

# Drug Testing in the Workplace

*A look at oral fluid-based testing*

**By Peter N. Cholakis and Roger Bruce**

**D** DRUG ABUSE IN THE WORKPLACE presents multiple challenges for employers, employees and associated constituencies such as insurers, suppliers, clients and shareholders. In this context, drug abuse refers to the use of illicit drugs (e.g., heroin, methamphetamine, ecstasy, cocaine) as well as the nonmedical use of prescription drugs. It does not encompass the abuse of or dependence on legal substances that may be termed drugs, including alcohol and tobacco.

According to the 2004 National Survey on Drug Use and Health, 75% of drug abusers in America are employed. That equates to 12.3 million workers (DHHS, 2005b). This means that taking a proactive approach to the establishment of a drug-free workplace is a sound business decision, one that can help companies remain competitive in a global marketplace. Furthermore, a drug-free workplace program is arguably a legal corporate responsibility. Specifically, American employers have a legal obligation to provide a safe workplace under the OSH Act.

## **Construction: A Case in Point**

Construction is one of the most dangerous occupations in America. Bureau of Labor Statistics (BLS) consistently reports that the construction industry has the highest number of workplace fatalities. For example, in 2005, the sector recorded 1,186 fatal work injuries, the most of any industry sector and about one of every five fatal injuries recorded in 2005. The increase was led by a rise in fatalities within residential building construction, utility system construction, and highway, street and bridge construction (BLS, 2005).

SH&E professionals in the construction industry are constantly challenged to identify innovative methods to reduce the number of on-the-job incidents. In this regard, drug testing is an overlooked and under-

appreciated tool. Implemented properly, drug testing can significantly improve worksite safety.

Based on what is known about the effects of drug use, it is safe to say that construction workers who abuse drugs cause more accidents, increase workers' compensation costs, create more rework, increase turnover rates and take away from a company's competitive edge. While many large contractors use some form of drug testing, most currently rely on urine-based technologies. Unfortunately, this form of testing is becoming less reliable because workers have found ways to defeat the test by using products such as additives or substitute urine—which means they can continue to abuse drugs without being detected.

"Cheating" drug tests has become such a problem that U.S. Rep. Ed Whitfield (R-KY), chair of the Energy and Commerce Subcommittee on Oversight and Investigations, and U.S. Rep. Eliot Engel (D-NY) introduced H.R. 4910, the National Drug Testing Integrity Act, on March 8, 2006, to prohibit products that defraud workplace drug tests. Although the bill was referred to subcommittee, it was not passed into law.

Cheating drug tests has become so common that Robert Stephenson, director of workplace programs for the Substance Abuse and Mental Health Services Administration has questioned the validity of urine-based tests. "The effectiveness of required specimen validity testing has been limited because, as adulterants were identified and reported

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**Table 1****Drug Use by Industry**

Industry	Current <sup>a</sup> illicit drug use (%)
Construction and mining	12
Manufacturing	7
Transportation, communications, utilities	7
Wholesale and retail	11
Service—business and repair	9
Finance	8
<b>Occupation</b>	
Executive, managerial, administrative	7
Technical and sales support	8
Administrative support	7
Operators, laborers, fabricators	9

*Note.* Adapted from National Household Survey on Drug Abuse, by Department of Health and Human Services, 2000, Rockville, MD: Author, Substance Abuse and Mental Health Services Administration, Office of Applied Studies.

<sup>a</sup>Within past month.

by laboratories and tests developed for them, the products themselves were changed by their manufacturers to avoid being detected” (Stephenson, 2005). This is noteworthy because federally mandated testing programs still require the use of urine.

While federally mandated programs represent a small percentage of workplace drug tests, their questionable validity and reliability remains a serious, unresolved issue. Alternative testing methods, when combined with random drug-testing policies, provide promising tools that management can use to address drug abuse in the construction workplace as well as in other industry segments.

**Importance of a Zero-Tolerance Drug Policy**

Approximately 8% of all employees in the U.S. between the ages of 18 and 49 report drug abuse, and construction has one of the highest drug abuse rates (DHHS, 2005a). The impact of drug abuse is staggering. The economic cost in the U.S. alone is estimated to be more than \$180 billion annually. As noted in “The Economic Costs of Drug Abuse in the United States, 1992-2002,” a report from the Office of National Drug Control Policy, “If we only compare the health-related costs of drug abuse, it still must be considered one of the more costly health problems in the nation” (vs. heart disease, cancer, stroke and mental illness) (Executive Office of the President, 2004).

While no single line item on a corporate profit-and-loss (P&L) statement reports the costs of workplace drug abuse, it clearly affects multiple areas. Substance abuse costs American businesses approximately \$10,000 per drug abuser due to productivity losses, absenteeism and increased insurance premiums. For example, drug abusers file five times more workers’

compensation claims than the average worker, contributing to double-digit annual insurance premium increases. They increase employee turnover rates by 30%, and are absent 10 times more than nonabusers. Healthcare benefit utilization rates for abusers are reported to be 300% to 400% higher than average. Drug abusers also are responsible for as much as 32% of workplace theft/inventory shrink. Abusers are also linked to more than half of workplace accidents (Executive Office of the President, 2004; Gerber, 2000).

A demonstrated relationship exists between drug abuse and criminal activity by workers, such as workplace violence, harassment and theft. Up to 80% of all arrestees in major cities throughout the U.S. test positive for illicit drugs. National Institute of Justice (NIJ) Arrestee Drug Abuse Monitoring (ADAM) Program measures drug use among arrestees by calculating the percentage of arrestees with positive tests for drug use. ADAM data are collected voluntarily and anonymously at the time of arrest, in booking facilities in select U.S. cities.

The data collected from male arrestees in 1998 across 35 cities showed that the percentage testing positive for any drug ranged from 42.5% in Anchorage, AK, to 78.7% in Philadelphia. Female arrestees testing positive ranged from 33.3% in Laredo, TX, to 82.1% in New York. As Table 1 shows, drug abuse is not limited to a single industry or occupational category (DHHS, 2000).

**What about Current Testing Methods?**

Drug-testing statistics compiled semiannually by leading national laboratories provide some insight as to why traditional testing methods have not been more effective. The “positive rate” (workers who test positive for drug abuse) within the private workforce in the U.S. has remained relatively stable for the past decade at approximately 4.5% of workers tested (Quest Diagnostics, 2005).

Additionally, most workplace drug testing is conducted for preemployment purposes only using traditional urinalysis, which is widely viewed as ineffective. The parent drug or metabolite of an illicit drug is typically present and detectable in traditional urine tests for only 3 to 4 days. Even marijuana (THC), one of the more persistent drug classes, is usually only detected for this period of time (Niedbala, Kardos, Fritch et al., 2001). Knowing this, a drug abuser applying for a job can simply not use a substance for a few days, pass the preemployment test, then resume using. Even companies that employ random and other forms of drug testing, such as reasonable-cause, post-accident or return-to-duty testing, cannot detect drug abusers as effectively as one might expect.

Urine samples also can be easily adulterated. An Internet search using the phrase “beat drug test” yields more than 5 million hits. This reflects the pervasiveness of the practice. It also highlights the marked growth in the test adulteration market—the same search in 2002 yielded only 158,000 hits. Unless sample collection is directly observed, such tests are easily defeated. However, directly observing urine collection is not allowable in most situations.

**Figure 1**

## Random Testing Solution

Avitar case study #2: At a 150-employee heavy and highway contractor, reportable on-the-job accidents and workers' compensation claims were reduced to zero.

### Benefits of a Drug-Free Workplace

A drug-free workplace offers many benefits (DHHS, 2006). Short-term benefits include:

- cost savings and incentive programs offered by medical and health insurance carriers; property, casualty and liability insurance carriers; and workers' compensation insurance carriers;
- lower chance that a current user/abuser will apply for a job or be hired;
- ability to respond quickly when problems with alcohol or other drug abuse arise;
- fewer accidents;
- fewer disciplinary actions;
- reduced losses due to absenteeism, theft and fraud.

Long-term benefits include:

- improved employee morale and overall productivity;
- lower costs due to losses and errors;
- reduced costs of insurance claims;
- greater employee awareness about alcohol and other drug abuse, as well as other health issues;
- earlier identification and resolution of problems that affect job performance;
- decreased legal costs and costs of hiring and training new employees;
- reduced medical and insurance costs;
- reduced liability.

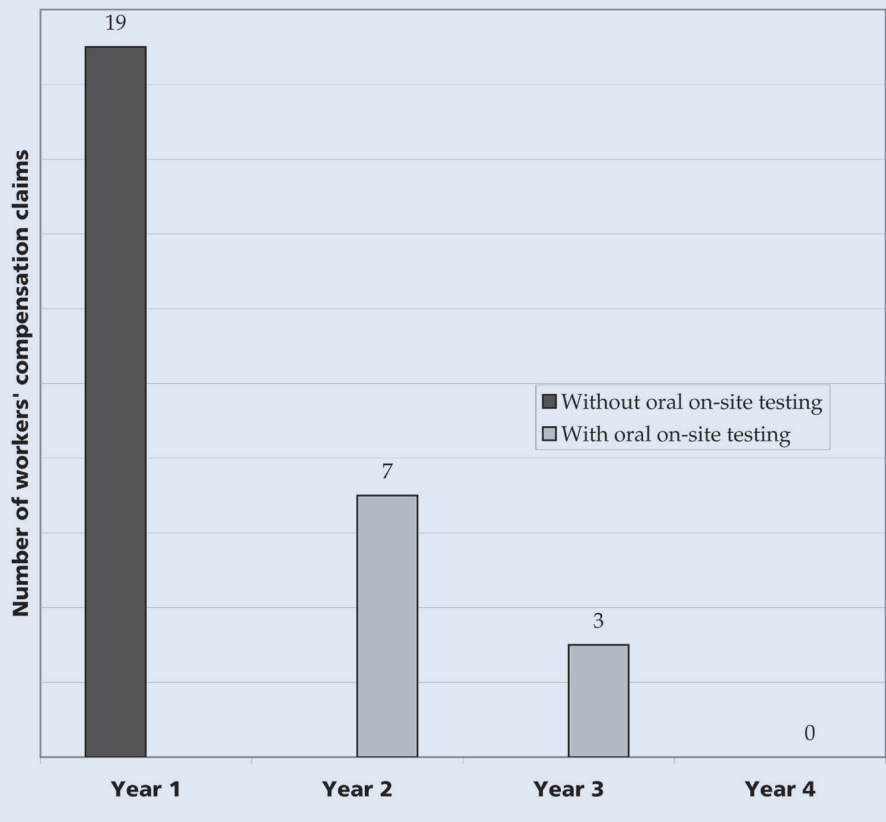
### Using an Oral Fluid-Based Testing Method

Many sources (including research reports, case studies and articles) have documented the benefits of drug testing—and more specifically oral-based on-site random testing (Yacoubian, Wish & Perez, 2001; Wish & Yacoubian, 2002; Caplan & Goldberger, 2001; Cone, Presley, Lehrer et al., 2002; Kidwell, Holland & Athanasielis, 1998). These sources indicate the following:

- Oral fluid is an accurate specimen matrix for determining recent drug abuse, as well as various clinical applications, including HIV screening.
- Because oral fluid specimen collection can be directly observed, there currently is no known method of intentionally beating the test by substituting or otherwise altering a specimen.
- Oral fluid-based testing is convenient for both employer and employee. It is socially acceptable and results are available within 5 to 15 minutes.

The convenience and social acceptability of oral fluid-based screening versus urinalysis cannot be underestimated. It is the technology's ease-of-use that enables the deployment of truly random testing—and provides a greater chance of testing programs being diligently implemented day-to-day in a work environment.

The objective is not to catch or punish workers, but rather to deter drug abuse on the job and to provide a safe work environment for everyone. Since oral fluid-based testing can be performed by almost anyone, anywhere, at anytime, on a jobsite or in an office, it is a more effective deterrent.



Based on the authors' experience, corporations deploying on-site random drug testing using oral fluid technology have been able to:

- reduce reportable accidents by more 50%;
- lower workers' compensation premiums by at least 10%;
- increase productivity by 20%;
- reduce employee theft and inventory shrink by nearly 50%.

Such benefits are available to companies of all sizes. For example, a heavy-highway contractor implemented oral fluid-based drug testing in 2001 and experienced a dramatic reduction in workers' compensation claims. The 150-employee firm had long used urinalysis to detect drug abuse among its workers, but in 2001, the firm decided to revamp its safety manuals, rewrote its employee handbook, implemented a zero-tolerance drug and alcohol use policy and began using oral fluid-based testing.

In the year before the more-vigilant safety program was implemented, the firm had 19 reportable workers' compensation claims. Only seven claims were filed the next year, three were filed in the second year and none were filed in the third year (Figure 1). The contractor's safety and human resources director attributes the drop in claims to less drug use on the job, driven by use of on-site drug testing. "Testing became less of a hassle," the director says. "Before, it was an issue of having to have a restroom available, messing around with a testing cup and dealing with disposal items." This contractor administers pre-employment, post-accident and reasonable-suspicion tests.

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### **Limitations of the Oral Fluid-Based Method**

What are the limitations of oral fluid-based drug testing? This method can detect recent and/or on-the-job drug abuse. The detection window for oral fluid begins within minutes of consumption and continues up to 2 to 3 days for multiple drug classes. However, for corporations interested in gathering information on historic drug abuse or those seeking to identify employees who abuse marijuana on the weekend, other forms of testing (such as urine- or hair-based methods) would be required.

Urinalysis can commonly detect marijuana use in a window of 3 to 5 days, up to 1 week (and in rare cases up to 30 days) (Niedbala et al., 2001). However, it cannot detect recent drug use because it takes 3 to 9 hours for the drug to be metabolized by the liver and pass into the urine. Oral fluid-based testing can detect use within minutes of consumption but up to a maximum of 24 hours.

Finally, while oral fluid is a proven specimen type as evidenced by the fact that it is used for diagnosing HIV and other types of screening, most companies still model their drug-testing programs after 20- to 30-year-old urine-based testing techniques. This is likely because they simply are not aware of the newer technology or do not yet recognize its advantages.

### **Legal Issues to Navigate**

Will an employer increase its legal liability by using an on-site oral fluid-based drug screening for employees (or applicants) for drugs-of-abuse versus using a traditional lab-based drug testing method? The answer typically is no. If a company has a comprehensive, documented and well-communicated drug-free workplace program, uses proper specimen collection and chain-of-custody techniques, and has the initial on-site test confirmed by an analytical gas chromatography/mass spectrometry (GC/MS) laboratory procedure, liability will not increase. In fact, legal liability may be reduced by the use of the on-site oral-based process (Evans, 2006).

Regardless of the type of drug testing used, however, a corporation should have a documented, well-communicated drug-free workplace policy that clearly identifies drug testing as a component. A company also must review its policy and drug-testing program to ensure that it complies with local, state and federal regulations and statutes.

Before discussing the scientific and legal aspects of liability, it is helpful to review the recommended industry-standard drug-testing process for on-site drug screening. On-site fluid-based drug testing is a two-step process: an initial screening with a disposable device yields a nonnegative result, is confirmed by GC/MS in a laboratory, then is validated by a medical review officer (MRO)—a physician trained in evaluating drug test results. The MRO then discusses the test result with the specimen donor before reporting a final result to the employer. The results should be kept confidential and released on a need-to-know basis only. Confirmed positive drug test results can then be used to discipline the employee, deny privileges and initiate further evaluation of the employee.

Both state governments and the federal government generally support drug testing. Many states have oral fluid-based testing laws on the books, which indicates wide legal acceptance of the technology. Oral fluid-based testing of employees for drugs is specifically permitted by statutes in at least 27 states. The remaining states have no specific statutes in place, so the oral fluid-based method may be permitted.

Several states also have approved use of this method for DUI testing for drugs (Evans, 2006). A November 2002 state-by-state review of state drugged driving legislation indicated that five states (CO, MO, NY, ND, OK) permit saliva and eight states (AZ, GA, IN, KS, LA, NV, NC, SD) permit other bodily substances as specimens for drugged driving tests.

Federal employment drug testing programs are regulated by the U.S. Department of Health and Human Services (DHHS). In 1997, DHHS began an assessment of oral fluid-based drug testing for possible application in federal workplace drug-testing programs. DHHS has noted that oral fluid-based drug testing has been used extensively in therapeutic drug monitoring, risk assessment in the insurance industry and nonfederal workplace testing. It is expected that DHHS will eventually adopt this method as well as alternative specimen matrices for federally regulated workplace testing. Despite pressure by private industry and legislators, however, this has been a slow process to date.

From a scientific perspective, several sources have shown that oral fluid is a valid matrix for the detection of drugs of abuse and even various medical conditions (Yacoubian, Wish & Perez, 2001; Wish & Yacoubian, 2002; Caplan & Goldberger, 2001; Cone, Presley, Lehrer et al., 2002; Kidwell, Holland & Athanaselis, 1998; Cone, 2001). DHHS (2004) also reports that “many studies support the use of oral fluid as a specimen for forensic drug testing.”

According to the agency, oral fluid offers some advantages over other types of specimens:

- Oral fluid is readily accessible and its collection is perceived as less invasive than a urine specimen collection.
- Oral fluid collections can be easily observed and, therefore, the specimen is less susceptible to adulteration or substitution by the donor.
- Drugs can be detected in oral fluids within 1 hour of use, so this method is useful in detecting very recent drug use and is suitable for post-accident testing (DHHS, 2004).

Field and laboratory validation testing of oral-based drug screens demonstrate high correlation with laboratory-based urinalysis for the detection of cocaine, opiates and methamphetamines, within a 3-day window following drug use. Marijuana is detectable immediately after usage. This near-term detection window enables oral fluid-based screens to determine use within what is widely considered to be the critical period of impairment for marijuana.

The courts recognize a limited duty by employers to properly perform drug testing of employees. Drug testing must not be administered in a negligent man-

# Substance Abuse Policy Template

## **Purpose**

The company has a vital interest in maintaining a safe, healthy and efficient workplace for the benefit of its employees, clients and the public. The use of performance impairing drugs can cause avoidable injuries to employees, damage to property and productivity losses.

## **Statement of Policy**

To ensure a safe and productive work environment, employees are prohibited from:

- A) Unlawfully manufacturing, distributing, dispensing, possessing or using controlled substances, or misusing or abusing prescribed or over-the-counter drugs.
- B) Having present in their bodies detectable levels of illegal drugs during working hours.
- C) Violating any federal or state law relating to drugs.
- D) The exception to this policy is the authorized possession, use and transportation of drugs prescribed by a physician and used according to prescription instructions, unless such use would pose a safety risk to the employee, other employees or the public.

## **Employee Responsibilities**

As a condition of employment, each employee must:

- A) Abide by this substance abuse policy.
- B) Notify the company of any criminal drugs statute conviction for a violation of federal or state law relating to drug use, possession or dealing no later than 5 days after such conviction.
- C) Employees who are required to submit to reasonable suspicion or post-accident testing agree to accept, at the company's discretion, transportation to a location where the test will be conducted and to their residence.

## **Penalties**

Any employee who violates this substance abuse policy shall be subject to discipline up to and including termination. Nothing in this policy changes the at-will employment relationship, and employees may be terminated at any time, with or without cause or notice.

## **Definitions**

**DRUG:** Any substance that has known mind- or function-altering effects on a person, including psychoactive substances prohibited or controlled by federal or state controlled substance laws.

**PRESCRIBED DRUGS:** Any substance prescribed for use by the employee by a licensed medical practitioner.

**SAMPLE:** Means oral fluid, urine, hair or blood.

## **Drug Testing Policy**

### **Preplacement Testing**

- 1) Each applicant for a position in the company will be subject to the company's substance abuse policy.
- 2) All offers of employment to applicants will be contingent upon the applicant passing a drug test in accordance with the company's policy.
- 3) An applicant who refuses to submit to pre-employment testing when requested, or refuses to sign the company's substance abuse policy consent form, will not be employed by the company.
- 4) If an applicant's test is positive for any prohibited substance, the applicant will not be employed by the company.

### **Random/Periodic Testing**

- 1) The company, at its discretion, may institute a program of random testing of current employees. This program may include testing of all personnel at a jobsite or a random selection program of individuals throughout the year.
- 2) If selected for a random test, the employee must go immediately to the collection area and submit a sample for drug testing.
- 3) Refusal to submit a sample or to properly complete documentation for a random test will be considered a refusal to test, which will require discipline up to and including termination.

### **Post-Accident Testing**

- 1) Employees involved in a work-related injury, regardless of severity, that requires professional medical treatment will be subject to a drug test.
- 2) Employees involved in an accident or safety-related incident of any kind while in a company vehicle or while on company time or on company property, will be subject to a drug test.
- 3) The company may require an employee who contributed to an accident be tested if there is reasonable cause to believe that the accident may have resulted from the use of drugs.

### **Reasonable-Suspicion Testing**

- 1) When the company has a reasonable belief that an employee may be under the influence of a substance a drug test may be conducted immediately.
- 2) Employees suspected of being unfit for duty will be escorted by a supervisor or designated company representative to the authorized testing location. The employee's cooperation with the escort and the collection procedures will be required.
- 3) Refusal to cooperate in the collection procedure or refusal to take the test will require discipline up to and including termination.

### **Confidentiality**

Only those persons authorized to receive results from the laboratory will be allowed to discuss these results with the supervisor or the employee. Individuals within the company will be notified of the results on a limited need-to-know basis. No test results shall appear in a personnel folder. Information of this nature will be included in a medical file. Drug test results will be released to a decision maker in a lawsuit, grievance or other proceeding (such as for a workers' compensation or unemployment insurance claim) initiated by or on behalf of the donor.

### **Use of Prescription Drugs**

In the event an employee is under the care of a physician and is taking prescribed medication that might impair the ability to perform a job safely, the employee must notify management in advance of starting work. It is at management's discretion as to whether the employee may continue to perform the normal assigned duties or be designated non-safety-sensitive duties (if available) until the employee provides a physician release to perform normal duties.

## ASSE on Construction Safety

### Construction Safety Management & Engineering

Written by 37 leading experts, this peer-reviewed text provides information on both technical and managerial subjects. It includes chapters on substance abuse programs for construction sites, communicating with the Spanish-speaking workforce and managing subcontractor liability. (ASSE Order #4401)

ner, and test results should not be improperly released. The direct use of an on-site device instead of traditional lab-based methods does not increase liability for employers, nor does use of third parties or laboratories make employers immune to litigation. Whether the employer uses a laboratory, conducts drug screening itself with an on-site device, or employs some combination, the liability is the same.

It is thought that on-site testing may even reduce employer liability because of the immediacy of the results, which protects worker safety. In addition, an employer gains more direct control over the testing process and, thus, can further protect itself against liability. An employer can better manage and monitor the test administration, the chain of custody and the confidentiality of test results.

Drug testing administered according to the manufacturer's instructions following sound drug-testing procedures should provide a strong defense against liability for negligent test administration.

Obtaining confirmation by GC/MS and by MRO review will help avoid any damage to employees who are drug-free. If a nonnegative test is confirmed by GC/MS and MRO review, it may protect the employer from liability even if the test results are released and the employee is damaged. Truth is always a defense to defamation (Evans, 2006).

### Customize & Consider Return on Investment

A company implementing a drug-testing program should tailor it to its specific needs. The company should be sure to evaluate all aspects—ranging from legal to convenience—and must continually monitor results. For example, a company must consider issues such as ease of collecting specimens, gender issues and privacy concerns.

Companies also should consider the return on investment (ROI). The cost of an on-site oral fluid-based drug test is typically about \$20 per test. Laboratory-based urinalysis typically costs about \$35 per test, including collection fees. However, such testing costs also include 3 hours of salary (average time) that must be paid while the employee travels to and from the collection site, as well as the incremental loss in productivity. Thus, with these other factors included, the cost of laboratory-based urinalysis rises to \$150 per test.

One also must recognize that the cost of drug testing is typically insignificant when compared to the savings associated with achieving a drug-free workplace. ROI on an effective drug-testing program averages 100 times the cost of the program. "Few business expenditures offer the return on investment that random drug testing does" (Witt, 2006).

### The Future

Compared with other industries, construction has a young workforce and workers constantly

change locations and duties. The industry is a pioneer when it comes to drug testing out of necessity. Random oral-based testing has proven to be a successful tool in the quest for a drug-free workplace and holds promise for the future. Regardless of the tool selected, a corporate-managed drug-testing program is not a liability but a benefit that gives a company greater control over its future. ■

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