

Audit of WMATA's Underground Storage Tanks

May 15, 2025

OIG 25-09





Results in Brief

Audit Report of WMATA's Underground Storage Tanks

Audit Objective

The objective of the audit was to determine the effectiveness of internal controls for managing the underground storage tank (UST) program.

Why We Did the Audit

- The Washington Metropolitan Area Transit Authority (WMATA) Office of Planning and Performance expressed concern about aging USTs.
- The Office of Inspector General (OIG) has conducted audits and investigations related to fuel in the past.
- This audit was included in the Fiscal Year (FY) 2024 Annual Audit and Evaluation Plan in response to concerns raised by key stakeholders regarding environmental compliance and infrastructure.
- The Infrastructure Investment and Job Act (IIJA) requires OIG to assess the effective use of funding for major capital improvement projects. The audit of the UST program falls within this assessment.

Recommendations

OIG identified six recommendations for WMATA's Office of Environmental Management and Compliance (EMAC) to avoid potential environmental contamination from USTs and associated penalties. By addressing these recommendations, WMATA can strengthen internal controls for its UST program and prevent environmental contamination.

What OIG Found

For this audit, OIG reviewed a sample size of seven UST sites including 36 tanks. OIG found that WMATA's internal controls for managing USTs are working effectively, with noted observations.

Specifically, OIG found that:

1. WMATA consistently performed both preventative and detective controls for UST maintenance, with some observations.
2. WMATA had insufficient physical security controls of USTs.



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The United States (U.S.) Environmental Protection Agency (EPA), Title 40, Code of Federal Regulations (CFR) Part 280.12, defines an underground storage tank (UST) as:

[A]ny one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground.

Owners of USTs include marketers, such as service stations and convenience stores, who sell gasoline to the public, as well as non-marketers, such as fleet service operators and local governments, who use tanks exclusively for their own needs.

The greatest potential danger associated with USTs is leaks. When petroleum or other hazardous substances escape from tanks or associated pipes, they can seep into the soil, contaminate groundwater, and make water unsafe to drink. Leaks can occur due to several factors, including faulty installation, inadequate operation and maintenance, spills, or overfills. These leaks can threaten human health and safety, as well as the environment. Moreover, the fumes and vapors can travel underground and collect in areas such as basements, utility vaults, and parking garages, where they can pose a serious threat of fire or explosion, asphyxiation, or other adverse health effects.

Regulations Applicable to WMATA's USTs

The EPA regulates all USTs located in the U.S. to ensure they are properly maintained and secure. However, the EPA recognizes that state and local governments are in the best position to oversee USTs because of the large size and great diversity of the regulated community. Therefore, in some cases, states may have more stringent regulations than EPA's requirements. WMATA has USTs in Maryland (MD), Virginia (VA), and the District of Columbia (DC) and is required to follow regulations from the following agencies:

- **Maryland Department of Environment (MDE):** The Oil Control Program within MDE's Land and Materials Administration regulates oil-related activities in the state. All owners, operators, and people in charge of a UST system located in Maryland are required to comply with the Code of Maryland Regulations (COMAR) Title 26 Subtitle 10, Oil Pollution Control and Storage Tank Management.
- **Virginia Department of Environmental Quality (VDEQ):** The Petroleum Storage Tank Program performs field inspections to ensure all regulated petroleum storage tanks are installed and operating properly. The regulations are outlined in the Virginia Administrative

Code (VAC) 9VAC25-580 Underground Storage Tanks: Technical Standards and Corrective Action Requirements.

- **DC Department of Energy and Environment (DOEE):** Regulates USTs located in DC to protect human health and the environment. DOEE also oversees the installation of new tanks and the operation, maintenance, and closure of existing tanks. All owners and operators must comply with the DC Underground Storage Tank Management Act of 1990, Water Pollution Control Act of 1984, DC Fire Code - Title 12 Subtitle H, and District Construction Codes and Construction Code Supplements.

WMATA's Office of Environmental Management and Compliance (EMAC)

EMAC oversees WMATA's environmental management programs and compliance with federal, state, and local environmental laws and regulations. WMATA's UST program consists of UST inspection, compliance, repair support, monitoring, and replacement. Also, WMATA has the following goals to continually improve environmental performance:¹

- minimize adverse environmental impact on the communities WMATA serves;
- be accountable as an organization by protecting the environment;
- contribute to the welfare and quality of life of WMATA's employees; and
- be responsible stewards of the environment entrusted to WMATA by the communities and patrons it serves.

While EMAC oversees WMATA's environmental management programs, it does not always directly perform individual environmental activities at UST sites. Individuals within the offices of Fleet, Facilities, and Track and Structures, are also responsible for ensuring that USTs comply with federal and state environmental regulations, as well as WMATA policy.

WMATA UST Guidance and Policy

Generally, WMATA follows the UST compliance requirements for MD, VA, and DC since these are more stringent than those set by EPA. In addition, WMATA has its own policies for monitoring USTs, including:

¹ WMATA Office of Environmental Management and Compliance. <https://washingtondcmetro.sharepoint.com/sites>.

- **Environment Standard Operating Procedures (ESOPs)** – Contain guidance for managing tank monitoring systems (Veeder-Root Panels),² as well as daily and monthly UST reconciliations.
- **UST Inspections Standard Operating Procedures (SOPs)** – Establish procedures and identify responsibilities for conducting UST inspections.
- **Office of Bus Fleet, Office of Bus Maintenance: Bulk Product and Tank Inventory Management Policy Instruction** – Establishes formal guidelines for proper accounting and handling of bulk petroleum and antifreeze products to ensure accurate control of inventory and to prevent leaks or unauthorized use.

EMAC's primary method for leak detection is interstitial monitoring, which monitors the area between the tank and the tank's secondary containment/barrier for leaks and alerts the operator if a leak is suspected. To mitigate the risks associated with leaks, spills, overfill, and vapor release, various WMATA personnel perform daily and monthly inspection checks. EMAC also implemented a compliance cycle where its inspection contractor performs 18 different tests on each UST. In addition, the contractor also performs minor system repairs for the entire UST population.

WMATA's UST Population

WMATA has 19 UST sites and 88 tanks (see Table 1). For WMATA's UST site map, see Appendix B.

Table 1: UST Site and Tank Population

#	Facility Name/UST Site	State	Number of Tanks
1	Alexandria Rail Yard	VA	3
2	Andrews Federal Bus Garage	MD	7
3	Bladensburg Bus Division	DC	11
4	Branch Ave Rail Yard	MD	2
5	Cinder bed Road Bus Division	VA	5
6	Dulles Rail Yard	VA	3
7	Forest Glen Station	MD	1
8	Four Mile Run Bus Division	VA	8

² A Veeder-Root Panel is an automatic tank gauge (ATG) that can be programmed to monitor several aspects of the use, compliance, and performance of a UST.

#	Facility Name/UST Site	State	Number of Tanks
9	Franconia Springfield Station	VA	1
10	Glenmont Rail Yard	MD	2
11	Greenbelt Rail Yard	MD	2
12	Landover Bus Division	MD	9
13	Montgomery Bus Division	MD	9
14	New Carrollton Rail Yard	MD	2
15	Shady Grove Rail Yard	MD	4
16	Shepherd Pkwy Bus Division	DC	6
17	Southern Ave. Bus Division	MD	3
18	West Falls Church Rail Yard	VA	3
19	Western Bus Division	DC	7
Total:			88

Funding Source for UST Replacement

WMATA's UST replacement project includes a UST replacement contract, which is part of the environmental compliance program outlined in Capital Improvement Program (CIP)³ 0010. The objective of CIP 0010, titled "Environmental Compliance Program," is to initiate construction programs focused on environmental issues. Dedicated funds are allocated to support the contract, which aligns with IIJA's priorities of building stronger infrastructure that combats the climate crisis. As of December 2024, according to the Office of Management and Budget, WMATA has been invoiced \$389,928 under this CIP, which commenced after the award of the UST replacement contract on July 30, 2024. These costs are expected to continue to increase when WMATA receives and pays additional invoices. OIG will continue to monitor this spending as part of the IIJA requirements.

In November 2021, Congress and the President enacted IIJA.⁴ The act requires OIG to assess the effective use of funding for major capital improvement projects. The UST replacement contract falls within this assessment.

³ The CIP is designed to improve the safety of WMATA's rail, bus, and paratransit system for all customers and employees, improve the customer experience, and keep the region's infrastructure in good repair. It also outlines the source of the funds.

⁴ Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).
<https://uscode.house.gov/statutes/pl/117/58.pdf>.

Finding 1: WMATA Consistently Performed Both Preventative and Detective Controls for UST Maintenance, with Some Observations

For the audit, OIG selected a sample of six of the nineteen UST sites based on factors such as their age and location (DC, MD, VA). OIG tested preventative and detective controls⁵ for UST maintenance outlined in WMATA's UST guidance and policy to determine whether WMATA consistently maintains the USTs in accordance with the policies and regulations of the respective jurisdictions.

OIG determined that WMATA consistently performed and documented both preventative and detective controls for maintaining USTs. However, OIG noted some observations regarding UST design and replacement, operator training, succession planning, and remote connectivity. If these concerns are not addressed, USTs are potentially susceptible to a range of issues that can ultimately compromise their integrity and lead to environmental contamination.

WMATA Performed Daily and Monthly Inspections Appropriately

For six of the six UST sites sampled (32 of 32 tanks), OIG reviewed the latest daily continuous statistical leak detection (CSLD) reports.⁶ The analysis showed that all tanks passed the leak detection test; however, the report also showed that one tank that passed the leak detection test was overfilled at 100.6% volume (above the 90% EPA threshold). During OIG's site visit to examine the overfilled UST, a WMATA employee explained that the tank was filled despite being "out of service" at the time.

For all UST sites sampled (32 of 32 tanks), OIG reviewed the daily reconciliation process for the substances that are "metered."⁷ The objective of the daily reconciliation was to detect unusual changes in UST volume. If there was an abnormal variance, it was usually caused by:

- human error (90% of the time);
- an issue with the counter on the dispenser; or
- a stuck Veeder-Root Float.


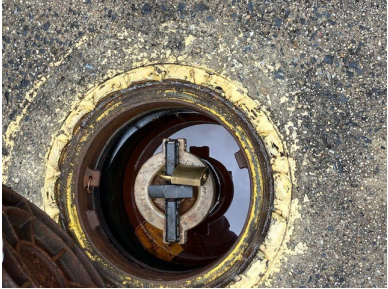

⁵ Control activities can be either preventive or detective. The main difference between preventive and detective control activities is the timing of a control activity within an entity's operations. A preventive control activity prevents an entity from failing to achieve an objective or address a risk. A detective control activity discovers when an entity is not achieving an objective or addressing a risk before the entity's operation has concluded and corrects the actions so that the entity achieves the objective or addresses the risk.

⁶ A CSLD report is a certified leak-testing technology that continuously monitors fuel height and temperature to detect idle periods in the underground storage tank and collect leak-detection data during idle time in a database.

⁷ Metered is the device used at the facility to track fuel or substance usage.

OIG reviewed the monthly environmental compliance checklists for six UST sites and confirmed that the checklists were completed. However, OIG noted one minor issue. At three of the UST sites, OIG found particles in or water collecting around UST fill ports (see Figure 1). According to the Environmental Standard Operating Procedure (ESOP), “housekeeping plays a critical role in maintaining environmental compliance.”⁸ ESOP also recognized that if “housekeeping is poor, regulators will expect more violations.”⁹ Additionally, OIG consulted with outside agencies,¹⁰ which indicated that the presence of particles or water at the UST fill port could potentially compromise the UST if not resolved within a reasonable time.

Figure 1: UST Sites that Showed Particles or Water Collection

<p>Shady Grove, MD (April 2024):</p>	<p>Glenmont, MD (May 2024):</p>	<p>West Falls Church, VA (June 2024):</p>
		

For six UST sites, OIG also reviewed the compliance and inspection testing performed for the last three years within a single five-year cycle. As required, WMATA’s compliance and inspection contractor performed the standard testing, including hydrostatic tests, vapor recovery tests, tightness tests, automatic tank gauging (ATG) system recertification, and dispenser calibration testing. OIG determined that WMATA provided sufficient documentation of the inspections and properly documented the results.

⁸ WMATA. (October 2021). *Environmental Standard Operating Procedures (ESOPs) for Environmental Compliance Officers (ECOs) Deputy Compliance Officers (DCOs) Supervisors.*

⁹ *Ibid.*

¹⁰ The outside agencies OIG spoke with were the Air Force Liquid Fuel Systems Engineer at Department of Defense (Air Force Civil Engineer Center)/DLA; Director of Office of Environment at Maryland Department of Transportation (MDOT); and Fuel Program Manager at Montgomery County Department of Transportation (MCDOT).

Observations Identified Within WMATA's UST Program

1. UST Design and Replacement Deficiencies

WMATA requires that USTs meet specific design criteria, including double-walled construction for both tanks and piping and a lifespan of 30 years to ensure they do not exceed the manufacturer's warranty. Additionally, according to EPA implementation guidance, USTs must have secondary containment, which acts as a backup for a single-walled tank. Using a single-walled tank without a backup containment barrier could allow contents to leak into the environment. However, by enclosing a UST within a second wall, any leaks can be contained and detected quickly, thereby preventing harm to the environment.

OIG reviewed the design of the USTs at six different sites. For five of six UST sites sampled (31 of 32 UST tanks), OIG determined that the tanks met WMATA's minimum design criteria. However, the remaining UST was a 42-year-old, single-walled tank, raising concerns about potential compliance and environmental risks. As OIG's audit progressed, EMAC demonstrated its commitment to addressing the issue, and on July 30, 2024, a contract was awarded to replace the 42-year-old tank at New Carrollton. Prior to the contract being awarded, EMAC explained the reasons for the delay were because of procurement personnel turnover, the construction that would be required at the UST site, and coordination with another environmental consulting services procurement for tank removal services.

OIG also identified that there are tanks nearing the end of their 30-year warranty life located in Glenmont, Four Mile Run, and Bladensburg. EMAC confirmed that a contract has already been awarded to replace the USTs at Glenmont and Bladensburg. However, the replacement contract for the Four Mile Run site has faced delays. According to EMAC officials, these delays are due to the increased coordination required with a CIP project manager from another WMATA department. The previous EMAC Manager indicated that the CIP Project Manager did not communicate project changes of the CIP to EMAC, which delayed the Four Mile Run UST replacement. If the issue is not addressed, these USTs could be at risk of leaking, potentially endangering human health and the environment, as well as resulting in penalties from federal and state agencies.

At the federal level, the consequences of failing to address these hazards may include:¹¹

- administrative action seeking compliance with any applicable EPA order and penalties of up to \$37,500 for each day of non-compliance;

¹¹ 42 U.S.C. § 6934 (2024).

- civil lawsuit seeking compliance with any applicable EPA order and penalties of up to \$7,500 for each day of non-compliance; or
- federal monitoring, testing, or analysis, as well as potential reimbursement to the federal government from WMATA for the associated costs incurred.

At the state level, the consequences may include:

- **MD:** penalties for violations can be as high as \$10,000 per day.¹²
- **VA:** penalties of not less than \$1,000 nor more than \$50,000 for the initial violation, and \$10,000 for each day of violation thereafter.¹³
- **DC:** penalties for violations start at \$4,000 for the first offense and escalate for subsequent offenses.¹⁴

2. Absence of Succession Planning

As of July 2024, the Agency launched a succession management pilot program, Metro Elevate, to maintain business continuity and fill vacancies caused by retirements. While the program has been implemented at the Agency level, EMAC—previously identified as lacking succession planning—has not yet fully adopted or operationalized the program. As a result, succession planning challenges persist within that department, and additional efforts may be necessary to ensure the program’s full integration and effectiveness.

Currently, the EMAC Environmental Engineer serves as the lead for UST compliance and inspection monitoring. He possesses the institutional knowledge and experience necessary to oversee UST monitoring and to identify the appropriate contacts for resolving the various issues that may arise with the tanks. According to the ESOP, he is designated as the primary contact for UST and AST management, as well as the point of contact for issues identified during daily and monthly UST reconciliations.

In an interview, the former EMAC Manager for Environmental Engineering referred to the Environmental Engineer as “the Contracting Officer’s Technical Representative for the contractor,” and stated that he “provides the best approach for putting a tank back in compliance,” which further underscores the critical need for appropriate succession planning for this position.

¹² *Md. Code Ann. Environment § 4-417 (2024).*

¹³ *Va. Code Ann. § 62.1-44.34:20 (2024).*

¹⁴ *20 District of Columbia Municipal Regulations (DCMR), ch. 66 (2020).*

In his own interview, the Environmental Engineer noted that “if someone were to be hired, the individual would need at least five years of UST monitoring experience” to effectively lead UST compliance efforts at WMATA.

3. UST Operator Training Deficiencies

WMATA told OIG that it follows the training requirements for initial training, retraining, and routine refresher set by the state in which the UST is located. There are also specific training requirements for UST Class A, B, and C operators (see Appendix C). However, for three of the six UST sites sampled (25 of 32 tanks), EMAC did not have appropriate documentation that operators had completed the required training:

1. **Four Mile Run (8 tanks)** – EMAC officials could not provide evidence of current annual refresher training certificates for Class C operators. The most current annual refresher training certificates provided were from July 2013. Also, OIG saw documentation that VDEQ, on or about September 2023, had previously identified to WMATA a lack of current annual refresher training certificates for Class C operators. Upon OIG follow-up, however, EMAC ensured that training was provided and gave OIG copies of refresher training certificates as of July 2024 for the Four Mile Run site.
2. **Shepherd Parkway (6 tanks)** – EMAC officials could not provide evidence of the current five-year retraining requirement certificate for Class B operators or the annual refresher training certificate for Class C operators.
3. **Bladensburg (11 tanks)** – EMAC officials could not provide evidence of the current five-year retraining requirement certificate for Class B operators or the annual refresher training certificate for Class C operators.

While there’s no centralized system to track and record training for class A, B and C operators, EMAC personnel stated that they maintain these records electronically.

4. Absence of Complete Remote Connectivity

OIG met with an engineer at the Air Force Civil Engineer Center, who follows the best practices for UST management as upheld by the Defense Logistics Agency (DLA) Energy.¹⁵ The engineer explained that UST operators can remotely view the full population of USTs using the Veeder-

¹⁵ The Air Force Civil Engineer Center, in partnership with DLA Energy, manages the maintenance and construction of USTs for the Air Force. DLA Energy provides energy to the military services, the Department of Defense, and other federal agencies at more than 4,000 locations worldwide. Additionally, it provides Unified Facilities Criteria (UFC) “lessons learned” guidance, such as for the design of petroleum fuel facilities and petroleum fuel systems maintenance for design and management of USTs.

Root system and detect any leakage by running a report for volume differences or by conducting quality checks on any alarms.

The EMAC environmental engineer is responsible for reviewing the Veeder-Root panels for compliance-related alarm conditions. However, the EMAC engineer currently has remote access only to approximately 50% of the Veeder-Root panels, which limits operational efficiency and slows response times for monitoring fuel inventory and UST conditions. EMAC also informed OIG that three UST sites at New Carrollton, Shady Grove, and Glenmont (covering eight tanks) have Veeder-Root panels linked to WMATA's network via radio antennas connected to the nearest main building, rather than through a direct link to WMATA's network. This setup complicates remote connectivity.

During this audit, EMAC promptly took steps to address the lack of remote connectivity through a request for information process. This type of process is designed to conduct market research and identify vendors capable of utilizing existing tank monitoring software or developing a WMATA-specific monitoring application in order to achieve remote monitoring of all USTs. However, EMAC has not yet issued a request for proposal, which begins the actual process to ultimately award a contract to resolve the remote monitoring issue.

5. Monthly Compliance Tracking Deficiencies

OIG reviewed the monthly environmental compliance checklists for six UST sites and confirmed that they were completed in accordance with the ESOP. However, OIG inquired whether EMAC has a procedure or tracking method to determine if issues identified in the prior month's checklist were resolved or, if not, why they remained unresolved.

On April 17, 2025, EMAC management provided OIG with an internal tracking tool (an Excel spreadsheet) that lists issues identified during monthly compliance checks along with their corresponding resolutions. Upon review, OIG identified deficiencies. Specifically, OIG was unable to reconcile the issues listed in the monthly checklists with those documented in the tracking spreadsheet.

As a result, OIG concluded that EMAC's internal tracking spreadsheet does not accurately or comprehensively track all issues identified in the monthly checklists. This increases the risk that identified issues may not be resolved in a timely or effective manner.

Recommendations

OIG recommends that the GM/CEO:

1. For maturing, but not yet matured tanks, develop detailed plans outlining the required resources, timeline, and steps for their removal and replacement. The plans should be completed within a reasonable timeframe, as determined by WMATA, and should be coordinated and prioritized in consultation with relevant stakeholders.

Management Response

WMATA will plan for UST replacements well ahead of their designed lifespans expiring. In the CAP, EMAC will identify the current age of all USTs, time left in each UST's designed lifespan, and provide detailed plans for the necessary resources, timelines, and steps for UST removal and replacement activities in coordination with relevant stakeholders.

OIG Comment

OIG considers management's comments responsive to the recommendation and the corrective actions taken should resolve the issue identified in this report. OIG will follow up on the planned actions during the corrective action plan phase.

2. Implement a formal system to record and track the training for UST Class A, B, and C operators.

Management Response

WMATA recognizes the importance of formalizing a tracking system and is currently assessing options to improve documentation and oversight for all categories of operator training. The CAP will detail the system outlining the training and tracking methods, relevant standard operating procedures (SOPs), as well as review schedules that will prompt training prior to any potential lapses.

OIG Comment

OIG considers management's comments responsive to the recommendation and the corrective actions taken should resolve the issue identified in this report. OIG will follow up on the planned actions during the corrective action plan phase.

3. Create comprehensive desk procedures documenting the EMAC environmental engineer's responsibilities and the complex UST issues that could arise, to facilitate knowledge transfer and ensure continuity in the event of staff turnover.

Management Response

EMAC will develop desk procedures in detail to document the environmental engineer's responsibilities and the types of issues related to USTs that can arise. This preparation aims to transfer that knowledge to other staff in case of turnover. The CAP will identify appropriate EMAC staff to collaborate with the Manager of Environmental Engineering in carrying out this activity and plan for future knowledge transfer.

OIG Comment

OIG considers management's comments responsive to the recommendation and the corrective actions taken should resolve the issue identified in this report. OIG will follow up on the planned actions during the corrective action plan phase.

4. Assess whether to implement a complete remote connectivity system that can monitor the following:
 - tank fuel inventory using automatic gauging systems;
 - tank fuel delivery amounts and dates;
 - alarm conditions; and
 - leak detection information for these tank systems.

Management Response

WMATA issued a Request for Information (RFI) through its Procurement Office to several potential vendors/contractors on March 26, 2025. This assessment aims to evaluate the feasibility of complete remote connectivity for USTs. EMAC will document in the CAP the RFI findings and identify any additional information needed to complete the assessment. Once the assessment is finished, we will document its findings and recommendations in a technical memorandum, outlining steps and timelines for improvements to remote connectivity.

OIG Comment

OIG considers management's comments responsive to the recommendation and the corrective actions taken should resolve the issue identified in this report. OIG will follow up on the planned actions during the corrective action plan phase.

5. Establish an oversight mechanism to ensure that all UST-related observations identified in the monthly compliance checklists are accurately recorded in the centralized tracking spreadsheet. This mechanism should include a formal reconciliation process between the checklists and the tracking spreadsheet to confirm that all issues are captured and resolved in a timely manner.

Management Response

WMATA will enhance the tracking of UST-related observations in the centralized tracking spreadsheet. EMAC staff will provide additional oversight to address these observations. EMAC staff will flag any UST-related observations in the monthly compliance checklists for independent review and formal reconciliation. Each month, they will provide the relevant checklists and corresponding spreadsheet entries to the reviewer. When closing any UST-related observation in the tracking spreadsheet, they will repeat the reconciliation process. These enhancements will be described in the CAP and ensure accurate tracking and resolution of observations made during monthly checklists.

OIG Comment

OIG considers management's comments responsive to the recommendation and the corrective actions taken should resolve the issue identified in this report. OIG will follow up on the planned actions during the corrective action plan phase.

Finding 2. Insufficient Physical Security Controls of USTs

Various WMATA departments are responsible for security controls related to USTs. Based on the audit, OIG identified weaknesses in some controls, specifically regarding the security locking of USTs. OIG found that WMATA has not always followed its policy to lock all UST fill ports and monitor all deliveries. These lapses in compliance increase the risk of theft and may require an emergency cleanup if contamination occurs due to the failure to secure the fill port.

WMATA did not meet its own security controls for locking USTs and monitoring fuel deliveries. According to WMATA's policy,¹⁶ Class B or C operators should:

- **Secure and Lock USTs:** Ensure tank vent areas are clean and dry. Secure and lock the UST metal lid located just above the fill port with an outdoor-rated, keyed padlock. If the metal lid is in disrepair or not present, the tank fill port must be double padlocked until repair or replacement can be performed. Metal lids or fill port caps will remain padlocked unless there is a delivery in progress, active inspection, or maintenance occurring. (Section 7.1.2.13).
- **Monitor Deliveries:** The WMATA personnel receiving the delivery must monitor the entire delivery process to include witnessing the before and after stick readings to ensure they match what is documented on the delivery ticket. (Section 7.1.2.4)

At four of seven UST sites (five of 36 tanks), the tanks were not secured and locked (see Figure 2). Unlocked tanks can potentially be pilfered or tampered with.

¹⁶ BUSV-BMNT-SOP-2.05-11: Bulk Product and Tank Inventory Management. (August 12, 2024).

Figure 2: Examples of Unlocked Tanks

<p>Shady Grove, MD (April 2024):</p>	<p>New Carrollton, MD (May 2024):</p>	<p>Shepherd Parkway, DC (May 2024):</p>
		

At one of the two “unmanned” sites we visited (two of six tanks), there was no WMATA escort or chaperone present, as required, to witness the “before” and “after” stick readings during deliveries. (see Figure 3). WMATA personnel informed OIG about a past incident where a fuel vendor, left unaccompanied, mistakenly put the wrong fuel into a UST tank at Bladensburg. The Fleet personnel also said that the fuel vendor paid to clean the tank. This is significant because cleaning the tank incurred additional costs, and the incorrect fuel could have damaged the UST. Without a WMATA escort on-site, the risks increase for fuel overfill, inaccurate stick readings, vapor emissions, and spills.

Figure 3: Example of no WMATA Escort During Fuel Delivery (Shady Grove - April 2024)



Recommendations

OIG recommends that the GM/CEO:

6. Conduct recurring training sessions for all relevant staff to reinforce and institutionalize proper fuel delivery and tank management practices. Training should emphasize the importance of securing UST fill ports and adhering to established security protocols. Establish and provide written guidelines and checklists to reinforce best practices.

Management Response

WMATA will review and reinforce existing standard operating procedures (SOPs) and training materials for staff with responsibilities for UST management practices. We will enhance relevant procedures and training as much as possible to emphasize the critical nature of securing fill ports, overseeing fuel deliveries, and following security requirements. We will identify in the CAP the procedures and training materials to be reviewed and enhanced and establish a timeline for completing and implementing improvements into staff training.

OIG Comment

OIG considers management's comments responsive to the recommendation and the corrective actions taken should resolve the issue identified in this report. OIG will follow up on the planned actions during the corrective action plan phase.

Scope

The scope of the audit is WMATA's 80+ underground storage tanks at bus and rail facilities to fuel and lubricate non-revenue vehicles, track equipment, generators, and buses.

Methodology

To achieve the audit objective, OIG's audit methodology was as follows:

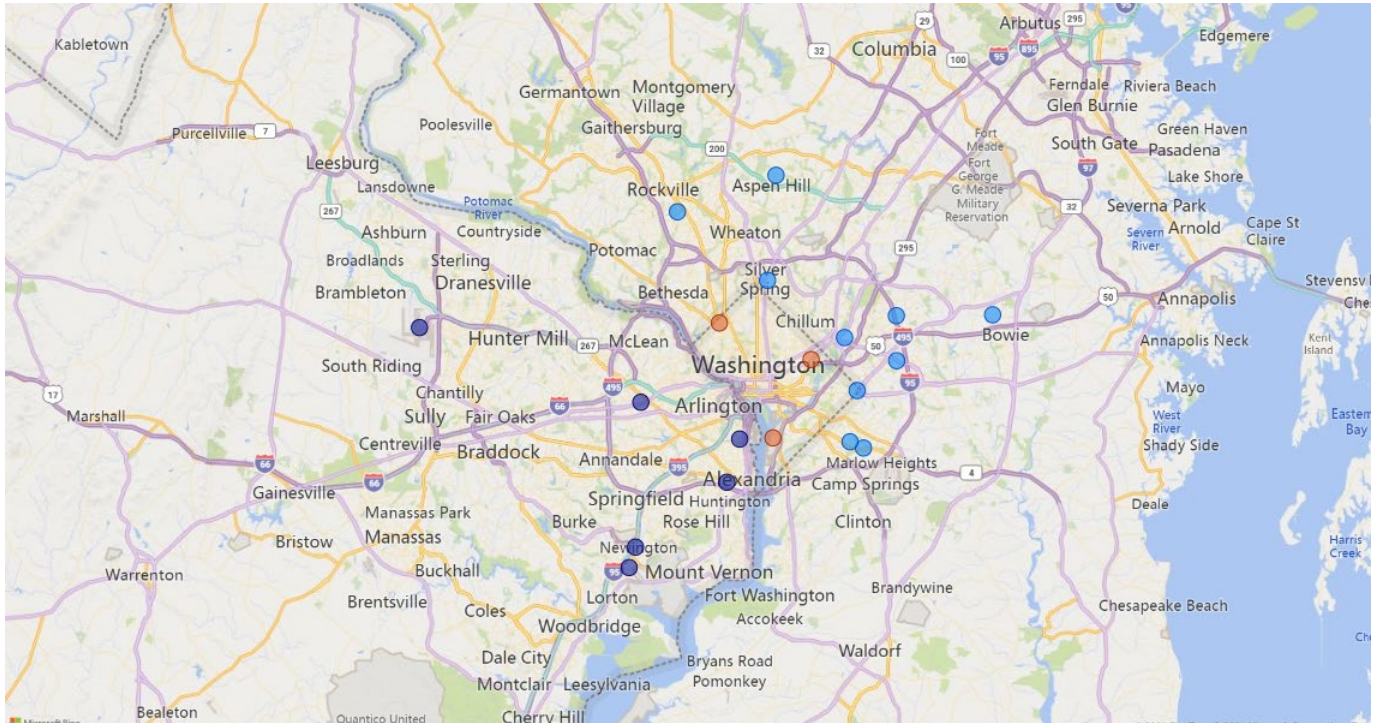
- Researched background information about WMATA's underground storage tanks by reviewing UST federal and state regulations & guidance, WMATA's environmental policies, and prior audits prepared by OIG, Audit & Compliance, and other transit agencies.
- Performed interviews, walkthroughs, and follow-up discussions with WMATA personnel at various departments to understand WMATA's underground storage tanks processes and documented the discussions.
- Performed interviews with external agencies to obtain their insight, best practices, and background on their underground storage tanks process.
- Identified and documented entity and process internal controls for WMATA's underground storage tanks through narrative, flow chart, and risk control matrices.
- Obtained the entire population of underground storage tanks and selected a sample of WMATA's USTs. The sample was judgmentally selected based on age of the USTs, age of the piping of the USTs, and jurisdiction of the USTs (MD, DC, and VA).
- For a sample of WMATA UST site locations, tested internal controls for design, training and operator requirements, UST preventative and operational maintenance, and security.
- Performed site visits of UST site locations as part of internal controls testing. The site visits included observing UST sites before, during, and after, contractor fuel deliveries. We made observations of the UST site and procedures followed by WMATA and Contractor Personnel.
- Documented internal controls testing performed and other observations identified for the work papers and for audit reporting.

Generally Accepted Government Auditing Standards (GAGAS) Statement

We conducted this performance audit 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.

WMATA UST Site Map



WMATA UST Map ● Maryland ● Virginia ● Washington, D.C.

Federal Operator Training – Minimum Training Requirements:

- Class A Operator Training: Each designated Class A operator must either be trained or pass a comparable examination that provides general knowledge requirements.
- Class B Operator Training: Each designated Class B operator must either be trained or pass a comparable examination about the regulatory requirements and typical equipment used at UST facilities; or site-specific requirements which address only the regulatory requirements.
- Class C Operator Training: Each designated Class C operator must either: be trained by a Class A or Class B operator; complete a training program; or pass a comparable examination.
- Retraining: Class A and B operators at UST systems determined to be out of compliance must be retrained within 30 days of the determination of noncompliance. For retraining, the training program or comparable examination must be developed or administered by an independent organization, the implementing agency, or a recognized authority. Retraining must, at a minimum, cover those areas found to be out of compliance. Retraining is not required if:
 - Class A and B operators take annual refresher training.
 - The implementing agency waives retraining.

Maryland UST Operator Training Program Requirements:

- Class A Operator Training: Class A operator training program must, at a minimum, provide general knowledge.
- Class B Operator Training: Class B operator training program must, at a minimum, cover either: General requirements that encompass all regulatory requirements and typical equipment used at a regulated substance storage facility.
- Class C Operator Training: A certified Class A operator or a certified Class B operator designated for a regulated substance storage facility shall train each individual designated as a Class C operator for the same regulated substance storage facility.

Virginia UST Operator Training Program Requirements:

Operator training requirements ensure that tank owners and operators understand the UST requirements and how to respond in the event of an emergency. Each UST facility must have a designated Class A, Class B, and Class C operator.

Generally, tank owners and operators should:

- Designate Class A, Class B, and Class C operators for each facility.
- Obtain UST operator training for all classes of operators.
- Keep on file the Class Designations and Certificates of Training for each trained operator for VDEQ staff review upon inspection.
- Conduct annual refresher training for all Class C operators.
- Ensure the emergency notification procedures are stored in a known location at the facility or posted if the facility is unmanned.

VDEQ may require retraining if a facility is not meeting the UST requirements.

DC UST Operator Training Program Requirements:

- Class A or B Operators: Develop a training curriculum and materials that meet the district's requirements for training Class A and/or B operators. Upon completion of the training, participants must pass an examination to become certified UST A/B operators. Retraining is required every five years. (Note: DOEE Regulation requires retraining within a "reasonable time." Third-party vendors who train DC Class A and B operators, recommend that retraining take place every 5 years.)
- Required training for Class C Operators: Class A or B operators may provide training to Class C operators, or this may be done by an external training provider. At a minimum, training provided by the Class A or B operator shall enable the Class C operator to take action in response to emergencies or alarms caused by spills or releases from a UST system. Training shall include written instructions or procedures for the Class C operator to follow and to provide notification necessary in the event of emergency conditions. After the initial training, Class C operators shall be briefed by the Class A or B operator, on these instructions or procedures at least annually (every 12 months).

Management's Response



M E M O R A N D U M

SUBJECT: OIG Audit Report: Audit of WMATA's Underground Storage Tanks DATE: May 2, 2025

FROM: Executive Vice President and Chief Safety Officer – Theresa Impastato Theresa M Impastato Digitally signed by Theresa M Impastato Date: 2025.05.02 09:45:14 -0400

TO: Office of Inspector General – Michelle Zamarin

On April 25, 2025, the Office of Inspector General (OIG) distributed its final report titled, "Audit of WMATA's Underground Storage Tanks". Based on the audit's findings, six recommendations were presented for WMATA's underground storage tank (UST) operation, maintenance and management program. WMATA's Office of Environmental Management and Compliance (EMAC) oversees the UST program in collaboration with staff from the Offices of Fleet, Track and Structures, and Metro Transit Police. WMATA appreciates OIG's commitment to driving positive outcomes and improvements through its Findings and Recommendations, and WMATA is equally committed to acting on them. To this end, EMAC will lead the development of a Corrective Action Plan (CAP) for implementing each of OIG's Recommendations. The CAP will be developed within 60 days of this memorandum, and provide detailed steps to be taken and timelines for completion to address each of OIG's recommendations.

- 1) **For maturing, but not yet matured tanks, develop detailed plans outlining the required resources, timeline, and steps for their removal and replacement. The plans should be completed within a reasonable timeframe, as determined by WMATA, and should be coordinated and prioritized in consultation with relevant stakeholders.**

Response: WMATA will plan for UST replacements well ahead of their designed lifespans expiring. In the CAP, EMAC will identify the current age of all USTs, time left in each UST's designed lifespan, and provide detailed plans for the necessary resources, timelines, and steps for UST removal and replacement activities in coordination with relevant stakeholders.

- 2) **Implement a formal system to record and track the training for UST Class A, B, and C operators.**

Response: WMATA recognizes the importance of formalizing a tracking system and is currently assessing options to improve documentation and oversight for all categories of operator training. The CAP will detail the system outlining the training and tracking methods, relevant standard operating procedures (SOPs), as well as review schedules that will prompt

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training prior to any potential lapses.

- 3) **Create comprehensive desk procedures documenting the EMAC environmental engineer's responsibilities and the complex UST issues that could arise, to facilitate knowledge transfer and ensure continuity in the event of staff turnover.**

Response: EMAC will develop desk procedures in detail to document the environmental engineer's responsibilities and the types of issues related to USTs that can arise. This preparation aims to transfer that knowledge to other staff in case of turnover. The CAP will identify appropriate EMAC staff to collaborate with the Manager of Environmental Engineering in carrying out this activity and plan for future knowledge transfer.

- 4) **Assess whether to implement a complete remote connectivity system that can monitor the following:**

- Tank fuel inventory using automatic gauging systems;
- Tank fuel delivery amounts and dates;
- Alarm conditions; and,
- Leak detection information for these tank systems.

Response: WMATA issued a Request for Information (RFI) through its Procurement Office to several potential vendors/contractors on March 26, 2025. This assessment aims to evaluate the feasibility of complete remote connectivity for USTs. EMAC will document in the CAP the RFI findings and identify any additional information needed to complete the assessment. Once the assessment is finished, we will document its findings and recommendations in a technical memorandum, outlining steps and timelines for improvements to remote connectivity.

- 5) **Establish an oversight mechanism to ensure that all UST-related observations identified in the monthly compliance checklists are accurately recorded in the centralized tracking spreadsheet. This mechanism should include a formal reconciliation process between the checklists and the tracking spreadsheet to confirm that all issues are captured and resolved in a timely manner.**

Response: WMATA will enhance the tracking of UST-related observations in the centralized tracking spreadsheet. EMAC staff will provide additional oversight to address these observations. EMAC staff will flag any UST-related observations in the monthly compliance checklists for independent review and formal reconciliation. Each month, they will provide the relevant checklists and corresponding spreadsheet entries to the reviewer. When closing any UST-related observation in the tracking spreadsheet, they will

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repeat the reconciliation process. These enhancements will be described in the CAP and ensure accurate tracking and resolution of observations made during monthly checklists.

- 6) **Conduct recurring training sessions for all relevant staff to reinforce and institutionalize proper fuel delivery and tank management practices. Training should emphasize the importance of securing UST fill ports and adhering to established security protocols. Establish and provide written guidelines and checklists to reinforce best practices.**

Response: WMATA will review and reinforce existing standard operating procedures (SOPs) and training materials for staff with responsibilities for UST management practices. We will enhance relevant procedures and training as much as possible to emphasize the critical nature of securing fill ports, overseeing fuel deliveries, and following security requirements. We will identify in the CAP the procedures and training materials to be reviewed and enhanced and establish a timeline for completing and implementing improvements into staff training.

cc: Senior Executive Team
Vice President and Chief Risk and Audit Officer - Elizabeth Sullivan

To Report Fraud, Waste, or Abuse

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