

Audit Report

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**Department of the Environment**

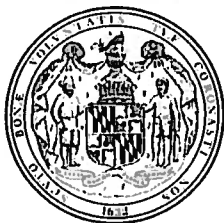
November 2011

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**OFFICE OF LEGISLATIVE AUDITS**  
**DEPARTMENT OF LEGISLATIVE SERVICES**  
**MARYLAND GENERAL ASSEMBLY**

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DEPARTMENT OF LEGISLATIVE SERVICES  
OFFICE OF LEGISLATIVE AUDITS  
MARYLAND GENERAL ASSEMBLY

Karl S. Aro  
Executive Director

November 21, 2011

Bruce A. Myers, CPA  
Legislative Auditor

Delegate Guy J. Guzzone, Co-Chair, Joint Audit Committee  
Senator James C. Rosapepe, 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 April 1, 2007 and ending June 30, 2010. MDE is responsible for protecting and restoring the quality of the State's land, air, and water resources, and safeguarding the public from health risks associated with pollution.

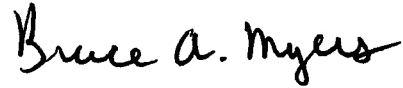
MDE did not disclose significant Enterprise Environmental Management System (EEMS) functionality deficiencies in required EEMS status reports submitted to the General Assembly and the Department of Information Technology. For example, MDE reported in June 2010 that EEMS was successfully implemented for 12 environmental programs; however, we noted that, for many of these programs, MDE continued to use pre-existing databases and systems that EEMS was intended to replace. MDE has spent \$7.8 million for the development of the system for which the initial contract cost was \$6.4 million.

Processes were not established to ensure compliance with environmental regulations regarding hazardous waste facilities, certain construction sites, and lead paint properties. For example, MDE did not sufficiently monitor affected lead properties and ensure required fees were paid by property owners. In addition, MDE had not established regulations to govern the Bay Restoration Fund, established in 2004, and the related Septic System and Wastewater Treatment Programs. Comprehensive reviews of Septic System Program grant applications were not performed, resulting in questionable grant awards totaling approximately \$1.1 million.

Finally, several security and control weaknesses were noted over certain critical databases.

An executive summary of our findings can be found on page 5. MDE's response to this audit is included as an appendix to this report. We wish to acknowledge the cooperation extended to us during the course of this audit by MDE.

Respectfully submitted,

A handwritten signature in black ink that reads "Bruce A. Myers". The signature is written in a cursive style with a large initial "B".

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) November 2011

- **MDE did not disclose significant system functionality deficiencies that affect the usefulness of the Enterprise Environmental Management System (EEMS), which was originally intended to fully integrate critical permitting, compliance, and enforcement functions for 32 programs, nor did it disclose the full cost. For example, MDE reported in June 2010 that EEMS was successfully implemented for 12 programs; however, we noted that MDE continued to use pre-existing databases and systems that MDE was intending to replace, especially for compliance and enforcement functions. To date, the State has spent approximately \$7.8 million for the development of the system for which the original contract cost was \$6.4 million.**

MDE should fully disclose to the General Assembly's budget committees and the Department of Information Technology the status of the EEMS project, including the programs implemented and all system functionality deficiencies affecting the usefulness of the system. MDE should also disclose all anticipated funding necessary to fully implement all functions and programs.

- **MDE did not have a process to verify that certain hazardous material facilities complied with the State's security standards. In addition, inspections of certain construction sites were not always timely performed as required by State regulations designed to lessen the impact of sediment leaving the sites and to prevent erosion, pollution, and local flooding.**

MDE should conduct periodic audits of hazardous material facilities or should obtain and review the results of third-party verifications. MDE should also take action to comply with regulations regarding site inspections.

- **Adequate procedures were not established over the Lead Paint Poisoning Program to monitor properties affected with lead paint, as well as those certified as lead-free, and to collect related revenues. For example, MDE was unaware that approximately 3,000 property owners registered for calendar year 2008 had not renewed registrations for calendar years 2009 or 2010.**

MDE should establish recommended procedures over the Lead Paint Poisoning Program, including identifying and pursuing property owners who fail to register affected lead paint properties and pay the annual registration fee.

- **Regulations governing the Bay Restoration Fund (BRF) Programs, including the Wastewater Treatment Program and the Septic System Program, had not been adopted.**

MDE should adopt regulations necessary to govern the BRF Programs, including specific criteria detailing eligible systems.

- **Comprehensive reviews of Septic System Program grant applications, paid through the Bay Restoration Fund, were not performed and resulted in the approval of questionable awards totaling approximately \$1.1 million. For example, we identified higher than average grants that were awarded to 51 projects totaling \$1million that involved the same two installation contractors serving the same geographic area. For example, bid documentation submitted by the two contractors was not always complete, comparable, or in accordance with MDE policy. As a result of our review, we referred this matter to the Office of the Attorney General's Criminal Division.**

MDE should work with the Office of the Attorney General to investigate and resolve the aforementioned questionable activity and should ensure local jurisdictions are administering the Septic System Program in accordance with established requirements.

- **MDE paid a former employee approximately \$225,000 through eight consulting contracts, resulting in potential violations of State laws.**

MDE, in conjunction with its legal counsel and the State Ethics Commission, should review the circumstances surrounding these contracts and take appropriation action.

- **Several security and control deficiencies were noted with regard to MDE information systems, including EEMS and the Public and Private Drinking Water Information System (PPDW). For example, logging of certain database activity was incomplete, and user account and password controls were not adequate.**

MDE should take the recommended actions to improve information systems controls and security.

## **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 to 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 industries and communities in their efforts to handle pollution, waste disposal, and emergency spills of waste or oil. MDE consists of the following units:

- Office of the Secretary (including the Maryland Water Quality Financing Administration)
- Administrative Services Administration
- Water Management Administration
- Science Services Administration
- Land Management Administration
- Air and Radiation Management Administration
- Coordinating Offices

The Maryland Water Quality Financing Administration administers the Water Quality and Drinking Water Revolving Loan Funds and the Bay Restoration Fund Wastewater Treatment and Septic System grants programs.

According to the State's records, during fiscal year 2011, MDE's operating and capital expenditures totaled approximately \$256.8 million. These expenditures were funded by general funds totaling approximately \$32.7 million, special funds totaling approximately \$156.9 million, federal funds totaling approximately \$57.8 million, and reimbursable funds totaling approximately \$9.4 million. MDE's capital expenditures primarily related to its Water Quality and Drinking Water Revolving Loan Funds and the Bay Restoration Fund; these capital expenditures totaled approximately \$126.5 million and \$9 million, respectively.

### **Financial Statement Audits**

MDE engaged an independent accounting firm to perform audits of the Maryland Water Quality Financing Administration's financial statements for the Water Quality and Drinking Water Revolving Loan Funds and the Bay Restoration Fund for the fiscal years ended June 30, 2008, 2009, and 2010. In the related audit reports, the firm stated that the Administration's financial statements presented

fairly, in all material respects, the financial position of the Administration and the results of its operations and its cash flows for the years 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, 2010, the Maryland Water Quality Financing Administration's net assets totaled approximately \$1 billion.

The Maryland Water Quality Financing Administration provides a combination of federal and state funds for low-interest loans to local jurisdictions and private entities throughout the State for drinking water and water quality capital projects. These projects include upgrades and expansions to wastewater treatment plants, pump stations, and the creation of storm water management facilities. Additionally, the Administration provides Bay Restoration Fund grants for enhanced nutrient removal upgrades to existing wastewater facilities, for sewer infrastructure rehabilitation, and for septic system upgrades.

### **Status of Findings From Preceding Audit Report**

Our audit included a review to determine the status of the 15 findings contained in our preceding audit report dated January 18, 2008. We determined that MDE had satisfactorily resolved 11 findings. The remaining 4 findings are repeated in this report and appear as 3 findings.

# Findings and Recommendations

## Enterprise Environmental Management System

### Background

In January 2004, MDE entered into a multi-year Major Information Technology Development Project (MITDP) contract totaling approximately \$6.4 million<sup>1</sup> to develop and implement an Enterprise Environmental Management System (EEMS). EEMS was envisioned to provide a comprehensive centralized database to replace approximately 170 disparate legacy databases and associated business applications through the acquisition and integration of a commercial off-the-shelf data management system known as Tools for Environmental Management and Protection Organizations (TEMPO). EEMS was intended to enhance MDE's permitting, compliance, and enforcement activities and to improve operational efficiencies, reporting, and customer service.

MDE originally intended for 32 environmental programs to be fully integrated into EEMS; however, when MDE completed the original EEMS contract in October 2009, only 12 programs were integrated into EEMS. Cost overruns occurring throughout the contract term, as well as budget and resource constraints, resulted in 20 programs not being implemented. MDE advised it may implement six of these 20 programs at a later date. According to the State's accounting records, as of June 30, 2010, MDE had paid approximately \$7.8 million under the original contract and other related contracts for the implementation and maintenance of the TEMPO database since inception of the EEMS contract.

Due to previous concerns regarding MDE's transparency and accountability related to the EEMS project, the April 2009 *Joint Chairmen's Report* issued by the General Assembly required MDE to provide a report on how it will submit full and timely reports on all MITDPs to both the Department of Information Technology (DoIT) and to the General Assembly budget committees, including full disclosure of project summaries, scope, funding requirements, and changes on all projects. In its June 2009 response to the *Joint Chairman's Report* request, MDE stated that it would provide annual project status reports to the budget committees regarding its information technology projects, in addition to the project status reports required to be submitted to DoIT for all MITDPs through project completion and the first year of operations and maintenance.

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<sup>1</sup> As noted in our preceding audit report on MDE, the original contract amount of \$6.8 million was reduced to \$6.4 million in November 2006 because of a mathematical error.

**Finding 1**

**Required status reports on Enterprise Environmental Management System (EEMS) development and implementation did not disclose certain significant functionality and cost issues affecting the overall usefulness of the system.**

**Analysis**

Although MDE submitted the EEMS project status reports, required by the April 2009 *Joint Chairmen's Report*, to both the General Assembly budget committees and to DoIT, we noted that the following significant EEMS functionality and financial issues were not disclosed in the June 2010 project report.

- MDE did not disclose the limited usage of EEMS. MDE reported in its June 2010 EEMS project status report that EEMS was successfully implemented for 12 programs and that these 12 programs currently track more than 80 percent of their permit approvals in EEMS. Our review of 9 of these programs within three Administrations disclosed, however, that MDE did not actually use EEMS for reporting on a majority of critical permitting, compliance, and enforcement activity and data (such as, number of permits issued, inspections performed, and enforcement actions taken), as published in its 2010 *Annual Compliance and Enforcement Report*. Rather, MDE continued to use information obtained from the pre-existing databases and systems that EEMS was intended to replace. Specifically, only four of the nine programs reviewed within the Water Management, Air and Radiation Management, and Land Management Administrations were using any of EEMS permitting functions. Furthermore, none of the 9 programs reviewed were using EEMS to monitor compliance and enforcement action (such as, number of inspections performed, and enforcement actions taken). MDE management advised us that, as of March 2011, EEMS reporting functions were not fully operational, regulatory data for compliance was not fully populated, and certain data entry functions were not customized, making it difficult for the programs to use all functions of the system.
- MDE's June 2010 EEMS project status report on the financial components necessary for complete EEMS implementation was also not comprehensive. Specifically, MDE reported the current project cost of \$7.3 million, which included costs associated with two related contracts; however, other related contracts, including three that were identified in our preceding audit report, were not reported. Therefore, the actual cost of the EEMS project totaled approximately \$7.8 million instead of the reported \$7.3 million. In addition, MDE did not disclose that additional funding would be necessary to complete the compliance and enforcement functions of the system. MDE could not provide an accurate estimate of the additional costs necessary because of ongoing changes in information technology related to the system; however,

MDE advised us that additional costs could range from approximately \$2 million to \$3 million.

A lack of comprehensive disclosure of EEMS' development, implementation, operational, and financial status was commented upon in our proceeding audit report. Subsequent to our audit, MDE submitted its fiscal year 2011 EEMS status report to the General Assembly's budget committees, which included more detailed information than it had in previous reports regarding the status and future plans for EEMS. However, the status report did not include comments regarding any system functionality limitations or challenges such as the ones identified above.

#### **Recommendation 1**

**We recommend that MDE provide the General Assembly's budget committees and DoIT with a full disclosure of EEMS project status (repeat). Specifically, we recommend that MDE disclose**

- a. the system's actual usage by the programs implemented in the system,**
- b. all system functionality deficiencies affecting the usefulness of the system, and**
- c. the funding necessary to fully implement all intended programs and functions of EEMS.**

### **Permitting, Compliance, and Enforcement**

#### **Finding 2**

**MDE did not establish a process to verify if certain hazardous material facilities are in compliance with adopted security standards, as required by State law.**

#### **Analysis**

MDE has not developed a process to verify that hazardous material facilities (that is, locations that store, dispense, use, or handle hazardous materials) comply with the State's security standards. State law requires certain hazardous material facilities to analyze the security of their facilities in accordance with security standards adopted by MDE and, beginning October 1, 2005, to submit analysis reports to MDE every five years. The analysis reports should include potential security threats, vulnerabilities, and consequences to the facility, as well as a third-party verification that the physical security measures identified in the analysis have been implemented. The law also requires that MDE, in consultation with the Department of State Police (DSP), audit these facilities, through inspections or other investigations, in order to verify the analysis reports submitted.

According to MDE records, as of October 14, 2010, 36 facilities were required to submit security analysis reports, and these facilities submitted the required reports during the period from September 2006 through October 2010. However, as of June 2011, MDE had not audited any of these facilities. MDE management advised us that it verbally contacted DSP for assistance in conducting these audits since it believes DSP has the requisite expertise regarding facility security; however, it was informed by DSP personnel that the audits were a low priority. Although the law specifies that MDE should consult with DSP when auditing these facilities, conducting the security audits is the responsibility of MDE.

We were advised that MDE believes it does not have the expertise to conduct these security audits; rather, it relies on the third-party verification certifications included with the facilities' security analysis reports. Although the final certification reports are required to be included in the security analysis reports submitted to MDE, the detailed findings of these third-party verifications are not required to be reported.

Consequently, without reviewing the documentation supporting the third-party certifications or conducting security audits, hazardous material facilities could be operating with insufficient security measures that could pose a significant risk to public safety, and violations could go undetected and civil penalties would not be assessed. State law provides for the assessment of civil penalties not exceeding \$1,000 per day for each specific violation related to hazardous material facilities.

### **Recommendation 2**

**We recommend that MDE develop a process to verify the security analysis reports submitted by hazardous material facilities. Specifically, MDE should conduct periodic audits or should obtain and review the detailed findings supporting the third-party verification certifications submitted by hazardous material facilities in accordance with State law.**

### **Finding 3**

**Inspections of certain construction sites were not being performed on the average of once every two weeks, as required by State regulations.**

### **Analysis**

Inspections of certain construction sites were not performed in accordance with State regulations. Specifically, State regulations require that construction activity that disturbs more than 5,000 square feet of land or that results in more than 100 cubic yards of earth movement must have an MDE approved erosion/sediment control plan before construction begins. The purpose of these plans is to lessen the impact of sediment leaving construction sites and to prevent stream channel

erosion, pollution, and local flooding. For every active erosion and sediment control plan, State regulations also require that MDE perform on-site inspections for compliance with these regulations on the average of once every two weeks. We were advised by MDE management that these inspections should be frequent because of the continuously evolving land conditions of active construction sites. According to MDE's *Annual Enforcement and Compliance Report* for fiscal year 2010, there were 2,213 on-site inspections performed, resulting in 73 violations deemed significant; however, as of June 30, 2010, there were approximately 12,900 active plans MDE was responsible for inspecting. We determined, based on a review of MDE's detailed records, that the records of inspections performed were reliable for our purposes.

In this *Report*, MDE also disclosed that it does not have a sufficient number of inspectors to meet the inspection requirements and MDE advised that it has never been in compliance with this inspection requirement, nor does it expect to be any time in the foreseeable future. Rather, MDE stated that it prioritizes on-site inspections based on citizen complaints and size of the construction sites. According to MDE's records, during fiscal year 2010, approximately \$795,000 was collected from administrative and civil penalties resulting from violations found during inspections.

### **Recommendation 3**

**We recommend MDE take action to comply with State regulations regarding inspections of the aforementioned construction sites. If MDE determines that the inspection requirement cannot be achieved with current resources, MDE should either seek additional resources through the budget process or pursue modifying the State regulations to include a risk-based approach.**

#### **Finding 4**

**MDE did not establish adequate procedures over the Lead Poisoning Prevention Program to ensure properties were registered and related fees paid.**

#### **Analysis**

Critical procedures were not established over the Lead Poisoning Prevention Program diminishing MDE's ability to adequately monitor properties affected with lead paint and to collect related fee revenue as required by State law. According to MDE's records, there were 71,231 rental dwelling units in registered lead paint properties as of December 31, 2009. State law requires that owners of affected lead paint properties register the properties annually with MDE, meet specific lead paint reduction standards, and pay a \$15 fee for each rental dwelling unit by December 31 of each year; owners of rental properties

certified as lead-free are required to pay a one-time \$10 fee for each unit. During fiscal year 2010, the Program's revenue, consisting of fees and penalties, totaled approximately \$1.3 million. Our review disclosed the following conditions:

- MDE had not established procedures to identify and pursue property owners who failed to annually renew their property registrations that specify risk reduction actions taken, and pay the required registration fees. Based on our analysis of MDE's lead property database, which we tested and found to be reliable for our purposes, we determined that, as of December 2010, approximately 3,000 property owners registered for calendar year 2008 had not renewed their property registrations for calendar years 2009 and 2010. MDE had not identified that these property owners had not renewed the registrations. A similar condition was commented upon in our preceding audit report.
- MDE did not have a process to ensure that lead-free property inspection certificates were accurately recorded in the lead property database and if all properties certified lead-free paid the required certification fee. Third-party inspectors performed the inspections on MDE's behalf and the certificates were recorded in the lead property database by another third party. Property owners were requested to separately submit the required fees to a lock-box under MDE's control. However, MDE did not perform reconciliations to ensure that lead-free certifications were accurately recorded in the lead property database and were supported by an inspection certificate, and that the related certification fees were collected for each inspection performed. Our test of 10 certifications processed in the certified lead-free property database disclosed that MDE had not received required fees from 7 of the 10 properties tested. According to the MDE lead-free property database, there were 23,340 lead-free certifications on file as of February 2011.

Fees collected by MDE are placed in the Lead Poisoning Prevention Fund and are used primarily for lead paint educational and community outreach purposes. Furthermore, State law requires that MDE establish and maintain a statewide database that tracks affected properties.

#### **Recommendation 4**

**We recommend that MDE**

- a. establish procedures to identify and pursue property owners who fail to register affected lead paint properties and pay the annual registration fee (repeat),**
- b. investigate the aforementioned property owners and take appropriate action to ensure the owners register the properties and pay any registration fees owed to MDE (repeat), and**

- c. **establish procedures to ensure properties certified as lead-free are accurately recorded in the lead property database and that related property owners have remitted required certification fees.**

## **Bay Restoration Fund**

### **Background**

The Bay Restoration Fund (BRF) enabling legislation, which became effective July 1, 2004, established the Wastewater Treatment Program (WWTP), and the Septic System Program to further Maryland's efforts to reduce nitrogen and phosphorus loading in the Chesapeake Bay. The Septic System Program is funded by imposing a \$30 annual fee on each property served by an onsite well and septic system. Funds collected are to be used to upgrade or replace existing septic systems or to install new septic systems with the best available technology (BAT) for nitrogen removal, which reduces the septic system's nitrogen load in half. According to State law, funding priorities for septic upgrades are first given to failing septic systems in the Chesapeake and Atlantic Coastal Bay Critical Area<sup>2</sup> and then to failing septic systems that MDE determines are a threat to public health or water quality. WWTP is a separate program targeted at upgrading 67 major wastewater treatment plants with enhanced nutrient removal technologies, which is funded by a \$2.50 monthly fee on each household served by a wastewater treatment plant.

In addition, Chapter 280, Laws of Maryland, 2009, effective October 1, 2009, requires all new and replacement septic systems serving property in the Critical Area to include the BAT for removing nitrogen, and these systems are also eligible for funding through the BRF, whether or not they replace an existing failing system. Funding for septic systems (including new and replacement systems) is provided to property owners, on a reimbursable basis, who obtain certain approvals and inspections. Prior to July 1, 2010, septic grants were awarded either directly through MDE or by designated local jurisdictions allowed to process septic grant applications. Effective July 1, 2010, although MDE still funds the projects through the BRF, the awards for these septic projects are the responsibility of the local county health departments or other related local organizations, in accordance with MDE revised policies and procedures. MDE subsequently makes payments to the locals to reimburse eligible property owners.

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<sup>2</sup> The Chesapeake and Atlantic Coastal Bay Critical Area includes all land within 1,000 feet of Maryland's tidal waters and tidal wetlands. It also includes the waters of the Chesapeake Bay, the Atlantic Coastal Bays, their tidal tributaries, and the lands underneath these tidal areas.

According to MDE's records, there are approximately 420,000 septic systems in Maryland, of which approximately 52,000 are located within the Critical Area. As of September 30, 2010, MDE has awarded funding to upgrade 2,417 septic systems, of which 1,251 systems were located within the Critical Area. According to the January 2011 BRF Annual Status Report, as of September 30, 2010, approximately \$36.9 million in grants have been awarded since the program was established, of which \$17.7 million was awarded directly to property owners by MDE, and \$19.2 million was provided to local jurisdictions to fund septic grant awards to property owners. Additionally, as of September 30, 2010, MDE has awarded approximately \$322.2 million in grants to upgrade wastewater treatment plants. As of June 30, 2010, according to the State's records, the balance in the BRF approximated \$86 million, of which approximately \$5.2 million was for the Septic System Program, and the balance was for the WWTP.

#### **Finding 5**

**MDE had not adopted regulations necessary to govern the Bay Restoration Fund programs.**

#### **Analysis**

MDE had not adopted certain State regulations pertaining to the Wastewater Treatment Program (WWTP), and the Septic System Program as of June 2011. Legislation enacted in 2004, which established the Bay Restoration Fund (BRF) and these two programs, authorized MDE to adopt State regulations necessary or appropriate to carry out the provisions of the programs aimed at reducing nitrogen and phosphorus loading in the Chesapeake Bay. Furthermore, Chapter 280, Laws of Maryland, 2009, effective October 1, 2009, established additional legislation related to upgrading or replacing septic systems with nitrogen removal technology and this legislation required MDE to adopt State regulations to implement the Septic System Program. WWTP is a separate program for upgrading wastewater treatment plants with enhanced nutrient removal technologies, which obtains funding from a different source than the septic upgrade program. However, our review disclosed that MDE had not established regulations for either program.

Such regulations should establish the types of projects eligible for funding under each program. Establishing these regulations for the Septic System Program is critical considering that, effective July 1, 2010, the funding for all septic system projects is awarded by the local county health departments or other related local organizations. MDE did develop comprehensive implementation guidance in June 2010 over the Septic System Program for the benefit of local county health departments and others. This guidance established the criteria for local jurisdictions to use for awarding grants, including project prioritization and income-based grant funding limitations, MDE's approval for certain grant funding

categories, and regional maximum grant awards. However, the guidance has not been subject to legislative review and approval to ensure compliance with the legislative intent of the law, as required for formal regulations.

Additionally, the regulations for both Programs should identify the types of disposal systems eligible for funding. Our tests disclosed a large project for upgrading and expanding an existing wastewater treatment plant that was funded from the Septic System Program. Specifically, one project received approximately \$300,000 in funding from the Septic System Program even though, according to the application documents, this project was for upgrading and expanding an existing wastewater treatment plant. Furthermore, the project was reviewed, awarded, and monitored by the WWTP. MDE could not provide documentation supporting the appropriateness of funding this wastewater project through the Septic System Program since criteria regarding what systems should be funded by these programs had not been established. However, MDE management explained that, considering the disposing nature of the wastewater treatment plant, this project was considered a septic system.

We identified three additional projects, funded by the Septic System Program, which we believe further support the need for formal regulations. Prior to July 1, 2010, while MDE was directly operating the Program, MDE gave funding priority to three projects, totaling approximately \$59,400, for which the septic system grant applications indicated failing septic systems, even though there were no houses or structures on these properties at the time the new septic units were installed. For two of these projects, completed during October 2008 and April 2009, the Maryland Department of Assessments and Taxation records indicate that houses were built in 2010. For the third project, which was completed in October 2009, as of November 2010, no structure had been built on the property.

#### **Recommendation 5**

**We recommend that MDE adopt regulations necessary to govern the BRF programs, including specific criteria for project eligibility under the Wastewater Treatment and Septic System Programs.**

#### **Finding 6**

**MDE's process for reviewing applications and awarding grants prior to July 1, 2010 for the Septic System Program lacked adequate oversight and our review disclosed a number of questionable awards.**

#### **Analysis**

MDE's process for reviewing applications and awarding grants prior to July 1, 2010 for the Septic System Program lacked adequate oversight. As a result, there was a lack of assurance that septic system bids submitted were independent and fair and that the number of grants awarded was maximized. Prior to July 1, 2010,

during the application process, property owners were required to submit a minimum of three bids for the installation of the septic systems; the bids were required to include at least three separate manufacturers of the best available technology (BAT) septic system units and at least two different installers.<sup>3</sup> However, MDE allowed installation contractors to act as agents for property owners which allowed the contractors to solicit and collect the required bids for the project, including their own bids. Consequently, the contractors had access to the other bids and could adjust their own bids. We also noted that, when making the awards, MDE generally did not sufficiently review bid documentation for completeness, comparability, and legitimacy.

Based on our analysis of MDE's grant award records related to applications processed directly by MDE, we identified higher than average grant awards on 57 projects awarded during the period from May 1, 2008 to March 2, 2009, which involved two installation contractors serving the same geographic area of the State. Specifically, the average grant award for these 57 projects was \$19,860; whereas, the average grant award for the other 1,596 projects located throughout the remainder of the State was \$12,600—a difference of approximately \$7,260. We reviewed these 57 projects, with awards totaling approximately \$1.1 million, and noted the following questionable practices:

- Based on our detailed review of 51 projects totaling approximately \$1 million, the pattern of bidding between the aforementioned two installation contractors was questionable. Specifically, for 50 projects, these two contractors were the only bidders, with one of the contractors submitting two bids, each with a different BAT system, to account for the required three bids. For the remaining project, all three bids were submitted by the same contractor. Additionally, 2 of these 51 projects, which totaled approximately \$38,800, were for each contractor's home residence in which the other contractor was the losing bidder. For 49 projects, the winning bids, which had been submitted by both contractors, included the installation of the same manufacturer's BAT unit. Furthermore, one of the two contractors was the only authorized supplier of this unit in Maryland.

Our review of the bid documentation for 19 of these 51 projects, which were approved during the period from January 5, 2009 to March 2, 2009, disclosed a consistency between the winning bid costs regardless of the contractor performing the work. Specifically, one contractor was the low bidder on 11 projects (with an average cost of \$20,769) and the other contractor was the low bidder on 8 projects, (with an average cost of \$20,185), with the same BAT systems installed in each case.

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<sup>3</sup> One installation contractor could provide two bids, each with a different BAT septic system, resulting in the submission of three bids from two different installers.

- For 23 projects, the bid documentation submitted by these two contractors was not always complete or proper. Specifically, bids for BAT units did not always identify the specific property or project information and did not always include the dates that the estimates were provided. We identified 11 projects, totaling approximately \$210,000, in which the losing high bids did not appear to have been specifically prepared for the project under consideration; rather, the bids appeared to be copies of previously submitted bids used for other projects. Additionally, for 12 other projects totaling approximately \$242,600, either certain critical information (such as bid date, property address, name of applicant) in the losing bid documentation was missing or this critical information was hand-written onto a generic form bid; these characteristics were unlike bids for other projects submitted by the same contractor.

We believe that the aforementioned questionable practices and conditions could be contributing factors in the average grant award for these projects being approximately \$7,260 higher than other projects throughout the State. When we brought the aforementioned conditions to its attention, MDE could not provide an explanation. The cumulative average cost differential for these 57 projects is in excess of \$400,000. Based on the aforementioned conditions, we referred this matter to the Criminal Division of the Office of the Attorney General. A referral to the Criminal Division does not mean that a criminal act has actually occurred or that criminal charges will be filed.

As previously noted, while there are no established regulations governing this program (see Finding 5 in this report), effective July 1, 2010, MDE revised its procedures for determining and awarding septic system upgrade grants. These revised procedures establish maximum grant award amounts and provide for MDE to pre-approve BAT units eligible for installation, eliminating the need for applicants to obtain competitive bids. If a homeowner decides to install a BAT unit that is not pre-approved, the grant award is now limited to the established maximum grant award and the homeowner is responsible for the cost difference. These revisions should help reduce the potential for future questionable awards similar to the aforementioned awards we identified. As of June 8, 2011, the specific BAT unit used routinely by the two contractors had not been pre-approved by MDE. Additionally, MDE's current maximum grant award is \$12,307 for the region of the State where the aforementioned 57 projects were located, which is approximately \$7,550 less than the average award for the 57 projects.

### **Recommendation 6**

**We recommend that MDE work in conjunction with the Office of the Attorney General to investigate and resolve the aforementioned questionable activity. We also recommend that, for all septic grants processed by local**

**jurisdictions after July 1, 2010, MDE ensure the local jurisdictions are administering the Septic System Program in accordance with established requirements.**

## **Contractual Services**

### **Finding 7**

**MDE paid approximately \$224,950 to a former employee through eight consulting contracts resulting in potential violations of various State laws.**

### **Analysis**

MDE paid approximately \$224,950 to a former employee over an extended period through eight consulting contracts, which appeared to violate State laws, including procurement and ethics laws. In February 2007, an employee established a management consulting business and, on May 17, 2007, MDE awarded a one-year \$25,000 consulting contract to the business, effective June 30, 2007; the employee retired from State service effective May 31, 2007. MDE subsequently awarded seven additional consulting contracts to the former employee's business through June 30, 2011. The purpose of these contracts was to provide fiscal functions; the first two contracts also included a provision to train the former employee's replacement.

Our review disclosed that the contract qualifications and bid specifications for the initial procurement were specifically tailored to the former employee's experience, skills, and job functions. This is a violation of State procurement law which requires that specifications be written to permit maximum practicable competition and not be written in such a manner as to favor a single vendor over other vendors. Specifically, the contract solicitation required 10 years of specific State service and 5 years of specific experience with the State's Financial Management Information System (FMIS), and required bidders to submit unique documentation (such as, financial reporting using FMIS). Ultimately, the bid from the former employee's business for the initial contract (which was submitted on April 23, 2007, one week prior to the employee's official notification to MDE of the employee's retirement) was the only one received. For the original and subsequent contracts, the hourly rates ranged from \$49 to \$57 and the hourly rate of the former employee prior to retirement was approximately \$31 (excluding fringe benefits).

State law generally prohibits State agencies from rehiring former employees (including as independent contractors) until 45 days after the date of retirement. Finally, legal counsel for the State Ethics Commission advised us that the aforementioned procurement issues could violate a number of State Ethics Laws.

For example, Sections 15-502 of the State Government Article of the Annotated Code of Maryland (the Ethics Law) prohibits a State employee of a governmental unit from being employed by an entity that is negotiating or has entered a contract with that governmental unit. Any final decision related to violations of the State Ethics Laws would ultimately be determined by the State Ethics Commission.

After we brought this matter to its attention, MDE referred the aforementioned contract issue to the State Ethics Commission and terminated the contractual relationship pending its review. According to the State's accounting records, the last payment to the former employee was April 15, 2011.

#### **Recommendation 7**

**We recommend that MDE**

- a. in conjunction with its legal counsel and the State Ethics Commission, review the circumstances surrounding these contracts and take appropriate action; and**
- b. in the future, ensure that procurements comply with State law.**

## **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.

As previously mentioned, MDE uses the Enterprise Environmental Management System (EEMS), which is a comprehensive centralized database intended to replace numerous departmental databases and associated business applications through the integration of Tools for Environmental Management and Protection of Organizations (TEMPO), a commercial data management system. In addition, MDE operates other legacy application database systems, such as the Public and Private Drinking Water Information System (PPDW), which is used by the Water Management Administration for permitting and monitoring the State's public drinking water supply and keeping data on drinking water sources and treatment plants.

**Finding 8**

**Logging of certain database activity was incomplete and associated reports were not properly monitored.**

**Analysis**

Logging and monitoring controls over two critical databases (TEMPO and PPDW) were not adequate. Specifically, we noted the following conditions:

- Direct modifications made to numerous critical tables in these databases, such as by the database administrators, were not logged.
- For the TEMPO database, all activities performed by users with critical administrative system privileges were not logged.
- For the TEMPO database, the database administrator created a critical security log report from logged data. As a result, this administrator could exclude from this security report any logged database activity, including any questionable items. In addition, this security report, as designed, did not include any activity from weekends. Finally, while the security reports were reviewed for general propriety (that is, to ensure activity was performed by an appropriate person), these reviews did not include investigations of any questionable or unusual entries.

As a result of these conditions, unauthorized or inappropriate modifications to certain data contained in these database could occur and not be detected by management.

**Recommendation 8**

**We recommend that MDE**

- a. enable logging of direct changes to the TEMPO and PPDW databases' critical tables;**
- b. log activities performed by users with critical administrative privileges to the TEMPO database; and**
- c. ensure that the critical security event log report for the TEMPO database includes all weekly activity and is created and reviewed by personnel independent of the database operations, and that all questionable or unusual entries on the report are investigated with these investigations documented and retained.**

**Finding 9****User account and password controls did not comply with State requirements.****Analysis**

User account and password controls over certain critical databases were not adequate. We noted the following conditions:

- The TEMPO and PPDW databases' security settings did not enforce password length or complexity requirements for 21 important accounts.
- Identical accounts and passwords existed on the production and development versions of the TEMPO and PPDW databases for numerous users, increasing the risk that production accounts could be compromised.

These conditions were not in compliance with the Department of Information Technology's *Information Security Policy*.

**Recommendation 9**

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

**Finding 10****A current and complete information technology disaster recovery plan did not exist.****Analysis**

MDE did not have a current and complete 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 State of Maryland's *Information Technology Disaster Recovery Guidelines*. Specifically, MDE's plan did not address an alternate site arrangement and restoration of network connectivity. Furthermore, the listing of inventory prioritized for recovery was not current, as it did not include certain current critical applications. A similar condition was commented upon in our three prior audit reports.

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

**Recommendation 10**

**We recommend that MDE develop and implement a current and complete information systems disaster recovery plan in accordance with the aforementioned State of Maryland's *Information Technology Disaster Recovery Guidelines* (repeat).**

## **Audit Scope, Objectives, and Methodology**

We have audited the Maryland Department of the Environment (MDE) for the period beginning April 1, 2007 and ending June 30, 2010. The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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 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. The areas addressed by the audit included certain special funded programs (such as the Bay Restoration Fund Septic System grants); federal fund recoveries; permitting, inspections, and violation assessments; the Enterprise Environmental Management System; contract procurements and invoice processing; information system security; accounts receivable; and payroll. 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.

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, 2008, 2009, and 2010. In the related audit reports, the firm stated that the Administration's financial statements presented fairly, in all material respects, the financial position of the Administration and the results of its operations and its cash flows for the years then ended in conformity with the accounting principles generally accepted in the United States of America. We performed certain steps to satisfy ourselves as to the reliability of the reported results of the independent audits of the Maryland Water Quality Financing Administration. Accordingly, we have relied on the work of the independent accounting firm to provide audit coverage of certain aspects of the Maryland Water Quality Financing Administration's operations (internal controls and testing for the water quality and drinking water revolving loan fund programs).

Our audit procedures in these areas were generally limited, therefore, to obtaining a sufficient basis for that reliance. Finally, our audit did not include an evaluation of internal controls or an assessment of MDE's compliance with federal laws and regulations pertaining to federal financial assistance programs because the State of Maryland engages an independent accounting firm to annually audit such programs administered by State agencies, including MDE.

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

Robert M. Summers, Ph.D.  
Secretary

Kathy M. Kinsey  
Deputy Secretary

November 17, 2011

Mr. Bruce A. Myers  
Legislative Auditor  
Office of Legislative Audits  
Room 1202  
301 W. Preston Street  
Baltimore, Maryland 21201

Dear Mr. Myers:

Enclosed please find the Maryland Department of Environment's response to the draft audit report for the period beginning April 1, 2007 and ending June 30, 2010. Additionally, an electronic version of this document has been sent to your office via e-mail.

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. MDE will take the necessary steps to resolve the issues 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,

Robert M. Summers, Ph.D.  
Secretary

Enclosure

cc: Delegate Guy J. Guzzone, Co-Chair, Joint Audit Committee  
Senator James C. Rosapepe, Co-Chair, Joint Audit Committee  
Karl S. Aro, Executive Director, Department of Legislative Services  
Kathy Kinsey, Deputy Secretary, MDE  
Donna A. Dancy, Director, Internal Audit Services

**Finding 1**

**Required status reports on Enterprise Environmental Management System (EEMS) development and implementation did not disclose certain significant functionality and cost issues affecting the overall usefulness of the system.**

**Recommendation 1**

**We recommend that MDE provide the General Assembly’s budget committees and DoIT with a full disclosure of EEMS project status (repeat). Specifically, we recommend that MDE disclose**

- a. the system’s actual usage by the programs implemented in the system,**
- b. all system functionality deficiencies affecting the usefulness of the system, and**
- c. the funding necessary to fully implement all intended programs and functions of EEMS.**

**MDE Response**

MDE does not concur with the finding and recommendation.

The current MDE management can not change the historical fact that in 2004, when this project was initially proposed, it was overpromised and underfunded. However, what the current MDE management has done is accurately report to the General Assembly’s budget committees and DoIT the status of the project, and continue to move it forward as funding and staff become available by: (1) bringing other programs and functions onboard; and (2) improving operational and cost efficiencies through utilization of modern technologies such as DotNET. The Department strongly believes this is exactly what has been accomplished.<sup>1</sup>

MDE would like to point out that EEMS represents the “long-term vision” for a collection of Department-wide comprehensive systems that take a unified approach to MDE’s many complex, business and data collection and reporting processes. Whereas, TEMPO is a Commercial-Off-The Shelf (COTS) software product that serves as one of the systems needed to collect, integrate, and standardize data collection. While the two terms have been used in the past interchangeably, TEMPO is only one component of the larger EEMS Vision.

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<sup>1</sup> **Auditor’s Comment:** Although MDE contends that its reports to the General Assembly are accurate, our comment does not question their accuracy, but comprehensiveness. The most recent fiscal year 2011 report did include additional information beyond prior reports; however, certain information was still lacking, including future anticipated plans and related cost to fulfill the vision of EEMS or any significant changes to that vision.

**Finding 2**

**MDE did not establish a process to verify if certain hazardous material facilities are in compliance with adopted security standards, as required by State law.**

**Recommendation 2**

**We recommend that MDE develop a process to verify the security analysis reports submitted by hazardous material facilities. Specifically, MDE should conduct periodic audits or should obtain and review the detailed findings supporting the third-party verification certifications submitted by hazardous material facilities in accordance with State law.**

**MDE Response**

MDE partially concurs with the finding, but can only partially implement the recommendation.

MDE uses third parties to verify that hazardous materials facilities subject to the law have actually implemented their security plans. The Department has neither the expertise nor the resources – staff and funding - to conduct all the required security audits of HAZMAT facilities covered under the existing law to determine that the reports adequately assess and address vulnerabilities. Performing security audits requires intimate knowledge of: (1) security risk assessments, including personnel security, unauthorized access, and en route security; (2) detailed knowledge regarding written plans that entails in-depth security training and knowledge of company security objectives, specific security procedures, employee responsibilities, recommended actions in the event of a security breach, and the organizational security structure; and, (3) security awareness training that must include an awareness of security risks associated with hazardous materials transportation and methods designed to enhance transportation security. Furthermore, the Office of Homeland Security has found that each inspection requires two or more inspectors and approximately one week to perform.

In addition, in 2006, the U.S. Congress mandated that “High Risk” chemical facilities develop and implement security plans to guard against the possibility of terrorism. The Department of Homeland Security (DHS) was authorized to develop and administer the appropriate regulations. In 2007, DHS established Chemical Facilities Anti-Terrorism Standards (CFATS) which created a new form of “sensitive but unclassified information” called Chemical-terrorism Vulnerability Information (CVI). CFATS establishes types of information that are CVI, including but not limited to, security vulnerability assessments; site security plans; documents relating to DHS’s review and approval of security vulnerability assessments; and site security plans and documents relating to inspection or audits of a facility.

In order to be granted access to CVI, an individual must meet two criteria: (1) be an authorized user; and (2) be designated as having a “need to know”. To become an authorized user an individual must successfully complete DHS online CVI training and demonstrate trustworthiness. DHS must approve all “need to know” designations.

Based on recent advice of counsel, to determine which Maryland facilities are covered by CFATS, and therefore, exempt from compliance with the State's law, MDE must obtain from DHS a list of facilities with tier levels that are covered by CFATS. DHS determines what constitutes CVI under 6 CFR § 27.400. The CFATS list, itself, is expected to constitute CVI, and therefore require DHS' authorization to access. Access and/or exposure to CVI without having been approved by DHS as a CVI authorized user with a "need to know" is a violation of Federal law. Accordingly, MDE intends to request from DHS the list of facilities covered by CFATS and authorization to access CVI. Once this information and CVI authorization is obtained from DHS, MDE will move forward with contracting for security audits of facilities not covered by CFATS to the extent available funds allow.

### **Finding 3**

**Inspections of certain construction sites were not being performed on the average of once every two weeks, as required by State regulations.**

### **Recommendation 3**

**We recommend MDE take action to comply with State regulations regarding inspections of the aforementioned construction sites. If MDE determines that the inspection requirement cannot be achieved with current resources, MDE should either seek additional resources through the budget process or pursue modifying the State regulations to include a risk-based approach.**

### **MDE Response**

MDE concurs with the finding, but can not fully implement the recommendation.

The Department acknowledges that currently, due to a lack of resources at both MDE and local delegated jurisdictions, it is not possible to inspect every active construction site for compliance with erosion and sediment control plans on an average of once every two weeks in accordance with State regulations. In fact, the Fiscal Analysis performed in 2007 and updated through December 2010, estimated the Department to be understaffed by 342 positions just to comply with minimum mandated regulations.

MDE will continue to seek additional resources to increase the frequency of inspections. However, even with additional resources, the Department will still be required to prioritize inspections based on complaints and project size due to current staffing levels at MDE and the local delegated jurisdictions. Finally, MDE will evaluate existing resources and consider whether it is appropriate to propose changes to the regulatory requirement.

#### **Finding 4**

**MDE did not establish adequate procedures over the Lead Poisoning Prevention Program to ensure properties were registered and related fees paid.**

#### **Recommendation 4**

**We recommend that MDE**

- a. establish procedures to identify and pursue property owners who fail to register affected lead paint properties and pay the annual registration fee (repeat),**
- b. investigate the aforementioned property owners and take appropriate action to ensure the owners register the properties and pay any registration fees owed to MDE (repeat), and**
- c. establish procedures to ensure properties certified as lead-free are accurately recorded in the lead property database and that related property owners have remitted required certification fees.**

#### **MDE Response**

- a. MDE concurs with the finding and recommendation.

The Department has implemented several new initiatives to address the recommendation. First, in an attempt to reach the non-compliant property owners, an expanded renewal mail out was implemented for the Fiscal Year 2011 registration effort to all property owners who had received a notice from October 1, 2004 to December 2010. This enabled the Department to reach those individuals who had not renewed in any of the subsequent years. At this time, this effort is still underway and therefore the results are not yet available.

Second, any registrations sent to property owners that are returned in the mail are now investigated utilizing information contained in the Maryland Department of Assessments and Taxation (MDAT) database to determine if the property has been sold. If the property has been sold the new owner(s) are sent a letter informing them of their responsibility to comply with the State Lead Law if the property is a rental property. This process was implemented on March 22, 2011 and has resulted in an increase in new property owner registrations. The other benefit of this new procedure is that it enables MDE to identify properties that are not rented or are owner-occupied.

Third, a list will be generated of individuals who requested a certification but are not recorded in the lead registration database. These properties owners will be sent a registration letter. This process will not be initiated until completion of the 2012 mail out and elimination of the backlog of returned mail. This timeframe has been established to ensure operational and cost efficiencies by not using funds for postage or duplicating manpower on property owners who have already responded.

Fourth, an effort to increase overall awareness of the existence of the State Lead Law and the MDE Lead Program is currently underway. A link between the main Maryland State website ([www.maryland.gov](http://www.maryland.gov)) to the MDE Lead Program website has been established. Also, the Department has requested that the local jurisdictions' websites direct landlords to

register with the MDE Lead Program. At this time several counties have already added links to the MDE Lead program website. The Department will continue to follow up and urge the remaining counties to establish a similar link between the websites.

b. MDE concurs with the finding and recommendation.

As detailed in section a. above, letters sent to property owners are now being adequately tracked. If the owners respond and acknowledge owning a rental property, they are given 30 days to register. If the owners do not comply, they are forwarded to enforcement. The same action will be taken when a returned mail investigation discovers a new owner or property address. Owners will have 30 days to register or be referred to enforcement.

c. MDE concurs with the finding and recommendation.

With the addition of two new contractual employees in June 2010, the revisions to property and owner information are now being recorded in a timely manner. In addition, a new online registration and renewal system has been developed by the Department and will facilitate continued timely revisions to the database by enabling property owners to electronically remit their information and pay the related fee online. In addition, in preparation for use of the new system, the existing rental registry data-base will be cleaned and migrated to the new system to be utilized by the online effort.

Also, fiscal year 2011 House Bill 1254, entitled "Environment – Reduction of Lead Risk in Housing – Registration and Fees," signed by the Governor on May 19, 2011, authorizes the Department to alter, by regulation, the date by which an owner of a registered pre-1950 rental dwelling unit (affected property) must renew his/her registration. It also authorizes the Department to alter the date the registration fee must be paid. Currently, all affected properties must have their registrations renewed and paid by December 31<sup>st</sup> of each year. This large volume of work all at one time is overwhelming for the Lead Program staff and increases the opportunity for mistakes in keying data, causes delays in inputting data, and therefore, in ensuring that all properties are properly registered.

The legislation, which allows staggering the due date of registrations and the associated fee, took effect July 1, 2011 and authorizes the Department to adopt regulations that will distribute both the large volume of registrations and the associated revenues received by MDE more uniformly throughout the year. MDE will gain efficiency by spreading the work related to registration of affected properties throughout the year, thereby avoiding a rush of activity at the end of one year and the beginning of the next. Implementation is expected with the 2013 renewal year.

Finally, a staff member now reviews lead free certificates received by the Department and follows up with property owners including sending a letter to those who remit certificates without payment.

**Finding 5**

**MDE had not adopted regulations necessary to govern the Bay Restoration Fund programs.**

**Recommendation 5**

**We recommend that MDE adopt regulations necessary to govern the BRF programs, including specific criteria for project eligibility under the Wastewater Treatment and Septic System Programs.**

**MDE Response**

MDE partially concurs with the finding and is considering whether the development of regulations is necessary. Also, the Department would like to provide clarification related to some of the information included in the finding.

**BRF Regulations and Guidance**

Section 9-1605.2(l) of the Environment Article states: “The Department shall adopt regulations that are necessary or appropriate to carry out the provisions of this section.” The law provides MDE with the discretion to determine whether regulations are necessary or appropriate to implement. In the Department’s judgment, the law as enacted was sufficiently detailed to make the adoption of additional regulations unnecessary.

While MDE concurs with the statement that MDE’s guidance establishing the criteria for local jurisdictions to use when awarded a BRF grant has not been subject to legislative review and approval, guidance is not the same as formal regulations and does not require legislative review and approval.

In addition, it is MDE’s judgment that the Department’s guidance does establish adequate accountability over the use of BRF funds by the locals as it requires each local jurisdiction that receives a grant to sign, agree and adhere to the grant agreement and its twenty conditions.

This grant agreement establishes detailed guidance and provides extensive oversight by the Department concerning fund management and utilization. In addition, the grant agreement is specific in its directives related to technical design and specifications; procurement, construction management and reimbursement policies; and establishes recourse for non-compliance with the grant agreement requirements. Nevertheless, as the result of several recent amendments to the law, MDE is considering whether the development of regulations is necessary.<sup>2</sup>

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<sup>2</sup> **Auditor’s Comment:** Based on the significance of the Bay Restoration Fund programs, we continue to believe that establishing regulations would help ensure the legislative intent of the Bay Restoration Fund law is being followed and would strengthen MDE’s administration and oversight of the program by clarifying policies, such as the appropriate use of the funds under WWTP and the Septic System Program.

## Use of Septic Upgrade Portion of BRF

Also, MDE does not agree with the interpretation that the septic upgrade portion of the BRF cannot be used to fund a BAT upgrade at a large onsite sewage disposal system that discharges to groundwater. Section 9-1605.2(h) of the Environment Article (the Bay Restoration Fund enabling statute) authorizes use of the septic portion of the BRF for onsite sewage disposal systems. The statute does not define “onsite sewage disposal” or “onsite sewage disposal system.” However, COMAR 26.04.02.01 (“Sewage Disposal and Certain Water Systems for Homes and Other Establishments in the Counties of Maryland Where a Public Sewage System is Not Available”) defines “onsite disposal” to mean “the disposal of sewage effluent beneath the soil surface.” That same definition section further defines “on-site sewage disposal system” to mean a sewage treatment unit, collection system, disposal and related appurtenances.”

Therefore, consistent with the Department’s longstanding interpretation and application of these terms, an onsite sewage disposal system is any system that provides for the disposal of sewage effluent beneath the soil surface. A wastewater treatment facility that discharges to groundwater is an onsite sewage disposal system. Neither the size of the onsite sewage disposal system, nor the number of properties served by the system are factors in determining eligibility for funding under § 9-1605.2(h). This project, which upgraded the wastewater treatment portion of a large septic system, is consistent with the provisions in the enabling statute.<sup>3</sup>

Furthermore, while § 9-1605.2(h) prioritizes upgrades to failing onsite sewage disposal systems, it does not restrict the use of the BRF to failing septic systems. During the time period at issue, it was the Department’s policy to award grants for BAT upgrades for new construction on vacant lots. This is consistent with the enabling legislation and its underlying purpose to reduce nitrogen discharges to waters of the State. The nitrogen reduction is the same for an upgrade at a newly constructed house as it is for an existing house.

Related to the three projects discussed in the finding, two of these installations have been completed and inspected and are now serving occupied houses. The third applicant received the necessary permits from the health department to build on the property and installed the BAT which was inspected and approved by the health department prior to reimbursement by MDE of the system. However, construction of a house on the property has been delayed due to legal issues between the property owner and the County involving property taxes which are outside the control of the Department.<sup>4</sup>

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<sup>3</sup> **Auditor’s Comment:** MDE states that the definition of “onsite disposal” permits the funding of an upgrade and expansion of the wastewater treatment plant using Septic System Program funds. We noted that annual fees collected from the plant in question, both before and after receiving the funds, had been deposited into the WWTP (not the Septic System Program). We believe that the establishment of formal regulations will clarify the intent and use of funds from the various programs.

<sup>4</sup> **Auditor’s Comment:** The response indicates that the local health department approved the septic system project prior to MDE providing funding to the property owner, as required by MDE guidelines; however, MDE could not provide evidence to support this assertion.

**Finding 6**

**MDE's process for reviewing applications and awarding grants prior to July 1, 2010 for the Septic System Program lacked adequate oversight and our review disclosed a number of questionable awards.**

**Recommendation 6**

**We recommend that MDE work in conjunction with the Office of the Attorney General to investigate and resolve the aforementioned questionable activity. We also recommend that, for all septic grants processed by local jurisdictions after July 1, 2010, MDE ensure the local jurisdictions are administering the Septic System Program in accordance with established requirements.**

**MDE Response**

MDE partially concurs with the finding, but will fully implement the recommendation.

The Department will work with the Office of the Attorney General related to the issues included in the finding and take appropriate action based on the results of the investigation. Also, MDE has already taken steps to ensure that all septic grants processed by local jurisdictions after July 1, 2010, are administered in accordance with established requirements.

As expressively acknowledged by the auditors, MDE had proactively revised its procedures and by doing so had already addressed the concerns raised by the audit finding. Moreover, in the Department's view, there are other possible explanations for the cost differential based on differences in technology. MDE is conducting additional investigation into the circumstances surrounding the cost differential and will provide the results of the investigation to the Office of the Attorney General.

**Finding 7**

**MDE paid approximately \$224,950 to a former employee through eight consulting contracts resulting in potential violations of various State laws.**

**Recommendation 7**

**We recommend that MDE**

- a. in conjunction with its legal counsel and the State Ethics Commission, review the circumstances surrounding these contracts and take appropriate action; and**
- b. in the future, ensure that procurements comply with State law.**

**MDE Response**

- a. MDE concurs with the finding and recommendation.

The Department is awaiting the decision of the State Ethics Commission (SEC) and based on that decision will take appropriate action to comply with any issues noted. However, the Department would like to clarify one point included in the finding. There were a total of five awards made with eight purchase orders released against them.

- b. MDE concurs with the finding and recommendation.

The Department will ensure that future procurements will comply with State Law. However, MDE would like to point out that the initial procurement which the auditors are taking exception to was processed by employees no longer with the Department, namely, the former Chief Procurement Officer and former Director of Administrative Services. The Department believes this situation is an isolated and unusual incident and not indicative of any systemic problem with the internal controls governing the current MDE procurement process. Also, the second, third and fifth subsequent awards were conducted as competitive procurements in which the Department received bids from multiple vendors in each case. The fourth award was a bridge contract executed in accordance with State procurement regulations and with the approval of the Department of Budget and Management.

**Finding 8**  
**Logging of certain database activity was incomplete and associated reports were not properly monitored.**

**Recommendation 8**

**We recommend that MDE**

- a. **enable logging of direct changes to the TEMPO and PPDW databases' critical tables;**
- b. **log activities performed by users with critical administrative privileges to the TEMPO database; and**
- c. **ensure that the critical security event log report for the TEMPO database includes all weekly activity and is created and reviewed by personnel independent of the database operations, and that all questionable or unusual entries on the report are investigated with these investigations documented and retained.**

**MDE Response**

- a. MDE concurs with the finding and recommendation.

The Department has implemented the recommendation and now logs direct changes to the TEMPO and PPDW critical tables.

- b. MDE concurs with the finding and recommendation.

The Department has implemented the recommendation and now logs activities performed by users with critical administration system privileges for the TEMPO database.

- c. MDE concurs with the finding and recommendation.

The Department has implemented the recommended changes for the TEMPO database to ensure the critical security event log 1) includes all weekly activity, 2) is created and reviewed by personnel independent of the database operations, and 3) all questionable or unusual entries on the report are investigated and documentation supporting these investigations is being retained for future reference.

**Finding 9**  
**User account and password controls did not comply with State requirements.**

**Recommendation 9**  
**We recommend that MDE comply with account and password requirements of the Department of Information Technology’s *Information Security Policy*. We made detailed recommendations to MDE, which, if implemented, should provide adequate security in this area.**

**MDE Response**

MDE concurs with the finding and recommendation.

The Department has implemented the recommended changes to Password Length and Complexity, and Account and Password files.

**Finding 10**  
**A current and complete information technology disaster recovery plan did not exist.**

**Recommendation 10**  
**We recommend that MDE develop and implement a current and complete information systems disaster recovery plan in accordance with the aforementioned State of Maryland’s *Information Technology Disaster Recovery Guidelines* (repeat).**

**MDE Response**

MDE concurs with the finding and recommendation.

The Department is currently in the process of updating the disaster recovery plan and will ensure that in the future this plan is maintained in accordance with the State of Maryland's *Information Technology Disaster Recovery Guidelines*.

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