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DRUG TESTING

Undercover Tests Reveal Significant Vulnerabilities in DOT's Drug Testing Program

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Highlights

Highlights of GAO-08-225T, a testimony before the Subcommittee on Highways and Transit, Committee on Transportation and Infrastructure, House of Representatives

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Why GAO Did This Study

To help prevent accidents resulting from drug use by individuals in safety-sensitive positions, the Department of Transportation (DOT) requires motor carriers to conduct drug testing of their employees. These drug tests involve collecting a urine specimen from employees. To ensure the integrity of the urine specimen and the collection process, DOT regulations provide numerous protocols that outline collection procedures and identify controls to prevent employees from defeating a drug test.

Recent media accounts indicate that some sites performing DOT drug test collections may not be adhering to the collection protocols. Moreover, given the different techniques a drug user may employ in an attempt to defeat a drug test, it is possible that a commercial truck driver could defeat a drug test by diluting, substituting, or adulterating a urine specimen in order to obtain a passing result. GAO was asked to perform an undercover operation to determine whether (1) urine collectors followed DOT protocols at selected collection sites and (2) commercially available products could be used to defeat drug tests.

To perform this undercover operation, GAO created two fictitious trucking companies and produced bogus driver's licenses. GAO investigators then posed as truck drivers to test 24 collection sites throughout the United States. GAO briefed DOT officials on its results and they agreed with the findings.

To view the full product, including the scope and methodology, click on GAO-08-225T. For more information, contact Gregory Kutz at (202) 512-6722 or kutzg@gao.gov.

What GAO Found

DOT's drug testing program is vulnerable to manipulation by drug users, especially given the wide availability of products designed to defeat drug tests. While all urine collection sites followed DOT protocols by asking GAO undercover investigators to provide identification, investigators successfully used bogus driver's licenses to gain access to all 24 sites—demonstrating that a drug user could send someone to take a drug test in their place using fake identification. In addition, 22 of the 24 selected urine collection sites did not adequately follow the remaining protocols GAO tested. For example, 75 percent of the urine collection sites GAO tested failed to restrict access to items that could be used to adulterate or dilute the specimen, meaning that running water, soap, or air freshener was available in the bathroom during the test. The table below provides information about the high failure of selected protocols for the 24 collection sites tested.

Failure Rates for Selected DOT Protocols GAO Tested

Selected DOT urine specimen collection protocol	Percentage of the 24 collection sites that failed
Secure the facility from all substances that could be used to adulterate or dilute the specimen	75
Secure all sources of water in the restroom	67
Ask the employee to empty his/her pockets and display items to ensure no items are present that could be used to adulterate the specimen	42
Check the temperature of the specimen	19
Place a bluing agent in the toilet or secure it with tape	17

Source: GAO.

GAO also found that drug masking products such as adulterants, dilutants, and substitutes were widely available on the Internet. After purchasing drug masking products from Web sites, GAO investigators used adulterants at four of the collection sites and substitute synthetic urine at another four sites without being caught by site collectors—demonstrating that these products could easily be brought into a collection site and used during a test. Even in one case where a collection site followed all DOT collection protocols regarding administration of the test, investigators were still able to substitute synthetic urine for their sample. Every drug masking product went undetected by the drug screening labs. Provided the adulterant GAO used would be able to mask drug use as advertised, a drug user would likely be able to use the substances GAO tested to obtain a passing result on his or her test. According to officials GAO interviewed at the Substance Abuse and Mental Health Services Administration (SAMHSA), companies that make drug-masking products are aware of government test standards and devise products that prevent laboratories from detecting them. SAMHSA is required to provide information to laboratories on how to test the validity of the urine specimens, publicly providing detailed information on lab testing procedures on its Web site.

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to discuss our undercover operation to test Department of Transportation (DOT) drug testing regulations as they relate to commercial truck drivers. According to DOT, its regulations implement the world's largest drug and alcohol testing program covering six DOT operating administrations and over 12.1 million employees in the United States, including school bus drivers, commercial truck drivers transporting hazardous materials, and airline pilots. We focused our efforts on the DOT drug testing program for commercial truck drivers, which DOT considers to be a safety-sensitive transportation position. If an employee in a safety-sensitive transportation position were using controlled substances such as marijuana, cocaine, or phencydidine (PCP), a clear public safety risk would exist.

To help prevent accidents resulting from drug use by individuals holding safety-sensitive positions, federal law requires motor carriers to drug test their employees.[1] Motor carriers in the United States are responsible for conducting the drug testing of their employees and can use third-party administrators to help them coordinate the drug tests. Drug tests involve collecting a urine specimen from the employee at a collection site. As long as the collection site meets the requirements of DOT's regulations, urine collection can be performed at sites across the nation, in addition to being performed onsite at an employer's facilities. DOT regulations contain numerous control measures intended to ensure the integrity of the urine specimen and the collection process during these tests. However, a drug using employee may attempt to defeat a drug test using techniques commonly known as substitution, dilution, and adulteration. To prevent an employee from defeating the drug test, DOT regulations mandate that collection sites follow certain protocols, for instance:

- DOT protocols require collectors to validate that an employee is carrying photo identification before the test. This is designed to prevent an employee from having somebody else take the test for him or her, which is one form of *substitution*.

- DOT protocols require collectors at drug testing sites to ensure that no clear water source is available in the collection area, among other measures, to prevent an employee from using water in the bathroom to *dilute* their urine specimen.

[1] 49 U.S.C. § 31306.

- DOT protocols specify that employees should not be able to access soap, air freshener, or other chemicals to prevent them from using these products to *adulterate* a urine specimen. Other DOT protocols designed to prevent adulteration require employees to empty their pockets and wash their hands before providing the specimen.

Recent media accounts indicate that some private sector collection sites performing DOT drug test collections may not be adhering to established collection protocols. Moreover, given the different techniques a drug user may employ in an attempt to defeat a drug test, it is possible that a commercial truck driver could defeat a drug test by diluting, substituting, or adulterating a urine specimen in order to obtain a passing result. You asked us to perform an undercover operation to determine whether (1) urine collectors followed DOT protocols at selected collection sites and (2) commercially available products could be used to defeat drug tests.

To determine whether urine collectors followed DOT protocols at selected publicly advertised urine collection sites, we created two fictitious trucking companies. Since our focus was on commercial truck drivers, we produced bogus commercial driver's licenses using computer software and hardware available to the public. Our investigators then posed as commercial truck drivers employed at the fictitious companies. We also used the fictitious company names to hire third-party administrators (TPA) to help us coordinate the drug tests by recommending collection sites and processing the required paperwork. Our undercover investigators then reported to urine collection sites pretending they had been selected by their company to receive a drug test and submitted urine specimens. The specimens were sent to the drug testing laboratories by the collection sites, and through our TPA we were able to access the laboratory results of our drug tests. We selected 24 publicly advertised urine collection sites to test four major geographic areas throughout the United States, including 6 urine collection sites in the Washington, D.C., metropolitan area and 6 in each of the following three areas—Los Angeles, New York/Northern New Jersey, and Dallas/Fort Worth. We chose the Washington, D.C., area because of its size and for reasons of convenience and economy, and the other three areas due to the large number of truck drivers residing within each area.[2] At each urine collection site we tested 16 specific DOT protocols which we determined, based on our research, to be the most critical in preventing an employee from defeating a drug test.

[2]According to the U.S. Department of Labor, Bureau of Labor Statistics.

Investigators brought mobile phones with photographic capability into the collection sites to photograph any breaches of protocol they observed.

To determine whether commercially available products could be used to defeat drug tests, we researched products available to mask drug use by conducting Internet searches, reviewing prior GAO reports, and interviewing knowledgeable government officials.[3] We then purchased adulterants and substitute synthetic urine over the Internet and used them in an attempt to defeat 8 out of the 24 drug tests. We did not test any commercially available dilutants or use dilutants we found in the collection area (e.g., tap water). While synthetic urine requires complete substitution, adulterants were mixed with the urine specimen our investigators provided. It is therefore important to note that since our investigators' urine specimens did not contain traces of drug use, we cannot report on whether the adulterants we used were able to mask drug use—only on whether the laboratories could detect the presence of the adulterant. We assumed that a drug user could receive a passing result as long as the laboratories did not detect the presence of the synthetic urine. It is not possible to generalize the results of our undercover testing to apply to all collection sites or to all drug-masking products.

We conducted this investigation from May to September 2007 in accordance with standards prescribed by the President's Council on Integrity and Efficiency.

Summary

While all urine collection sites followed DOT protocols by asking our undercover investigators to provide identification, we successfully used bogus driver's licenses to gain access to all 24 sites—demonstrating that a drug user could send someone to take a drug test in their place using fake identification. In addition, 22 of the 24 selected urine collection sites did not adequately follow the remaining protocols we tested. For example, 75 percent of the 24 urine collection sites we tested failed to restrict access to items that could be used to adulterate or dilute the specimen, meaning that running water, soap, or air freshener was available in the bathroom during the test. Table 1 provides information about the high failure of selected protocols for the 24 collection sites tested.

[3]GAO, *Products to Defeat Drug Use Screening Tests Are Widely Available*, GAO-05-653T (Washington, D.C.: May 17, 2005).

Table 1: Failure Rates for Selected DOT Protocols GAO Tested

Selected DOT collection protocol	Percentage of the 24 collection sites that failed
Secure the facility from all substances that could be used to adulterate or dilute the specimen	75
Secure all sources of water in the restroom	67
Ask the employee to empty his/her pockets and display items to ensure no items are present that could be used to adulterate the specimen	42
Check the temperature of the specimen	19
Place a bluing agent in the toilet or secure it with tape	17

Source: GAO.

We also determined that drug-masking products, such as adulterants, dilutants, and substitutes, were widely available on the Internet. After purchasing drug-masking products from Web sites, we used adulterants at four of the collection sites and substitute synthetic urine at another four sites without being caught by site collectors—demonstrating that these products could easily be brought into a collection site and used during a test. Even in one case where a collection site followed all DOT collection protocols regarding administration of the test, we were still able to substitute synthetic urine for our specimen. Every drug-masking product went undetected by the drug screening labs. Provided the adulterant we used would be able to mask drug use as advertised, a drug user would likely be able to use the substances we tested to obtain a passing result on his or her test. According to officials we interviewed at the Substance Abuse and Mental Health Services Administration (SAMHSA), companies that make drug-masking products are aware of government test standards and devise products that prevent laboratories from detecting them.

We briefed DOT officials on the results of our work and they agreed with our findings. We will provide DOT with a referral letter that specifies the geographic areas and collection site names for those sites that we determined had failures in protocols.

Background

Six operating administrations under DOT have issued regulations requiring antidrug programs in the aviation, highway, railroad, mass transit, pipeline, and maritime industries. Antidrug programs for commercial truck drivers are regulated by the Federal Motor Carrier Safety Administration (FMCSA), which is the operating administration responsible for enforcing FMCSA regulations and establishing who is tested and when they are

tested.[4] FMCSA antidrug regulations require that employers of commercial motor carriers, including those who are owner-operators, conduct drug testing according to the DOT "Procedures for Transportation Workplace Drug Testing Programs."[5] These DOT regulations mandate that motor carriers must conduct pre-employment, reasonable suspicion, random, and post-accident drug testing on their employees. While these scenarios are all different, DOT requires collectors and collection sites to follow uniform collection protocols regardless of the reason for the test. Collection sites are privately run facilities, where the collectors at the sites do not have to be certified by DOT, but must meet DOT regulations by completing the required training and following DOT protocols. Because collection sites are spread throughout the nation, it is easy for an employee in any of the drug testing scenarios, from pre-employment to post-accident drug testing, to get to a collection site within the given time frame.[6] According to DOT regulations, collection sites must promote privacy, incorporate the scientific and technical guidelines of the Department of Health and Human Services (HHS), utilize a scientifically recognized testing method, and require that specimens be labeled and secured in the presence of the tested employee to prevent tampering. To help collection sites comply with these regulations, DOT's Office of Drug and Alcohol Policy and Compliance issued revised protocols in December 2006.[7] The protocols indicate that the collector has a major role in the success of the DOT drug testing program because he or she is the one individual in the testing process with which all employees have direct, face-to-face contact. The protocols also state that the test may lose validity if the collector does not ensure the integrity of the specimen and collection process.

DOT protocols have specific requirements that collection sites must meet, including procedures to (1) prevent unauthorized access to the urine

[4]These regulations apply to those who operate commercial motor vehicles in any state and are subject to commercial drivers' license requirements under 49 CFR 382, Licencia Federal de Conductor (Mexico) requirements, or the requirements of Canadian National Safety Code.

[5]49 CFR Part 40.

[6]Post-accident drug tests must be conducted as soon as practicable, but within 32 hours of the crash, while employees required to take a random drug test must report immediately once he or she is notified.

[7]*Urine Specimen Collection Guidelines for the U.S. Department of Transportation Workplace.*

collection site; (2) prevent the tested employee or anyone else from gaining unauthorized access to the collection materials/supplies;

(3) ensure that the tested employee does not have access to items that could be used to adulterate or dilute the specimen such as soap, disinfectants, cleaning supplies, and water; and (4) ensure that the tested employee is under the supervision of a collector or appropriate site personnel at all times when permitted into the site.

To document the collection of the specimen, DOT requires that urine collection sites correctly complete the Federal Drug Testing Custody and Control Form (CCF) for every collection under the DOT drug testing program. This form is also used to document the transfer of the specimen to the HHS-approved, private sector laboratories, where the urine specimen is sent to be tested for marijuana, cocaine, amphetamines, opiates, and phencydidine (PCP) as identified by HHS regulations. It is important to note that the laboratories that test the specimen are separate entities than the urine collection sites. The collection sites must follow DOT protocols and their role is to collect the urine specimen, while the laboratories must be certified by HHS and their role is to perform the drug testing of the specimen. The laboratories are authorized to also conduct validity testing to determine if the specimen is consistent with normal human urine, whether adulterants or foreign substances are present, or if the specimen was diluted or substituted. The HHS organization, Substance Abuse and Mental Health Services Administration (SAMHSA), administers the Federal Workplace Drug Testing Program and revised the guidelines in 2004 to require that specimen validity tests be conducted on all urine specimens of federal employees due to the increase in the number of chemical adulterants that were marketed on the Internet and in certain magazines. DOT did not adopt this update in their regulations—so currently drug testing laboratories are only authorized, not required, to perform validity testing for all DOT required commercial motor carrier drug tests.

As an additional quality control check, DOT requires that a Medical Review Officer (MRO) serve as an independent, impartial authority to verify the lab results. After the results are verified, the MRO, who is a licensed physician, informs the designated company official whether the employee passed or failed the drug test. The MRO may also designate test results as *cancelled* in the case of an invalid test. An invalid test results when a drug screening lab identifies an unidentified adulterant, substitute, or abnormal physical characteristic in the specimen that prevents the lab from obtaining a valid test result. In the case of a cancelled test, the MRO conducts an interview with the employee to determine if there is a

legitimate medical reason for the result. If the MRO determines there is a legitimate medical reason, no further action is required.[8] However, if the MRO determines there is no legitimate medical reason, the employee is required to take another drug test under direct observation—effectively getting another opportunity to take the test, but without the privacy afforded previously.[9] In the case of a positive result, which is defined as a failed drug test, a supervisor or company official is required to immediately remove the employee from the job. Employees who test positive and continue to perform safety-sensitive functions and employers who permit them to do so are both subject to criminal and civil fines.

Most Collection Sites Failed to Comply with All DOT Protocols

In our tests of the selected 24 urine collection sites in four major geographic areas throughout the United States, we determined that 22 of the 24 sites showed varying degrees of failure in complying with the protocols that we tested. While all urine collection sites followed DOT protocols by asking our undercover investigators to provide identification, we successfully used bogus driver's licenses to gain access to all 24 sites—demonstrating that a drug user could send someone else to take a drug test in their place. This fact in and of itself shows that in 100 percent of our tests we successfully used a form of substitution. However, we did not count these instances as a failure of protocol because the collectors are not required to validate the identity of the employee—they are only required to ensure that an employee presents identification.

Twenty-two of the 24 tested collection sites failed to comply with many of the remaining DOT protocols we tested. In table 2, we provide a summary of the results of our testing of the 16 protocols by geographic area in the order that we tested them. The table identifies the number of protocols with which each site failed to comply.

[8]In the case of pre-employment, return-to-duty, or follow-up tests, a negative result is required.

[9]A directly observed collection procedure is the same as a routine collection with the additional requirement that an observer physically watch the employee urinate into the collection container.

Table 2: Results of Testing the 16 Protocols by Geographic Area

	Number of protocols failed					
Geographic area	**Site 1**	**Site 2**	**Site 3**	**Site 4**	**Site 5**	**Site 6**
Washington, D.C.	2	2	0	2	12	2
Los Angeles	8	5	6	2	2	3
New York/Northern New Jersey	6	4	5	3	6	5
Dallas/Fort Worth	2	5	2	4	0	2

Source: GAO.

For a summary of the protocols we tested and their rationale, see figure 1.

Figure 1: Key Collection Protocols Tested by GAO Undercover Investigators

Requirement	Rationale
1. Did the collector require the employee to provide appropriate identification?	To validate the identity of the employee
2. Did the collector ask the employee to empty his/her pockets and display items to ensure no items are present that could be used to defeat the test?	To ensure no items are present that could be used to defeat the test
3. Did the collector instruct the employee to wash his/her hands under the collector's supervision?	To ensure that the employee does not have items that he or she could use to adulterate, substitute or dilute the specimen
4. Did the collector direct the employee to provide a specimen of at least 45 ml?	To ensure the specimen contains a sufficient amount of urine—a minimum of 45mL for DOT collections
5. Did the collector direct the employee to not flush the toilet?	When the employee flushes the toilet, he or she can use the clear (un-blued) water to potentially dilute the specimen
6. Did the collector direct the employee to return with the specimen as soon as possible after voiding?	The time from urination to temperature measurement is critical and in no case shall exceed 4 minutes
7. Were all sources of water in the restroom secured?	The employee can use clear (un-blued) water to potentially dilute the specimen
8. Was bluing agent placed in the toilet or was it secured with tape?	The employee can use the clear (un-blued) water to potentially dilute the specimen
9. Did the collector check the temperature of the specimen?	If the temperature of the specimen is outside the acceptable range, it gives reason to believe that the donor may have altered or substituted the specimen
10. Was the employee allowed to place the tamper-evident seals from the Federal Drug Testing Custody and Control Form (CCF) onto the specimen bottles?	The collector, not the employee, is supposed to place the tamper-evident label/seal on the specimen bottle
11. Did the collector seal and date the specimen?	The tamper-evident seal is used to deter tampering of the specimen during transit and the specimen is dated to ensure that the urine specimen is correctly documented
12. Did the collector have the employee initial the specimen bottle seals after placing them on the bottles?	To certify that it is the specimen collected from the employee
13. Did unauthorized people have access to the collection site?	To ensure secure access and authorization of the collection site
14. Did the employee have access to the collection materials or supplies?	To avoid unauthorized access to items that could be used to adulterate or substitute the specimen
15. Did the employee have access to items that could be used to adulterate or dilute the specimen?	To avoid unauthorized access to items that could be used to adulterate or substitute the specimen
16. Was the employee under the supervision of the collector or appropriate site personnel at all times?	To ensure that all employees authorized are under the supervision of a collector or appropriate site personnel at all times when permitted into the collection site

Source: GAO.

Note: We selected these protocols from 49 CFR Part 40, “Procedures for Transportation Workplace Drug Testing Programs.”

Some of the criteria above relate to preventing the employee from having access to items at the collection site, such as water or cleaning products, which could be used to adulterate or dilute the specimen. These types of products might be detected by drug testing laboratories, however, we did not test this. We provide detail on our findings of the tested urine collection sites by area in the order of our testing below.

Washington, D.C., Metropolitan Area

In our testing of the Washington, D.C., metropolitan area we determined that, in five of the six sites tested, there were varying degrees of failure in complying with the 16 protocols. Most of the sites failed only two protocols, while site 3 did not fail any of the protocols and site 5 performed poorly by failing 12 protocols—75 percent of the protocols tested. In the case of site 5, we determined that although this collection site failed to comply with most of the protocols, the drug screening lab identified errors and cancelled the test due to the inappropriate collection process. We provide additional detail below on our experiences at three of the Washington, D.C., metropolitan area collection sites.

- **Washington D.C., Area, Site 3**: This collection site did not fail any of the protocols that we tested. However, our investigator used substitute synthetic urine he brought with him to contaminate the urine specimen during the test and the laboratory did not detect the presence of the synthetic urine.

- **Washington D.C., Area, Site 4:** At this collection site, the investigator had access to water which could be used to dilute a specimen. In addition, the investigator brought in and used an adulterant at this site and the laboratory did not detect the presence of the adulterant.

- **Washington D.C., Area, Site 5:** This site failed to comply with 12 of the 16 protocols that we tested. Although it was not one of the protocols we tested at other facilities, one of our investigators exhibited a “shy bladder” at this site and could not provide a full urine specimen of 45 mL. The collector permitted our investigator to provide half of the specimen, leave the facility, and return approximately 1 hour later—a violation of DOT protocols, which state that the employee should not be allowed to leave the collection site and should be monitored during the waiting time. When completing the collection process, the collector used half of the specimen from the original collection and half from what the investigator provided later. The drug screening lab identified this error and cancelled the test due to the inappropriate collection process.

See appendix I for a site-specific breakdown, by protocol, of the results of our testing in the Washington, D.C., metro area.

Los Angeles Area

In our testing of the Los Angeles area we determined that, of the six sites tested, there were varying degrees of failure in complying with the 16 protocols—including one site that failed 8 of the 16 protocols. Other selected sites in the Los Angeles area failed up to 5 and 6 protocols while the remaining sites failed 3 protocols or less. We provide additional detail below on our experiences at four of the Los Angeles area collection sites.

- **Los Angeles, Site 1:** The investigator was not instructed to wash his hands before providing the specimen. This could have allowed a tested employee to hide a drug-masking product in his hand when taking the test. In addition, there was no bluing agent in the toilet. That means a tested employee could have used the clear water in the toilet to dilute his or her specimen. The collector did not perform the split specimen correctly by only filling one specimen bottle.[10] The results were still valid despite the incorrect split specimen because the lab result was passing for the first specimen bottle, so according to DOT protocols a second bottle is not needed to validate a passing result.

- **Los Angeles, Site 3**: The collector did not tell our investigator that the toilet should not be flushed, allowing the employee to potentially use the clear un-blued water in the flushed toilet to dilute the specimen. In addition, the collector did not instruct the investigator to return with the specimen as soon as possible after voiding—the temperature of the specimen needs to be taken within 4 minutes in an attempt to determine whether the specimen was substituted, diluted, or adulterated. Our investigator used synthetic urine in this drug test and the laboratory was not able to detect the presence of the synthetic urine.

- **Los Angeles, Site 4:** The collector at this site asked our investigator to empty his pockets. However, he did not have to empty all of his pockets—this enabled our investigator to bring an adulterant into the collection area by hiding it in his back pocket. The laboratory did not detect the presence of the adulterant.

[10]DOT regulations require a split specimen, which entails splitting the urine specimen into two vials. The collector pours the primary specimen of at least 30 mL of urine in the first vial, and then pours at least 15 mL in the second vial. The second vial is not tested unless there is a positive result and it is needed to confirm the positive result.

- **Los Angeles, Site 6:** The collector failed to instruct our investigator to empty his pockets before providing a specimen at this site. In addition, our investigator had access to running water in the sink—this could potentially be used to dilute the specimen. The collector did not perform the split specimen correctly and only filled one specimen bottle. The results were still valid despite the incorrect split specimen because the lab result was passing for the first specimen bottle, so according to DOT protocols a second bottle is not needed to validate a passing result.

See appendix I for site-specific breakdown, by protocol, of the results of our testing in the Los Angeles area.

New York/Northern New Jersey Area

In our testing of the New York/Northern New Jersey area we determined that, of the six sites tested, collection sites failed to comply with a large number of the 16 protocols—sites 1 and 5 failed to comply with six protocols, sites 3 and 6 failed to comply with five protocols, and sites 2 and 4 failed to comply with four and three protocols, respectively. We provide additional detail below on our experiences at five of the New York/Northern New Jersey area collection sites, including photographs of the collection areas taken with mobile phone cameras.

- **New York/Northern New Jersey, Site 1:** In addition to failing to comply with five other protocols, this collection site had an adulterant (bleach) located on top of the toilet (see fig. 2).

Figure 2: Bleach Located in Collection Area in Violation of DOT Protocols

Source: GAO.

- **New York/Northern New Jersey, Site 2**: The collector failed to instruct our investigator to empty his pockets before providing a specimen at this site, making it easy for our investigator to bring an adulterant into the collection room. Moreover, the collector did not watch our investigator to see whether he washed his hands before providing the specimen. The bathroom had liquid soap and liquid cleaning products available in the collection area. Our investigator used an adulterant he brought with him to contaminate the urine specimen during the test. The laboratory did not detect the presence of the adulterant.

- **New York/Northern New Jersey, Site 4:** The collector failed to instruct our investigator to empty his pockets before providing a specimen at this site, making it easy for our investigator to bring synthetic urine into the collection room. In addition, the bathroom had water and disinfectant spray available in the collection area. The laboratory did not detect the presence of the synthetic urine.

- **New York/Northern New Jersey, Site 5:** The collector did not supervise our investigator in the collection site. While the collector remained in one room, he told our investigator to use a bathroom

located down an adjoining hallway. According to DOT protocols, a tested employee should be supervised at all times during the collection process.

- **New York/Northern New Jersey, Site 6:** Our investigator was unsupervised at the collection site, allowing him to identify cleaning products outside the collection room that could be used as adulterants, pick up a large can of disinfectant, and bring it with him into the collection room. Our investigator took pictures of this violation using a mobile phone camera. Figure 3 shows the disinfectant spray and other adulterants outside the collection room.

Figure 3: Adulterants Located Outside a Collection Room in Violation of DOT Protocols

Source: GAO.

In figure 4, the investigator has brought the disinfectant with him into the collection room and placed it next to his urine specimen on the toilet.

Figure 4: Adulterant Moved into Collection Room

Source: GAO.

See appendix I for a site-specific breakdown, by protocol, of the results of our testing in the New York/Northern New Jersey area.

Dallas/Fort Worth Area

In our testing of the Dallas/Fort Worth area we determined that, in five of the six sites tested, there were varying degrees of failure in complying with the 16 protocols. Many of the sites failed 2 protocols, while site 2 failed 5, site 4 failed 4, and site 5 did not fail any of the protocols. We provide additional detail below on our experiences at five of the Dallas/Fort Worth area collection sites, including photographs of the collection areas taken with mobile phone cameras.

- **Dallas/Fort Worth, Site 2:** Our investigator was able to bring an adulterant into the collection site and used it to adulterate his urine specimen. While in the collection area, the investigator noticed that running water was available—in violation of DOT protocols. See figure 5.

Figure 5: Running Water in the Collection Room in Violation of DOT Protocols

Source: GAO.

After providing his urine specimen to the collector, the investigator observed that the collector only filled one specimen bottle rather than the two required under DOT's split specimen protocols. The collector threw out the remaining specimen. The laboratory did not detect the presence of the adulterant. The results were still valid despite the incorrect split specimen because the lab result was passing on the first specimen bottle, so according to DOT protocols a second bottle is not needed to validate a passing result.

- **Dallas/Fort Worth, Site 4:** The collector failed to instruct our investigator to empty his pockets before providing a specimen at this site, making it easy for our investigator to bring synthetic urine into the collection room. Once he was in the collection room, the collector instructed our investigator to leave the door completely open while providing the specimen. The collector waited outside the collection room and did not directly observe the collection; nevertheless, our investigator was able to pour synthetic urine into the provided specimen cup. The laboratory did not detect the synthetic urine.

- **Dallas/Fort Worth, Site 5**: This collection site performed well in meeting all of the DOT protocols. This site had a 15-item checklist

outlining DOT protocols hanging on the wall. Our investigator observed the technician using the checklist while conducting the collection of the urine specimen.

- **Dallas/Fort Worth, Site 6**: This collection site allowed the employee access to water by not securing the toilet lid in the collection room—leaving the employee an opportunity to use the clear un-blued water to potentially dilute the specimen. Also in the collection room was an automatic spray disinfectant on the wall. A tested employee could have used this spray to dilute or adulterate his or her specimen.

See appendix I for a site-specific breakdown, by protocol, of the results of our testing in the New York/Northern New Jersey area.

Commercially Available Products Can Defeat Drug Tests at Selected Sites

We determined that drug-masking products were widely available for purchase over the Internet and used this method to purchase adulterants and synthetic urine for our tests. As discussed above, we submitted specimens containing adulterants at four of the collection sites and at another four sites we used synthetic urine without being caught by site collectors, demonstrating that these products could easily be brought in and used during a test. In every case that investigators used adulterants or substitutes during the drug test, the drug-masking products went undetected during lab testing, lab validation, and MRO review of the labs' results. We also determined that publicly available regulations provide details on how drug testing labs test and validate urine specimens. Companies that sell drug-masking products can access this information and update their products to prevent them from being detected by the laboratory.

Products to Defeat Drug Tests Are Widely Available

In performing Internet searches, we found drug-masking products that the public can easily obtain and that are marketed as products that can be used to pass urine drug tests. A simple Internet search using a phrase such as "pass drug test" resulted in over 2 million Web site hits. We determined that these types of Web sites contained various adulterants and urine substitutes available for purchase, including accessories that would allow an employee to conceal the product on their body when taking a test. We used these types of Web sites to purchase drug-masking products for our testing of selected urine collection sites. SAMHSA is aware of these products and revised the Mandatory Guidelines for Federal Workplace Drug Testing Programs in 2004 to require that specimen validity tests be conducted on all urine specimens, noting that there was a recent increase in the number of chemical adulterants that are marketed on the Internet

and in certain magazines. DOT did not adopt this update in their regulations—so currently drug testing laboratories are only authorized, not required, to perform validity testing for all DOT required commercial motor carrier drug tests. According to SAMHSA, approximately 400 different products are available to defeat urine drug tests.

Adulterants and Synthetic Urine Used at 8 of 24 Collection Sites

We were able to easily bring drug-masking products into a collection room at every one of the eight collection sites we tested with these products. Even in cases where the collector followed DOT protocol and asked our investigator to empty his pockets, our investigators simply hid these products in their pockets and elsewhere in their clothing. At one Dallas/Fort Worth collection site discussed above, the collector instructed our investigator to leave the bathroom door completely open when providing the specimen. The collector waited outside the bathroom; nevertheless, the investigator was able to pour synthetic urine into the specimen cup undetected. Investigators determined that there is information on the Internet about concealing drug-masking products. For example, one Web site noted that "although most testing sites will require you to remove items from your pockets, it is still possible to sneak in another specimen." Even a knowledgeable government official with SAMHSA stated that, because collection protocols do not allow collectors to directly observe urination unless they are suspicious, the opportunity to substitute or adulterate a urine specimen exists.

Adulterants and Substitutes Were Not Detected by Laboratories

SAMHSA officials stated that validity tests are intended to produce accurate, reliable, and correctly interpreted test results and to decrease or eliminate opportunities to defeat drug tests. We found that none of the adulterants or synthetic urine we used were identified by the laboratories, however, we cannot confirm if the laboratories performed validity testing because under DOT regulations they are only authorized, not required, to do so. SAMHSA is required to provide information to laboratories on how to test the validity of the urine specimen and publicly provide detailed information on lab testing procedures.[11] According to a SAMHSA official with whom we spoke, companies that market masking substances periodically offer new formulations of their products to avoid detection. In fact, one Web site we located appeared to verify this claim by advertising that its product was "continuously updated and adjusted to keep up with changing technologies." Despite their sophistication and ease of use, there is no regulation prohibiting the sale of these products. Under 21 U.S.C.

[11]Under P.L. 100-71, Section 503 (July 11, 1987).

Section 863 it may be illegal to sell drug-masking products if the products are determined to be "drug paraphernalia." However, we have not found any reported federal cases in which an individual has been prosecuted for selling drug-masking products under this statute.

Corrective Action Briefing

We briefed DOT on the results of our investigation on October 1, 2007. DOT officials agreed with our findings and indicated that they were not surprised by the results of our work, stating that they have performed similar tests themselves in prior years with similar results. We agreed with DOT that we would provide a referral letter that specifies the areas and collection site names for those sites that we determined had failures in protocols. DOT added that it has already taken steps to improve the collection facilities' performance in the drug testing program. For example, officials said they have developed posters with 10 key DOT protocols to be distributed at urine collection sites. These posters are intended to help collectors follow the appropriate protocols while conducting drug tests under the DOT drug screening program.[12] DOT officials also stated that the Real ID Act could close the vulnerability we identified of using fake drivers' licenses to take the drug tests, but that, because implementation of this act is years away, there should be an interim solution.[13] Finally, regarding drug-masking products, DOT officials stated that they have continually supported legislation to ban the sale and marketing of drug-masking products.

Conclusion

Our work shows that a drug user could easily pass a DOT drug test and continue to work in his or her safety-sensitive commercial transportation job—driving children to school or transporting hazardous materials, for example. To fully address the vulnerabilities we identified, improvements will need to be made in both the design of the entire process and the ability of collection site employees to adhere to current protocols. In ongoing work, expected to be complete in May 2008, GAO is examining options to deal with these and related drug testing issues.[14]

[12]49 CFR Part 40.

[13]Real ID Act of 2005, P.L. No. 109-13, div. B (May 11, 2005).

[14]GAO, *Preliminary Information on Challenges to Ensure the Integrity of Drug Testing Programs*, GAO-08-220T (Washington, D.C.: Nov. 1, 2007).

Mr. Chairman and Members of the Subcommittee, this concludes my statement. I would be pleased to answer any questions that you may have at this time.

Contacts and Acknowledgments

For further information about this testimony, please contact Gregory D. Kutz at (202) 512-6722 or kutzg@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony. In addition to the individual named above, the individuals who made major contributions to this testimony were John Ryan Assistant, Director; Verginie Amirkhanian; Shafee Carnegie; Paul Desaulniers; Matthew Harris; Jason Kelly; Jeffrey McDermott; and Andrew McIntosh.

Appendix I: Results of Undercover Testing in Four Metropolitan Areas of the United States

The following four tables present a site-specific breakdown, by protocol, of our undercover test results. We provide these tables in the order of our testing. Our investigators used a data collection instrument to track the compliance of collectors at each site. An "unknown" result means that investigators could not determine whether the collection site failed to comply with the particular protocol because it was not observed.

Washington, D.C., Metropolitan Area

Table 3 provides our findings for the Washington, D.C., metropolitan area, which is the first area where we tested the 16 key collection protocols.

Table 3: Washington, D.C., Undercover Test Results

Protocol	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Did the collector require the employee to provide appropriate identification?	✓	✓	✓	✓	✓	✓
Did the collector ask the employee to empty his/her pockets and display items to ensure no items are present that could be used to defeat the test?	✓	✓	✓	✓	**Fail**	✓
Did the collector instruct the employee to wash his/her hands under the collector's supervision?	✓	✓	✓	✓	**Fail**	✓
Did the collector direct the employee to provide a specimen of at least 45 mL?	✓	✓	✓	✓	✓	✓
Did the collector direct the employee to not flush the toilet?	✓	✓	✓	✓	**Fail**	✓
Did the collector direct the employee to return with the specimen as soon as possible after voiding?	✓	✓	✓	✓	**Fail**	✓
Were all sources of water in the restroom secured?	**Fail**	**Fail**	✓	**Fail**	**Fail**	**Fail**
Was bluing agent placed in the toilet or was it secured with tape?	✓	✓	✓	✓	**Fail**	✓
Did the collector check the temperature of the specimen?	**Unknown**	**Unknown**	✓	✓	**Fail**	**Unknown**
Was the employee allowed to place the tamper-evident seals from the CCF onto the specimen bottles?	✓	✓	✓	✓	✓	✓
Did the collector seal and date the specimen?	✓	✓	✓	✓	**Fail**	**Fail**
Did the collector have the employee initial the specimen bottle seals after placing them on the bottles?	✓	✓	✓	✓	**Fail**	✓
Did unauthorized people have access to the collection site?	✓	✓	✓	✓	✓	✓
Did the employee have access to the collection materials or supplies?	✓	✓	✓	✓	**Fail**	✓
Did the employee have access to items that could be used to adulterate or dilute the specimen?	**Fail**	**Fail**	✓	**Fail**	**Fail**	✓
Was the employee under the supervision of the collector or appropriate site personnel at all times?	✓	✓	✓	✓	**Fail**	✓
Number of protocols failed	**2**	**2**	**0**	**2**	**12**	**2**

Source: GAO.

Los Angeles Metropolitan Area

Table 4 provides our findings for the Los Angeles metropolitan area, which is the second area where we tested the 16 key collection protocols.

Table 4: Los Angeles Undercover Test Results

Requirement	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Did the collector require the employee to provide appropriate identification?	✓	✓	✓	✓	✓	✓
Did the collector ask the employee to empty his/her pockets and display items to ensure no items are present that could be used to defeat the test?	**Fail**	✓	✓	✓	✓	**Fail**
Did the collector instruct the employee to wash his/her hands under the collector's supervision?	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	✓
Did the collector direct the employee to provide a specimen of at least 45 mL?	✓	✓	✓	✓	✓	✓
Did the collector direct the employee to not flush the toilet?	**Fail**	✓	**Fail**	✓	✓	✓
Did the collector direct the employee to return with the specimen as soon as possible after voiding?	**Fail**	**Fail**	**Fail**	✓	✓	✓
Were all sources of water in the restroom secured?	**Fail**	**Fail**	✓	✓	✓	**Fail**
Was bluing agent placed in the toilet or was it secured with tape?	**Fail**	**Fail**	**Fail**	✓	✓	✓
Did the collector check the temperature of the specimen?	✓	✓	✓	✓	**Fail**	✓
Was the employee allowed to place the tamper-evident seals from the CCF onto the specimen bottles?	✓	✓	✓	✓	✓	✓
Did the collector seal and date the specimen?	✓	✓	✓	✓	✓	✓
Did the collector have the employee initial the specimen bottle seals after placing them on the bottles?	**Fail**	✓	**Fail**	**Fail**	✓	✓
Did unauthorized people have access to the collection site?	✓	✓	✓	✓	✓	✓
Did the employee have access to the collection materials or supplies?	✓	✓	✓	✓	✓	✓
Did the employee have access to items that could be used to adulterate or dilute the specimen?	**Fail**	**Fail**	**Fail**	✓	✓	**Fail**
Was the employee under the supervision of the collector or appropriate site personnel at all times?	✓	✓	✓	✓	✓	✓
Number of protocols failed	**8**	**5**	**6**	**2**	**2**	**3**

Source: GAO.

New York/Northern New Jersey Metropolitan Area

Table 5 provides our findings for the New York/Northern New Jersey metropolitan area, which is the third area where we tested the 16 key collection protocols.

Table 5: New York/Northern New Jersey Undercover Test Results

Requirement	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Did the collector require the employee to provide appropriate identification?	✓	✓	✓	✓	✓	✓
Did the collector ask the employee to empty his/her pockets and display items to ensure no items are present that could be used to defeat the test?	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**
Did the collector instruct the employee to wash his/her hands under the collector's supervision?	**Fail**	**Fail**	**Fail**	✓	✓	✓
Did the collector direct the employee to provide a specimen of at least 45 mL?	✓	✓	**Fail**	✓	✓	✓
Did the collector direct the employee to not flush the toilet?	✓	✓	✓	✓	✓	✓
Did the collector direct the employee to return with the specimen as soon as possible after voiding?	✓	✓	**Fail**	✓	**Fail**	**Fail**
Were all sources of water in the restroom secured?	**Fail**	**Fail**	✓	**Fail**	✓	✓
Was bluing agent placed in the toilet or was it secured with tape?	✓	✓	✓	✓	✓	✓
Did the collector check the temperature of the specimen?	**Fail**	✓	**Unknown**	✓	**Unknown**	✓
Was the employee allowed to place the tamper-evident seals from the CCF onto the specimen bottles?	**Unknown**	✓	✓	✓	✓	✓
Did the collector seal and date the specimen?	✓	✓	✓	✓	✓	✓
Did the collector have the employee initial the specimen bottle seals after placing them on the bottles?	✓	✓	**Fail**	✓	✓	✓
Did unauthorized people have access to the collection site?	✓	✓	✓	✓	**Fail**	✓
Did the employee have access to the collection materials or supplies?	**Fail**	✓	✓	✓	**Fail**	**Fail**
Did the employee have access to items that could be used to adulterate or dilute the specimen?	**Fail**	**Fail**	✓	**Fail**	**Fail**	**Fail**
Was the employee under the supervision of the collector or appropriate site personnel at all times?	✓	✓	✓	✓	**Fail**	**Fail**
Number of protocols failed	**6**	**4**	**5**	**3**	**6**	**5**

Source: GAO.

Dallas/Fort Worth Metropolitan Area Undercover Testing

Table 6 provides our findings for the Dallas/Fort Worth metropolitan area, which is the fourth area where we tested the 16 key collection protocols.

Table 6: Dallas/Fort Worth Undercover Test Results

Requirement	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Did the collector require the employee to provide appropriate identification?	✓	✓	✓	✓	✓	✓
Did the collector ask the employee to empty his/her pockets and display items to ensure no items are present that could be used to defeat the test?	✓	✓	✓	**Fail**	✓	✓
Did the collector instruct the employee to wash his/her hands under the collector's supervision?	✓	**Fail**	✓	**Fail**	✓	✓
Did the collector direct the employee to provide a specimen of at least 45 mL?	✓	**Fail**	✓	✓	✓	✓
Did the collector direct the employee to not flush the toilet?	✓	✓	✓	✓	✓	✓
Did the collector direct the employee to return with the specimen as soon as possible after voiding?	✓	**Fail**	✓	✓	✓	✓
Were all sources of water in the restroom secured?	**Fail**	**Fail**	**Fail**	**Fail**	✓	**Fail**
Was bluing agent placed in the toilet or was it secured with tape?	✓	✓	✓	✓	✓	✓
Did the collector check the temperature of the specimen?	**Unknown**	**Unknown**	✓	**Unknown**	✓	✓
Was the employee allowed to place the tamper-evident seals from the CCF onto the specimen bottles?	✓	✓	✓	✓	✓	✓
Did the collector seal and date the specimen?	✓	✓	✓	✓	✓	✓
Did the collector have the employee initial the specimen bottle seals after placing them on the bottles?	✓	✓	✓	✓	✓	✓
Did unauthorized people have access to the collection site?	✓	✓	✓	✓	✓	✓
Did the employee have access to the collection materials or supplies?	✓	✓	✓	✓	✓	✓
Did the employee have access to items that could be used to adulterate or dilute the specimen?	**Fail**	**Fail**	**Fail**	**Fail**	✓	**Fail**
Was the employee under the supervision of the collector or appropriate site personnel at all times?	✓	✓	✓	✓	✓	✓
Number of protocols failed	**2**	**5**	**2**	**4**	**0**	**2**

Source: GAO.

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