take appropriate action to address the problems with the EEMS system reporting. To the extent programs are not included in EEMS, we recommend that alternative procedures be implemented to provide adequate controls over the programs' permit and enforcement functions. We also recommend that MDE submit for BPW consideration the aforementioned scope modification, as well as any future material contract scope modifications, as required by State Procurement Regulations.

Finding 2

MDE had not disclosed the existence of three additional contracts totaling approximately \$398,000 necessary for the implementation of EEMS, and certain significant cost overruns to the General Assembly's budget committees.

Analysis

MDE had not disclosed to the General Assembly's budget committees that it had executed three additional contracts totaling approximately \$398,000 necessary for the implementation of EEMS. Specifically, in October 2006, MDE entered into a separate contract totaling approximately \$188,000 with the EEMS contractor to provide consulting and technical services in support of EEMS implementation in five MDE programs, including database administration and support, report development support, and help desk support. MDE originally planned to perform these services using its own personnel; however, we were advised by MDE management personnel that the separate contract was necessary because MDE lacked the necessary skilled personnel to perform the services. Additionally, MDE paid another contractor approximately \$210,000 under two separate contracts issued in December 2004 and October 2006 to perform enhanced system reporting (for example, ad-hoc reporting). However, these three separate contracts were not reported to the General Assembly's budget committees in the December 2005 or December 2006 status reports. This is important as the maximum amount MDE is authorized to spend on the EEMS project is established annually in State budget law. By not disclosing these contracts as

additional costs necessary for the implementation of EEMS, MDE could, in the future, exceed the maximum amount authorized for the EEMS project without the budget committees' knowledge.

In addition, certain significant cost overruns had not been reported to the budget committees. For example, although the EEMS contract originally budgeted \$150,000 for the purchase of basic system reporting software from the EEMS vendor, as of July 2007, MDE estimated that \$197,000 had to be paid to the vendor for this basic system reporting, and had committed to pay approximately \$196,400 more for system reporting to standardize data input and ensure the ultimate integrity of the system reports. Furthermore, as previously noted, MDE paid a separate contractor approximately \$210,000 during calendar years 2004 to 2006 to develop enhanced system reporting. MDE management personnel could not provide a reasonable explanation for the lack of a fully functioning system reporting solution despite these additional expenditures. Without a functional system reporting capability, the usefulness of EEMS is significantly limited.

Recommendation 2

We recommend that MDE report significant cost overruns, the aforementioned three contracts, and any future additional contracts necessary for the implementation of EEMS to the General Assembly's budget committees. In addition, MDE should limit spending on the EEMS project to the amount authorized.

Permit and Penalty Records

Finding 3

Guidelines were not in place to help ensure consistent determination and imposition of penalties for violations of environmental laws.

Analysis

Guidelines were not in place to help ensure consistent determination and imposition of penalties for violations of environmental laws. Each MDE program maintained its own records to track the assessment and resolution of penalties resulting from violations of environmental laws and forwarded this information quarterly to a central location for compilation and tracking purposes. While the information compiled was to be consistent among administrations, we found that the records often lacked necessary information to track case status and did not provide any rationale for changes to penalty assessments because MDE lacked department-wide guidelines for penalties. For example, we noted that a penalty for lead poisoning prevention violations initially assessed in June 2006 at

\$100,000 was subsequently reduced to \$8,000 in October 2006, but there was no indication of the employee who authorized the penalty reduction nor was there any supporting documentation in the records for this action.

According to MDE records, during fiscal years 2005 and 2006 penalties collected by MDE totaled approximately \$4.4 million.

Recommendation 3

We recommend that MDE develop guidelines for penalties, including requirements related to the consistent determination and imposition of penalties as well as the reduction of penalties. We also recommend that MDE identify significant reductions previously made to assessed penalties and verify the propriety of these reductions.

Land Purchase

Finding 4

MDE, in conjunction with the Maryland Environmental Trust, deposited funds totaling \$1.8 million in a bank that loaned the funds to a private foundation for the purchase of land without obtaining two property appraisals. The loan agreement did not require the foundation to immediately record a conservation easement on the property, and did not provide appropriate legal remedies if the easement was not eventually recorded.

Analysis

In December 2004, MDE, in conjunction with the Maryland Environmental Trust (MET – a program under the Department of Natural Resources), deposited funds in a bank and authorized the bank to loan funds totaling \$1.4 million to a private foundation for a \$1.8 million purchase of land for conservation purposes. The bank assumes all risk of non-payment or default related to its loan to the foundation and MDE receives interest on its funds during the loan period. To help finance the remaining amount needed for the land purchase, MET granted \$400,000 to a non-profit organization to give to the private foundation. Under the terms of the loan agreement, the foundation was permitted to subdivide the land, construct up to three structures on the subdivided portions, and sell these portions to generate funding to repay the loans.

The funds obtained by the foundation were used to finance the purchase of, and related settlement costs on, 385 acres of agricultural and wetland property on Maryland's Eastern Shore from a private land owner. The foundation is owned by an individual who had previously directed land acquisitions for the non-profit

organization which was granted the \$400,000 by MET to loan to the foundation. Additionally, this individual began serving in an advisory capacity to MET's board of directors approximately two months after purchasing the aforementioned land, providing advice on matters of interest to MET, especially in the solicitations of easements. Based on our review of this transaction, we noted the following conditions:

- Only one independent property appraisal was obtained for the property. The appraisal valued the property at \$1.7 million without a conservation easement being recorded and under the assumption that the highest and best use of the land would be the development of 28 waterfront houses and preservation of the rest of the land for hunting and agricultural uses. The appraisal valued the property, with the conservation easement recorded, at \$1.04 million. Although the State did not directly purchase this land, we noted that Section 4-416 of the State Finance and Procurement Article of the Annotated Code of Maryland requires that at least two independent appraisals be obtained in instances in which the State purchases the land directly. In our opinion, MDE should require that at least two independent appraisals be obtained to ensure that the funds set aside by the State for this purpose are appropriate.
- The loan agreement did not require the foundation to immediately record a conservation easement at the time the foundation purchased the land. Instead, the loan agreement permitted the foundation to delay recordation of the easement until the land, or a parcel of the land, was sold to a third party. Furthermore, except for the acceleration of the loan repayment, the loan agreement did not contain a specific performance action clause that outlined the legal remedies available to the State if the easement was not eventually recorded. As of July 2007, the foundation had not sold any of the property and no conservation easements had been recorded; consequently, the environmental protection of the property was not restrictively defined in the official land records. The loan agreement indicated that the foundation's earliest planned sale of the 385 acres was December 31, 2007. In June 2007, the foundation had advertised the land for sale for \$4 million.

MDE provides loans to private organizations and water system owners at below market interest rates through qualified banks for land purchases or conservation easements to protect the water quality of wellheads or watersheds.

Recommendation 4

We recommend that, in the future, MDE require two independent appraisals as the basis for amounts provided for land purchases, require the immediate recording of conservation easements, and include specific performance action clauses in loan agreements that provide sufficient legal remedies in the event that easements are not recorded. We also recommend that MDE,

in conjunction with MET, immediately require the foundation to record a restrictive easement on the aforementioned property.

Bay Restoration Fund

Finding 5

MDE had not established procedures to periodically reevaluate the propriety of exemptions from paying into the Bay Restoration Fund granted to wastewater facilities.

Analysis

MDE had not established procedures to periodically reevaluate exemptions from paying into the Bay Restoration Fund (BRF) granted to wastewater facilities. Specifically, our test of 29 facilities that had been exempted from paying into the BRF disclosed that, as of May 2007, MDE had not reevaluated the propriety of the exempt status for 26 of the facilities for periods ranging from 17 to 30 months from the date the exemption was initially granted. Furthermore, while 5 of the 26 facilities were initially granted exemptions during the period from November 2004 to October 2006 because they were not operational at that time, MDE was unaware whether these facilities had subsequently begun operations. As of May 2007, MDE had issued permits to 801 wastewater facilities; 415 of these facilities were granted exemptions from paying into the BRF.

Chapter 428, Laws of Maryland 2004, effective July 1, 2004, established the BRF which is primarily funded by imposing a \$2.50 monthly fee on each household served by a wastewater treatment plant, and a \$30 annual fee on each household served by an onsite well and septic system. Funds collected are to be used to provide grants to wastewater treatment plants, local government agencies and owners of certain septic systems to upgrade their water treatment technologies, and to farmers under the State Department of Agriculture's Cover Crop Program. State law exempts wastewater facilities from paying into the BRF under certain circumstances. For example, a facility does not have to pay into the BRF if the facility does not discharge nitrogen or phosphorus and is not required to monitor for nitrogen or phosphorus in its discharge permit. However, a facility's operations could change which may result in a change to its exemption status. According to the 2006 BRF Annual Report, during the period from July 1, 2004 through December 31, 2006, \$97.9 million in wastewater fund revenues and related interest had been collected and MDE had approved \$73.9 million in grants to upgrade wastewater treatment plants. Additionally, of the \$15.2 million in septic fund revenues and related interest collected, MDE had approved grants totaling \$9 million for septic system upgrades.

Recommendation 5

We recommend that MDE establish procedures to periodically reevaluate the propriety of exemptions from paying into the BRF granted under State law to wastewater facilities.

Special Funds

Finding 6

MDE did not adequately monitor activities in certain special fund programs to ensure compliance with applicable State laws and regulations.

Analysis

MDE did not adequately monitor certain special fund programs to ensure compliance with applicable State laws and regulations. Specifically, we noted the following conditions:

- Annual registrations had not been renewed for certain lead paint properties for calendar years 2006 or 2007. Specifically, we determined that, as of June 2007, approximately 2,600 properties registered for calendar year 2005 had not renewed its registrations for calendar years 2006 or 2007. MDE was unaware that these property owners had not renewed the registrations and could not readily explain why the properties had not been registered. Additionally, we were advised by MDE management personnel that MDE was approximately two years behind in recording changes to property and/or owner information in its database of affected properties. Failure to update the database timely inhibits MDE's ability to monitor properties with lead paint and to identify and pursue property owners that have failed to annually renew their property registration with MDE and pay the annual registration fee for each rental dwelling unit required by State law. According to MDE's records, there were 112,867 registered properties with 212,472 rental dwelling units as of June 30, 2006. During fiscal year 2006, the Lead Poisoning and Prevention Fund's revenue totaled approximately \$1.9 million.
- MDE did not always document its calculation of payments made to homeowners and business owners from the Underground Oil Storage Tank Reimbursement Program, and certain payments included costs that were ineligible for reimbursement under State regulations. Specifically, our test of 15 reimbursement payments totaling approximately \$269,200, made during fiscal years 2005 and 2006, disclosed that for 5 payments totaling approximately \$41,100, MDE had not documented its calculation of the payment amounts. In addition, 4 of the 15 payments included costs totaling approximately \$10,300 that were not eligible for reimbursement under State

regulations, such as the cost of removing an underground storage tank and the installation of a new storage tank. Eligible costs reimbursed under the program include those costs incurred for site rehabilitation because of contamination caused by an underground oil storage tank. During fiscal year 2006, underground oil storage tank reimbursement grant payments totaled approximately \$1.5 million.

Recommendation 6

We recommend that MDE adequately monitor special fund programs to ensure compliance with applicable State laws and regulations. Specifically, we recommend that MDE establish procedures to identify and pursue property owners who fail to register lead paint properties and pay the annual registration fee. We also recommend that MDE investigate the aforementioned 2,600 property owners and take appropriate action to ensure the owners register any required properties and pay any registration fees owed to MDE. Furthermore, we recommend that MDE record needed revisions to property owner information in the property database timely. Finally, we recommend that MDE maintain documentation supporting its calculation of underground oil storage tank reimbursement payments, that MDE only pay for costs that are eligible under State regulations, and that MDE recover the aforementioned payments for ineligible costs.

Monitoring of Hazardous Material Facilities

Finding 7

MDE had not established security standards for hazardous material facilities in accordance with the time frame established by State law, resulting in delays in conducting required security audits of the facilities.

Analysis

MDE had not established security standards for hazardous material facilities timely, as required by State law, thus causing delays in conducting security audits of the facilities. Specifically, State law required MDE to adopt regulations on hazardous material security standards by January 1, 2005 and required hazardous material facilities to conduct a security analysis using the standards adopted by MDE and report the results of the analysis to MDE by October 1, 2005.

However, MDE did not adopt the security standards until January 2, 2006. Due to the untimely adoption of the security standards, MDE did not require facilities to submit security analysis reports until October 1, 2006. Consequently, MDE incurred delays in obtaining and reviewing the security analyses submitted by the hazardous material facilities and this has, in turn, delayed the completion of any

security audits of the facilities by MDE, in conjunction with the Department of State Police, as required by State law. We were advised by MDE management personnel that the delays in adopting the security standards were because MDE obtained input from industry representatives related to establishing these security standards.

We also noted that MDE was not adequately monitoring submission of the security analyses by the hazardous materials facilities. Our review of MDE's records disclosed the following conditions as of March 2007:

- Of the 99 facilities originally identified by MDE as being potentially subject to the aforementioned State law, 23 facilities notified MDE that they were exempt from the provision of the law (for example, the facility no longer stored hazardous materials). However, there was no documentation to substantiate that MDE had taken any action to verify the exempt status claimed by the facilities.
- Thirty-four facilities had not submitted the required security analyses to MDE, and for 21 of the 34 facilities, MDE had made no attempt to contact the facilities to determine why the security analyses had not been submitted.
- For 17 of the 42 facilities that had submitted a security analysis, MDE had been in possession of the analyses for periods ranging from 6 to 10 months but had not reviewed them. In addition, 4 analyses reviewed by MDE did not include all of the information required by the security standards, but MDE had not followed-up with the facilities to obtain the missing information.

Recommendation 7

We recommend that, in the future, MDE adopt regulations in accordance with the time frames required by State law. We also recommend that MDE verify the exempt status claimed by the aforementioned 23 hazardous material facilities and maintain documentation to support the exemptions. In addition, we recommend that MDE obtain security analyses from the facilities that have not yet submitted them, and review all security analyses on a timely basis to ensure compliance with adopted security standards. Finally, we recommend that MDE, in conjunction with the Department of State Police, conduct security audits of hazardous material facilities as required by State law.

Strategic Plan for Public Drinking Water Systems

Finding 8

MDE did not ensure that a strategic plan designed to protect the State's public drinking water systems was developed timely.

Analysis

MDE did not ensure that a strategic plan addressing counterterrorism procedures designed to protect the State's public drinking water systems was developed timely. Specifically, in May 2005, MDE contracted with a consultant for approximately \$202,000 to develop a comprehensive strategic plan to protect the State's public drinking water systems in the event of a terrorist attack or other disruptive actions, and to conduct related training and emergency exercises. The contract required the strategic plan to be completed by August 2005 and the remaining services to be provided no later than May 2006. However, as of July 2007, MDE had not received an acceptable plan from the contractor. We were advised by MDE management personnel that the delay was due to the fact that MDE did not receive an initial draft of the plan until January 2006, and that the initial draft required extensive revisions because it lacked certain elements (such as an emergency response plan) required by the contract.

As a result of these delays, MDE lacked a strategic plan to protect the State's public drinking water supply, and available federal funding for the contract could potentially be lost. Specifically, MDE and the contractor have agreed to extend the completion date of the contract to May 2008; however, the federal grantor agency has only agreed to extend funding for the project to March 30, 2008. As of July 2007, MDE had paid the contractor approximately \$61,200 under this contract.

Recommendation 8

We recommend that MDE ensure that the services required under this contract are completed as soon as possible to adequately protect the State's public drinking water supply and to maximize available federal funding.

Information Systems Security and Control

Background

MDE maintains an internal computer network with related servers and workstations. Key network resources include MDE's website, e-mail, Internet connectivity, a firewall and various significant applications.

MDE has implemented portions of the Enterprise Environmental Management System (EEMS) project, designed to consolidate many legacy applications and databases into a central database system. The EEMS's applications use a standardized network domain/operating system/database software platform. In addition, MDE operates other legacy application/database systems, such as the Public and Private Drinking Water Information System (PPDW).

Finding 9

MDE's internal network was not adequately secured and controls on its firewall need improvement.

Analysis

MDE's internal network was not adequately secured and controls on its firewall need improvement. Specifically, we noted the following conditions:

- MDE's publicly accessible servers could access all internal network devices over numerous ports and all Internet locations over all ports. In addition, these servers were accessible from all internal devices over all ports and from all external addresses over certain unnecessary ports. Access to these servers should be restricted to help mitigate malicious activity and connections to these servers should be limited to those devices requiring access to these servers over necessary ports.
- Although MDE used an Intrusion Detection System (IDS) to help monitor network traffic, network personnel were not sent alerts for significant security events identified by the IDS and reviews of the IDS logs were not documented.
- Password controls on the server hosting the firewall did not meet the requirements set by the Department of Budget and Management's *Information Technology Security Policy and Standards*. For example, the administrator's password to access the server had not been changed in over six years and two server accounts' passwords were set to never expire.
- The firewall protecting the network from the Internet was a software firewall operating on a server. As of July 2007, the firewall's host server operating system software had not been updated since spring 2001. Accordingly, at least 100 operating system software security related patches and fixes released by the software vendor had not been installed. The security of a software firewall is dependent upon the security of the underlying host server's operating system software.

Recommendation 9

We recommend that MDE properly secure its internal network and implement adequate security controls over its firewall. We made detailed recommendations which, if implemented, will secure the internal network and the firewall.

Finding 10

Certain accounts were not adequately controlled and certain critical activities were not properly monitored.

Certain accounts were not adequately controlled and certain critical activities were not properly monitored. Specifically, we noted the following conditions:

- Twelve PPDW database user accounts were granted unnecessary modification access to critical database files. In addition, eight of these users were either no longer employed by MDE or had transferred positions. A similar condition was commented upon in our two preceding audit reports.
- The critical production EEMS application server's security logs were not reviewed.
- The database auditing features for the EEMS and PPDW databases were not used to record critical security events. As a result, critical security related events were not logged or monitored. A similar condition, with regard to the PPDW database, was commented upon in our two preceding audit reports.

Proper access controls and security event reporting and review are integral to an organization's information systems control environment. Additionally, the Department of Budget and Management's *Information Technology Security Policy and Standards* states that access to information should support the concept of "least possible privileges" and establishes security monitoring requirements for State agencies.

Recommendation 10

We again recommend that MDE comply with the user account and security monitoring provisions of the aforementioned *Information Technology Security Policy and Standards*. Specifically, we recommend that MDE limit access to database files to individuals requiring such access. We also recommend that MDE review the EEMS application server's security logs. Also, we recommend that critical EEMS and PPDW database security events be logged and reviewed. Finally, we recommend that all security log reviews be documented and retained for subsequent verification.

Finding 11**An adequate information technology disaster recovery plan did not exist.****Analysis**

MDE did not have an adequate information technology disaster recovery plan for recovering from disaster scenarios (for example, a fire). Specifically, MDE's plan did not adequately address certain requirements of the Department of Budget and Management's *IT Disaster Recovery Guidelines*. For example, MDE's plan did not adequately address an alternate site location, server software needed for restoration, and the specific assignment of responsibilities for designated functional disaster recovery teams. A similar condition was commented upon in our two preceding audit reports.

Without a complete disaster recovery plan, a disaster could cause significant delays (for an undetermined period of time) in restoring operations above and beyond the expected delays that would exist in a planned recovery scenario.

Recommendation 11

We again recommend that the MDE develop and implement a comprehensive information systems disaster recovery plan that covers all of the MDE's critical functions. We also again recommend that the plan be in accordance with the aforementioned *IT Disaster Recovery Guidelines* and, at a minimum, should address the required items noted above.

Finding 12**User account and password controls over certain critical systems were not adequate.****Analysis**

User account and password controls over certain critical systems were not adequate. For example, the EEMS and PPDW databases' security settings did not enforce account lockout or password aging. Also, the PPDW database's password controls allowed reuse of all previous passwords and the password length was set at one character. Furthermore, 98 active network user accounts were unused for periods ranging from 63 days to over 8 years, and an additional 49 active network user accounts had never been used to log onto the network. Similar conditions were noted in our preceding audit report. Accordingly, control settings for accounts and passwords did not comply with the Department of Budget and Management's *Information Technology Security Policy and Standards*.

Recommendation 12

We again recommend that MDE comply with account and password requirements and recommendations of the aforementioned Department of Budget and Management's *Information Technology Security Policy and Standards*. We made detailed recommendations to MDE which, if implemented, should provide adequate security in this area.

Purchasing and Disbursements

Finding 13

Procedures and controls over the processing of purchasing and disbursement transactions were inadequate.

Analysis

Procedures and controls over the processing of purchasing and disbursement transactions were inadequate. During fiscal year 2006, MDE processed disbursements totaling approximately \$150.6 million. Our review disclosed the following conditions:

- MDE did not always procure goods and services in accordance with State Procurement Regulations. For example, our review of procurements from nine vendors totaling approximately \$369,000 disclosed that MDE appeared to artificially divide procurements from four vendors totaling approximately \$149,700, each valued at less than \$25,000, in order to bypass applicable control entity approval. State Procurement Regulations prohibit procurements from being intentionally split to circumvent approval requirements.
- MDE awarded a sole source contract to a vendor for an air monitoring computer system without adequate justification as required by State Procurement Regulations. Specifically, although MDE's written justification for sole source procurement indicated that compatibility with MDE's equipment, accessories, or replacement parts was paramount and only one vendor could meet the requirements, we were advised by MDE management personnel that prior to awarding the contract, two other vendors were identified that could have provided the required system. In addition, while MDE paid the vendor \$85,000 for the system, the vendor was ultimately unable to provide a functional system. Although MDE requested approximately \$104,200 from the vendor to reimburse MDE for certain payments and damages, MDE ultimately entered into a settlement agreement with the vendor for the recovery of \$40,000. However, MDE lacked documentation to support their assertion that it was not cost beneficial to

pursue litigation and could not substantiate how the settlement amount was determined.

- MDE did not always obtain documentation (such as contractor employee time sheets) to support contractor and grantee labor charges or perform periodic audits of their records, as allowed for in the contract and grant agreements. Consequently, MDE lacked assurance as to the propriety of the contractor and grantee billings. For example, our test of labor charges totaling approximately \$179,000 paid under two task orders for the aforementioned EEMS contract disclosed that MDE had not obtained documentation to support the labor charges. The lack of documentation supporting billed labor charges has been commented upon in our three preceding audit reports.
- MDE did not fully use the security features available on the State's Financial Management Information System (FMIS) to establish proper internal control over disbursements. Specifically, although MDE had established the requirement for manual approval over certain disbursement transactions, MDE had not established electronic approval paths to prevent the same individuals from both initiating and approving these transactions in 69 of 72 initiating departments. During fiscal year 2006, MDE processed disbursement transactions of this type totaling approximately \$119 million.

Recommendation 13

We recommend that MDE process procurements in accordance with State Procurement Regulations. We also recommend that, in the future, MDE fully document the basis for contract settlements with vendors.

Furthermore, we again recommend that MDE require grantees and contractors to provide adequate documentation, such as time sheets, to support the propriety of amounts billed, or perform periodic audits of grantee and contractor records to verify the propriety of the billed labor charges. Finally, we recommend that MDE fully use the available FMIS security features by establishing independent online approval requirements for all critical disbursement transactions.

Corporate Purchasing Cards

Finding 14

Corporate purchasing cards were not adequately controlled.

Analysis

Adequate controls were not in place over corporate purchasing cards. For example, MDE did not always cancel purchasing cards that were unused for

extended periods. Specifically, as of December 31, 2006, five purchasing cards were issued to employees who had no purchasing activity for periods ranging from 13 to 20 months. In addition, MDE did not always adequately maintain documentation of the purchasing card application and issuance process. Specifically, our test of 14 purchasing cards disclosed that a completed cardholder application was not on file for 1 card and for 4 cards, the cardholder agreements lacked certain required approvals, such as that of the Purchasing Card Program Administrator (PCPA). As of January 2007, MDE had issued 99 active corporate purchasing cards and related expenditures totaled approximately \$970,000 during fiscal year 2006.

The Comptroller of the Treasury's *Corporate Purchasing Card Program Policy and Procedures Manual* provides that purchasing cards with no purchasing activity for an extended period must be cancelled; that applications must be completed to obtain a purchasing card; and that cardholder agreements must be signed by the agency fiscal officer and the PCPA.

Recommendation 14

We recommend that MDE comply with the requirements of the Comptroller of the Treasury's *Corporate Purchasing Card Program Policy and Procedures Manual*.

Payroll

Finding 15

MDE had not established award criteria and eligibility requirements for Secretary incentive award payments, as required by State law.

Analysis

MDE had not established award criteria and eligibility requirements for Secretary incentive award payments. Specifically, during calendar years 2005 and 2006, incentive award payments totaling approximately \$20,500 were made to 11 upper management employees. The individual award amounts ranged from \$1,500 to \$3,000. However, MDE had not established related award criteria (such as, job performance required to receive an award or the related amount of the individual awards) or eligibility requirements (such as, the classifications of employees eligible to receive a Secretary incentive award). We were advised by MDE management personnel that although MDE had established criteria for other types of incentive awards made to employees, award criteria and eligibility requirements had not been established for Secretary incentive awards made to upper management employees.

The State Personnel and Pensions Article of the Annotated Code of Maryland requires that award criteria and eligibility requirements for incentive awards be established.

Recommendation 15

We recommend that MDE establish award criteria and eligibility requirements for Secretary incentive awards, as required by State law. We also recommend that MDE ensure that all future awards are made in accordance with the established criteria and requirements.

Audit Scope, Objectives, and Methodology

We have audited the Maryland Department of the Environment (MDE) for the period beginning July 1, 2004 and ending March 31, 2007. The audit was conducted in accordance with generally accepted government auditing standards.

As prescribed by the State Government Article, Section 2-1221 of the Annotated Code of Maryland, the objectives of this audit were to examine MDE's financial transactions, records and internal control, and to evaluate its compliance with applicable State laws, rules, and regulations. We also determined the current status of the findings contained in our preceding audit report.

In planning and conducting our audit, we focused on the major financial-related areas of operations based on assessments of materiality and risk. Our audit procedures included inquiries of appropriate personnel, inspections of documents and records, and observations of MDE's operations. We also tested transactions and performed other auditing procedures that we considered necessary to achieve our objectives. Data provided in this report for background or informational purposes were deemed reasonable, but were not independently verified.

We did not audit MDE's federal financial assistance programs for compliance with federal laws and regulations because the State of Maryland engages an independent accounting firm to annually audit such programs administered by State agencies.

Our audit scope was limited with respect to MDE's cash transactions because the Office of the State Treasurer was unable to reconcile the State's main bank accounts during a portion of the audit period. Due to this condition, we were unable to determine, with reasonable assurance, that all MDE cash transactions prior to July 1, 2005 were accounted for and properly recorded on the related State accounting records as well as the bank's records.

MDE's management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records, effectiveness and efficiency of operations including safeguarding of assets, and compliance with applicable laws, rules, and regulations are achieved.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

Our reports are designed to assist the Maryland General Assembly in exercising its legislative oversight function and to provide constructive recommendations for improving State operations. As a result, our reports generally do not address activities we reviewed that are functioning properly.

This report includes findings relating to conditions that we consider to be significant deficiencies in the design or operation of internal control that could adversely affect MDE's ability to maintain reliable financial records, operate effectively and efficiently, and/or comply with applicable laws, rules, and regulations. Our report also includes findings regarding significant instances of noncompliance with applicable laws, rules, or regulations. Other less significant findings were communicated to MDE that did not warrant inclusion in this report.

MDE's response to our findings and recommendations is included as an appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise MDE regarding the results of our review of its response.



APPENDIX

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Shari T. Wilson
Acting Secretary

Robert M. Summers, Ph.D.
Deputy Secretary

January 17, 2008

Mr. Bruce A. Meyers
Legislative Auditor
Office of Legislative Audits
310 W. Preston Street
Baltimore, Maryland 21201

Dear Mr. Meyers:

Please find enclosed the Department's response to the draft Legislative Auditor's Report for the period beginning July 1, 2004 and ending March 31, 2007. Thank you to you and your staff for the time spent in helping our Department review our business practices and the constructive recommendations made as a result of the audit.

The Department has already corrected a number of the findings brought to our attention and will continue to take the necessary steps to resolve the remaining comments contained in the report. These efforts reflect of our strong commitment to strive for excellence and safeguard the environment for the citizens of Maryland.

If you or your staff have any questions or need additional information, please contact me at 410-537-3084 or Ms. Donna Dancy, the Department's Director of Internal Audit Services, at 410-537-3429.

Sincerely,

Shari T. Wilson
Secretary

Enclosure

cc: Delegate Steven J. Deboy, Co-Chairman, Joint Audit Committee
Senator Verna L. Jones, Co-Chair, Joint Audit Committee
Robert M. Summers, Ph.D., Deputy Secretary
Stephen L. Pattison, Assistant Secretary
Donna A. Dancy, Director, Internal Audit Services



**Maryland Department of the Environment
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Enterprise Environmental Management System (EEMS) Contract

Finding 1

MDE did not fully disclose to the General Assembly's budget committees significant EEMS development and implementation issues which could ultimately affect the usefulness of the system, and did not obtain Board of Public Works approval for contract scope modifications, as required.

Response:

The Department agrees with the finding and related recommendations.

The MDE will notify the General Assembly's budget committee and the BPW relating to the EEMS project as recommended via a memorandum. In addition, the MDE will continue to address EEMS system reporting by hiring staff with expertise in this area to analyze program reporting requirements and implement priority reports. Also, the MDE will continue to ensure that controls are adequate over the permit and enforcement functions.

Finding 2

MDE had not disclosed the existence of three additional contracts totaling approximately \$398,000 necessary for the implementation of EEMS, and certain significant cost overruns to the General Assembly's budget committees.

Response:

The Department agrees with the finding and related recommendations.

The MDE will report the information related to the three contract included in the finding analysis and any other significant developments or future contracts pertaining to the EEMS project to the General Assembly's budget committee as recommended. In addition, in the future, the MDE will limit spending on the EEMS project to the amounts authorized.

Finally, while the MDE does not consider these three EEMS contracts to be part of the \$6.4 million TEMPO contract and therefore require BPW approval as a contract modification, the MDE will nevertheless notify the BPW via a memorandum of the award of these contracts and any future EEMS contracts.

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Draft Audit Report Responses
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Permit and Penalty Records

Finding 3

Guidelines were not in place to help ensure consistent determination and imposition of penalties for violations of environmental laws.

Response:

The Department agrees in part with the finding and recommendations.

Guidelines were in place to help ensure consistent determination and imposition of penalties for violations of environmental laws. The process of assessing administrative penalties is set forth in statute, with each of MDE's administrative penalty provisions containing some version of the following factors for consideration:

1. The willfulness of the violation, the extent to which the existence of the violation was known to but uncorrected by the violator, and the extent to which the violator exercised reasonable care;
2. Any actual harm to the environment or to human health, including injury to or impairment of the use of the waters of this State or the natural resources of this State;
3. The cost of cleanup and the cost of restoration of natural resources;
4. The nature and degree of injury to or interference with general welfare, health, and property;
5. The extent to which the location of the violation, including location near waters of this State or areas of human population, creates the potential for harm to the environment or to human health or safety;
6. The available technology and economic reasonableness of controlling, reducing, or eliminating the violation;
7. The degree of hazard posed by the particular pollutant or pollutants involved;
8. The extent to which the current violation is part of a recurrent pattern of the same or similar type of violation committed by the violator; and
9. Whether or not penalties were assessed or will be assessed under other provisions.

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Finding 3 - Permit and Penalty Records Response (Cont'd)

Also, different programs do, in fact, have guidelines for analyzing the factors when assessing penalties. These guidelines promote consistency within individual programs, which is appropriate because individual programs deal with the same types of pollutants and violations. It is not necessarily true that there should be consistency between programs, because the programs are dealing with different statutory and regulatory requirements, different pollutants, and different amounts of administrative penalty authority.

For the penalty reduction included in the finding analysis, the MDE does not concur that there was no indication of the employee who authorized the action or no supporting documentation in the records for this action. Approval of penalty reductions has been delegated by the Secretary to the Administration Directors. There was a settlement document signed by the Director of the Waste Management Administration (WAS) that described the relief negotiated by the Department. This settlement document was maintained in the Administration program files for monitoring purposes. In addition, there was documentation supporting the basis of the reduction of the penalty fee assessed maintained in the Office of the Attorney General's files; however, the MDE inadvertently did not inform the auditors of this additional information. A review of this documentation disclosed that the penalty assessment reduction was proper.

The MDE does concur that there was not adequate written documentation supporting the reduction of penalty fees maintained in Administration program files. Therefore, the MDE will strengthen controls to ensure that the basis for reductions in penalty fee assessments are documented and maintained for future reference by indicating the category or categories that are most applicable:

1. New factual information obtained after penalty action taken;
2. New legal information obtained after penalty action taken;
3. Projected costs of litigation (filing fees, staff time, expert assistance, unavailability of staff to address higher priority issues) exceed initial penalty amount or deterrence value of penalty sought;
4. Other reason that does not fall under category 1, 2 or 3, with a brief summary of the reason for the reduction (e.g., SEP's).

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Finding 3 - Permit and Penalty Records Response (Cont'd)

Finally, the MDE does not concur with the recommendation that previous reductions in assessed penalties should be re-verified. The final penalty assessment is based on statutory requirements. Re-reviewing such transactions would preclude staff from performing functions critical to the MDE's mission. In addition, as the MDE has agreed to ensure that the basis of reductions in penalty assessments are properly documented in Administration program files and maintained for future reference, the Department believes the auditors concerns have been adequately addressed.

Land Purchase

Finding 4

MDE, in conjunction with the Maryland Environmental Trust, deposited funds totaling \$1.8 million in a bank that loaned the funds to a private foundation for the purchase of land without obtaining two property appraisals. The loan agreement did not require the foundation to immediately record a conservation easement on the property, and did not provide appropriate legal remedies if the easement was not eventually recorded.

Response:

The Department agrees with the finding and related recommendations.

In the future, the MDE will require that two independent appraisals be obtained as the basis for the amounts loaned for land purchases and the immediate recording of conservation easements. In addition, the MDE will include performance action clauses in future linked deposit agreements involving land purchase that provide legal remedies in the event that conservation easements are not recorded. Finally, the MDE has followed-up via correspondence dated November 29, 2007 and will continue to coordinate in conjunction with MET to ensure the restricted easement is recorded.

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Bay Restoration Fund

Finding 5

MDE had not established procedures to periodically reevaluate the propriety of exemptions from paying into the Bay Restoration Fund granted to wastewater facilities.

Response:

The Department agrees with the finding and related recommendation.

The MDE is in the process of developing a Standard Operating Procedure (SOP) that will require the propriety of exemptions granted under State law to facilities from contributing to the Bay Restoration Fund to be periodically reevaluated. This SOP is anticipated to be completed March 2008.

Special Funds

Finding 6

MDE did not adequately monitor activities in certain special fund programs to ensure compliance with applicable State laws and regulations.

Response:

The Department agrees in part with the finding and related recommendations.

Related to the Lead Poisoning and Prevention Special Fund, the WAS registration renewal database contains numerous properties that are exempt from the annual registration fee requirement. Property owners often do not advise the rental registry of these changes in the status of their properties. At times, due to staff shortages, corrections have not been entered in the database until after the next year's renewal mailing. Cleaning up the database is labor intensive and would preclude staff from performing other duties more directly impacting public health. Long-term, the WAS plans to investigate the feasibility of contracting a service to "clean" and provide an accurate and correct version of the renewal registration database and to create a list of property owners to pursue for compliance. However, this solution is contingent upon funding availability. In the short-term, the WAS has recently purchased and is testing a bar-coding system for rental property registration. This system includes bar codes

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Finding 6 – Special Funds Response (Cont'd)

preprinted on renewal forms, bar code scanners and a user interface. The initial version of the user interface, currently being tested, not only facilitates more rapid document processing, but also includes the following features:

1. All exemptions are processed as received and therefore will be noted in the approximate order in which they are received;
2. All claims of Opt-out and Lead-Free exemptions will be validated before entry;
3. All “failed” claims will be automatically noted in a table of “Pending Communications”. This table, which will include any record noting a need to correspond with a property owner, can then be used for automated or manual letters of explanation or letters demanding payment of fees.

This system can also be used to review existing records in the rental registry database. The first cleaning pass through of the database is scheduled for February 2008, with cleanup of the entire database anticipated for November 2008, which coincides with the next registration renewal period.

In reference to underground oil storage tank reimbursement payments, the WAS immediately implemented a SOP governing such payments. This SOP requires documentation to be maintained that reflects the calculation of reimbursements, deductibles, ineligible costs, and maximum reimbursement amounts from the Oil Contaminated Site Environmental Cleanup Fund.

With respect to costs eligible for reimbursement, the WAS, in good faith and based on an Assistant Attorney General’s (AAG) interpretation of law and regulation, has occasionally reimbursed property owners for the removal of underground tanks when it is necessary to remove them to access contamination that is beneath the tanks. This was in the best interest of public health and the environment. More recent AAG’s advice indicates that the regulation does not specifically authorize this practice. Since the language in the regulation is vague, the MDE is in the process of revising the regulation to clarify this issue. This change is part of a larger regulation package being prepared for presentation to the Administrative Executive Legislative Committee in February 2008.

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Finding 6 – Special Funds Response (Cont'd)

As far as pursuing the recovery of potential overpayments, given that homeowners may have decided to undertake remediation in reliance on the Department's policy, they had a reasonable expectation of being able to obtain reimbursement for the tank removal cost. As such, the AAG has advised that it would be difficult to recover such monies. Also, considering that the amount reimbursed under the policy at issue was less than \$10,000, the cost of pursuing return of the money would in all likelihood exceed \$10,000 in terms of the MDE and the Office of the Attorney General resources, particularly if there were litigation involved.

Monitoring of Hazardous Material Facilities

Finding 7

MDE had not established security standards for hazardous material facilities in accordance with the time frame established by State law, resulting in delays in conducting required security audits of the facilities.

Response:

MDE agrees in part with the finding and related recommendations.

The MDE concurs that the new legislation required the MDE to adopt hazardous material security standards by January 1, 2005. The regulations went into effect in January 2006. The regulations are now in place and being enforced. The delay resulted from technical discussions with industry representatives about ways to develop regulations that could be generalized to allow for feasible, yet comprehensive and generally applicable regulations for very diverse physical facilities, chemical hazards, and manufacturing processes that would need to be addressed.

The MDE also concurs that exemptions that are not self-evident or obvious should be independently verified. The MDE plans on-site audits for facilities that resist compliance or where the submission appears to be lacking. However, the MDE does not concur that it is necessary to independently verify exemptions if the exemptions are clear. For example, a DOD facility is exempted because it is subject to federal security requirements; nuclear facilities are covered by Nuclear Regulatory Commission requirements; and agricultural facilities are specifically exempted in the law.

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Finding 7 - Monitoring of Hazardous Material Facilities Response (Cont'd)

Previously, 23 facilities notified the MDE that they were exempt from a provision of the State law. However, further research has disclosed that only 22 facilities are exempt. Details of these exemptions are provided below:

- Ten facilities were not a facility as defined in the law because they are agricultural chemical companies. As such these facilities do not need to be verified.
- Four facilities indicated they did not store a covered chemical in excess of the threshold. These facilities are wastewater treatment plants that no longer use chlorine. WWTP facilities are moving away from using chlorine because of such concerns. Verification of these exemptions has been completed.
- One facility indicated that it was located in a jurisdiction that has a hazardous materials plan in place and is specifically exempted. This was verified by the address.
- The remaining seven facilities were exempted because they fall under the federal comprehensive site security requirements. Because of the nature of the facilities, verification does not need to be conducted.

The MDE concurs with the recommendation related to review of security analyses. As of December 18, 2007, the list of facilities actually regulated has been established at 55. Previously, 98 (listed as 99 in the finding analysis) facilities had been identified as being potentially regulated from databases developed for other purposes. Of these 98, 43 (includes 22 detailed above) have been determined to be exempt based on coverage by other local or federal programs, or specific categorical exclusions (e.g., agricultural facilities). The MDE has contacted all 55 regulated facilities and obtained full compliance for 40. The remaining 15 facilities are actively in the process of achieving compliance. A few were notified of their required participation in October 2007 and therefore require additional time to achieve full compliance. Eight require only third party reviews and are anticipated to be completed by January 2008. The 15 facilities not in compliance were sent notices of violation on December 21, 2007. Of these 15 facilities, 7 are water treatment plants, 5 are grocers or food distributors, and 3 are industrial.

The MDE concurs in part with the recommendation related to security audits. The specific language of the Act was "...audit a facility, through an inspection **or other investigation** [emphasis added], to verify the analysis submitted..." The MDE has determined, that through our knowledge of these facilities and in combination with other

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Finding 7 - Monitoring of Hazardous Material Facilities Response (Cont'd)

reports required by the Department, analysis of the facility's submission provides a satisfactory evaluation in most cases. Where the MDE is not satisfied that reporting is accurate, complete or satisfactory, the Department will solicit cooperation from the Department of State Police to complete on-site inspections.

Strategic Plan for Public Drinking Water Solutions

Finding 8

MDE did not ensure that a strategic plan designed to protect the State's public drinking water systems was developed timely.

Response:

The Department disagrees with the finding.

The delay in the completion of the contract had no detrimental effect on protecting the State's drinking water systems and was necessary. The MDE has had a working emergency response plan in force at all times. In addition, during the course of the contract, the MDE has provided systems with technical security advice as needed, even during emergency incidents in 2006 and in 2007. The purpose of the contract is to formalize and standardize the emergency response plan and develop a Strategic Security Plan. This is intended to provide broad, long term program guidance, training and outreach programs for staff and utilities.

While the length of the contract period has been extended beyond that which was anticipated at the outset, this was due in part to the quality of the contractor's product, which initially did not meet the MDE's specific needs and required extensive review. Ultimately, the MDE has received a product far superior to that which it would have if the strict date of completion had been observed. Throughout the period of performance, the MDE worked with the contractor to modify and rework several drafts of the response flow chart, classification of emergency events and substantive operating procedures that make up the heart of the contract. The contractor has been responsive in tailoring the emergency response plan to the MDE's requirements. It was also necessary to gather information from technical staff and explore the capabilities of external, Maryland State Agency staff (such as emergency response laboratory capacity, sampling protocols and federal response methods). This important groundwork has strengthened the final product.

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Finding 8 - Strategic Plan for Public Drinking Water Solutions Response (Cont'd)

In reference to federal funds, the MDE intends to expend the funds on time. The threat of losing any funding, while serious in nature for any program, is negligible in this instance. The MDE anticipates completion of the contract to be May 1, 2008 and has kept the Federal Environmental Protection Agency informed of the progress of the contract. MDE is making every effort to complete the Strategic Security Plan and other work under the counterterrorism grant as expediently as possible.

Information Systems Security and Control

Finding 9

MDE's internal network was not adequately secured and controls on its firewall need improvement.

Response:

The MDE agrees with the finding and related recommendations.

Due to unanticipated problems with the existing firewall, the MDE decided to advance the installation of a new firewall to December 2007. Therefore, the recommended rule changes, which will limit access to publicly accessible servers and connections to only necessary devices, were not made to the existing firewall but will be addressed in the new firewall. This is anticipated to be completed February 2008.

As of January 2008, periodic reviews of IDS logs are now documented and maintained for audit verification purposes. In reference to the configuration of the consolidated logs server to issue alerts for significant security events, the Office of Information Management & Technology (OIMT) staff requires additional technical assistance to complete the configuration. In its default state the consolidated logs server produces an enormous quantity of messages about various network devices. Determining which messages are of value and which need to be filtered is a skill set that the OIMT staff does not presently possess. Therefore, the MDE will pursue hiring a consultant during FY 2008 to implement the recommended configuration of the consolidated logs server.

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Finding 9- Information Systems Security and Control Response (Cont'd)

Also, as the existing firewall was replaced the recommended patches and fixes were not installed. However, the MDE will periodically monitor software releases involving security patches and fixes for the new firewall's operating system software and update the software utilizing the Legacy hardware as a test platform for operating system upgrades and patches.

Finally, password controls on the server hosting the firewall (regular user and Root accounts) will be reviewed and changed, if necessary, in the new firewall by February 2008 to comply with the *DBM Information Technology Security Policy and Standards*.

Finding 10

Certain accounts were not adequately controlled and certain critical activities were not properly monitored.

Response:

The MDE agrees with the finding and related recommendations.

The factory installed "Administrator" account name was changed as recommended in October 2007. In addition, domain administration authority is now only provided to those employees who need such privileges to perform their job functions. Also, the MDE is in the process of reviewing the PPDW database and anticipates this to be completed February 2008. All unnecessary database roles assigned to users will be removed. Furthermore, access to the PPDW database will be periodically reviewed to ensure access is proper.

As of November 2007, the security logs on the TEMPO (EEMS) application server are now reviewed for unusual activities, discrepancies are pursued and these reviews are documented and retained for future reference.

Finally, the MDE is in the process of reviewing the TEMPO and PPDW Databases to determine the significant security events that should be logged. Upon completion of this review, the logs will be sent to a directory that is protected as recommended. In addition, independent reviews will be conducted of these logging reports, unusual events will be investigated and the reviews will be documented and retained for future reference. This is anticipated to be implemented March 2008.

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Information Systems Security and Control (Cont'd)

Finding 11

An adequate information technology disaster recovery plan did not exist.

Response:

The Department agrees with the finding and related recommendations.

As of November 2007, detailed listings of server software needed for recovery were established. In addition, the MDE is in the process of defining specific responsibilities for designated functional teams involved in disaster recovery and anticipates this to be completed March 2008. Finally, the MDE is exploring the feasibility of establishing a "cold" site with the State Lottery Agency.

Finding 12

User account and password controls over certain critical systems were not adequate.

Response:

The MDE agrees with the finding and related recommendations.

As of November 2007, all user accounts are now disabled after 60 days of inactivity. In addition, as of January 2008 the other recommended controls over passwords and account settings were implemented in the applications (TEMPO and PPDW Database) included in the finding analysis. However, some recommended controls in the Department of Budget and Management's *Information Technology Security Policy and Standards* document cannot be implemented on the server because MDE's network authentication software does not have certain features required to support such controls. Other products would provide the necessary features to implement the recommended changes. Therefore, the MDE will pursue the purchase of such a product contingent upon funding availability.

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Purchasing and Disbursements

Finding 13

Procedures and controls over the processing of purchasing and disbursement transactions were inadequate.

Response:

The Department agrees with the findings and related recommendations.

In reference to the procurement of goods or services not in accordance with State procurement regulations, the MDE strengthened controls in November 2007 to ensure that future purchases will not be split circumventing procurement requirements.

Concerning the award of sole source contracts, the MDE strengthened controls in November 2007 to ensure that sole source contracts are awarded in accordance with State Procurement Regulations. In addition, in the future, adequate documentation will be maintained for all contract settlements with vendors.

With respect to grant and contract payments, the MDE will review, on a test basis, documentation supporting such expenditures to verify the propriety of the amounts billed.

Related to the FMIS security features, the ability to both initiate and approve purchasing transactions was immediately removed from the employee identified in the finding analysis. In addition, the MDE verified that this employee never exercised both abilities. Also, the MDE will begin a pilot study in FY2008 of the ADPICS Direct Voucher on-line approval process. The MDE currently utilizes one of the alternative Direct Voucher methods allowed under Section 6.4.1 in the ASM Security Manual.

Corporate Purchasing Cards

Finding 14

Corporate purchasing cards were not adequately controlled.

Response:

The Department agrees with the finding and related recommendations.

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Finding 14 - Corporate Purchasing Cards Response (Cont'd)

The MDE strengthened controls in November 2007 to ensure that purchasing cards with no activity for twelve months are cancelled with the exception of special use cards such as cards for travel or gasoline. In addition, the five cards identified in the finding analysis were immediately cancelled. Also, the MDE will ensure that, in the future, properly completed and approved applications will be maintained for all cardholders. An agreement with appropriate approval signatures has now been completed and is on file for all current cardholders.

Payroll

Finding 15

MDE had not established award criteria and eligibility requirements for Secretary incentive award payments, as required by State law.

Response:

The Department agrees with the finding and related recommendations.

The MDE is in the process of conducting a study of employee recruitment and compensation issues of which the re-evaluation of the current Secretary Incentive Award Program is a part. This re-evaluation is anticipated to be completed March 2008. Award criteria including employee eligibility requirements will be revised based on the evaluation. No additional awards will be made under the program until this review has been completed and criteria have been established.

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