



Summary of Fitness for Duty Program Performance Reports for Calendar Year 2013

SECTION 1, SUMMARY INFORMATION

PURPOSE

The U.S. Nuclear Regulatory Commission (NRC) staff provides the following fitness-for-duty (FFD) program performance summary to inform interested stakeholders on the drug and alcohol (D&A) testing performance of the commercial nuclear industry for Calendar Year (CY) 2013. Licensees and other entities submitted the information presented in this report as required by Sections 26.717 and 26.719 of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 26, "Fitness for Duty Programs," (Part 26). Section 2a. Detailed Data Analysis Summary," contains information on testing results, associated site- and event-specific descriptions, and data presentations in both graphical and tabular formats.

BACKGROUND

On June 7, 1989, the NRC issued regulations to require licensees authorized to construct or operate nuclear power reactors to provide reasonable assurance that plant personnel are reliable, trustworthy, and not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause that in any way affected their ability to safely and competently perform their duties. These regulations required licensees to establish D&A testing programs and report test results to the NRC. On March 31, 2008, the NRC amended 10 CFR Part 26, in part, to strengthen the D&A testing requirements and broaden the scope of D&A testing to other NRC licensees (e.g., owner operators of uranium fuel fabrication facilities) and to persons who perform safety- or security-significant activities within the protected areas (PA) of these sites. This final rule, published in the *Federal Register* (FR) (73 FR 16966), became effective on April 30, 2008.

Disclaimer:

The information in this report is provided as a public service, is solely for informational purposes, and is not, nor should be deemed as, an official NRC position, opinion, guidance, or "a written interpretation by the General Counsel" under 10 CFR 26.7, "Interpretations," on any matter to which the information may relate. The opinions, representations, positions, interpretations, best practices, or recommendations that may be expressed by the NRC technical staff in this document are solely their own and do not necessarily represent those of the NRC. Accordingly, the fact that the information was obtained through the NRC technical staff will not have a precedential effect in any legal or regulatory proceeding. Stakeholders should take care in reaching conclusions based on individual interpretations of the illustrated or tabulated data, because the report may not provide site- or event-specific information to help inform a conclusion.

AVAILABILITY, USE, AND PUBLIC COMMENT

Availability

The NRC makes available to the public the FFD program performance reports submitted by each licensee and other entity by posting each of the files in the NRC's Agencywide Documents Access and Management System (ADAMS). All reports can be obtained from the NRC website <http://www.nrc.gov/reading-rm.html>. Prior year NRC reports summarizing FFD program performance of the industry also can be viewed on the NRC's FFD website <http://www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/performance-reports.html>.

Use

The D&A information in this report informs the public on an annual basis about the performance of the commercial nuclear power industry in detecting and deterring illicit drug use and alcohol misuse at licensed facilities. This use is consistent with the Commission's Operational Excellence objective¹ to appropriately inform and involve stakeholders in the regulatory process.

Licensees and other entities may use the information in this report and the enclosed Section 2a. Detailed Data Analysis Summary," to make process improvements and/or take corrective actions, as appropriate, to enhance FFD program effectiveness. Suggestions, if described in this report, are not NRC requirements and no specific action or written response is required.

The NRC staff uses this report to inform the inspection preparation process conducted under NRC Inspection Manual Chapter (IMC) 2201, "Security Inspection Program for Commercial Nuclear Power Reactors," IMC 2681, "Physical Protection and Transport of SNM and Irradiated Fuel Inspection of Fuel Facilities," and IMC 2504, "Construction Inspection Program – Inspection of Construction and Operational Programs." Of these chapters, only IMC 2504 is publicly available (as ADAMS Accession No. ML12298A106).

Public Comment

The NRC welcomes comments on this report, which may be provided in written form through the NRC FFD Web site at:

<http://www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/contact-us.html>.

Written comments also may be sent to the NRC at the following address:

U.S. Nuclear Regulatory Commission
ATTN: Paul Harris, Senior Program Manager
Mail Stop: T4F25M
Washington, DC 20555-0001

¹ See NUREG-1614, Vol. 5, Strategic Plan, NRC, most recent revision.

DISCUSSION

1. Reporting Entities (Licensees and Other Entities)

In CY 2013, the NRC received FFD program performance information from a total of 76 licensees and other entities² (also referred to as “facilities” or “sites” in this report) listed below:

- 64 operating reactor sites;
- 2 reactor construction sites (V.C. Summer Units 2 and 3 and Vogtle Units 3 and 4);
- 1 formerly operating reactor site (Zion³);
- 6 corporate FFD program offices (i.e., some utilities with multiple reactor sites administer their FFD programs at locations other than the reactor sites and, therefore, report data for these administrative FFD personnel separately); and,
- 3 contractors/vendors (C/Vs): Babcock & Wilcox Nuclear Operations Group; Institute of Nuclear Power Operations (INPO); and Nuclear Fuel Services (NFS), Inc.

2. Reporting of FFD Performance Information

In the past, each licensee and other entity submitted one hard copy report per facility each year to meet the reporting requirements in Section 26.717. In 2009, the NRC staff coordinated with licensee and other entity representatives to design and implement electronic reporting (e-reporting) forms⁴ to utilize technological advances, to simplify and improve FFD data reporting, and to enable the reporting of additional voluntary information to the NRC. The detailed observations included in Section 2f. Evaluation of E-Reported Data, are largely due to this NRC-industry initiative to e-report FFD performance information. NRC periodically updates the e-forms based on user feedback, recommendations, lessons learned, and to improve form function. The testing results reported by all entities and provided in this report are confirmed by a Medical Review Officer (MRO) pursuant to Part 26.

Calendar Year 2013 marked the fifth year FFD e-reporting was available. Use of e-reporting has steadily increased, with 93 percent of facilities participating in CY 2013. Only 5 facilities⁵ chose to submit a hard copy performance report to meet the annual FFD program performance information reporting requirements in Section 26.717. The NRC continues to work with industry representatives to enable use of the e-reporting system by all licensees and other entities. This report and the enclosed Section 2a. Detailed Data Analysis Summary, were developed using both hard copy and e-reported FFD data.**3. Executive Summary for CY 2013**

² Site, licensee, and entity names, corporate affiliation, and other information are provided in NUREG 1350, NRC's Information Digest, most recent revision, at: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/>.

³ The Zion facility is in SAFESTOR. SAFESTOR is a method of decommissioning in which a nuclear facility is placed and maintained in a condition that allows the facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use.

⁴ The NRC FFD electronic forms are publicly available at the NRC website <http://www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/submit-ffd-reports.html>.

⁵ Five facilities submitted a hard copy FFD program performance report in CY 2013: Energy Solutions (Zion), NextEra (Point Beach), and Xcel Energy (Corporate Office, Monticello, Prairie Island).

Based on the fitness-for-duty (FFD) performance information reported to the NRC and a comparison of this information to previous years and other indicators, the commercial nuclear industry continues to effectively implement the Part 26 drug and alcohol (D&A) provisions and FFD program results have directly contributed to public health and safety and the common defense and security. The data indicates no adverse trends⁶; persons under the influence of illicit drugs and/or alcohol are being identified and removed from the protected area (PA) of NRC-licensed facilities; and, persons of questionable trustworthiness and reliability are being identified through aggressive testing methods (e.g., limit-of-detection testing, lower cutoffs, and effective monitoring during specimen collections). Industry identification and communication of program weaknesses, lessons learned, and corrective actions demonstrate commitment to improved performance and a drug-free work environment. Openness and transparency was demonstrated by industry's commitment to provide descriptions of FFD-related events and issues that facilitated timely and effective regulatory oversight and lessons learned for use by other FFD programs. Voluntary use of the FFD electronic forms by the industry significantly improved the consistency and accuracy of data reported, reduced burden⁷, and helps regulatory effectiveness. These outcomes helped provide reasonable assurance that persons who performed safety- or security-significant activities, or who had unescorted access to certain NRC-licensed facilities, information, or material, were fit for duty, and that the public and NRC are timely informed of FFD performance.

Overall Industry Testing Rate (data from Table 5)

Test Category*	Number Tested	Number Tested Positive	Percent Positive
Pre-Access	89,187	654	0.73%
Random	63,678	194	0.30%
For Cause	627	84	13.40%
Post-Event	718	5	0.70%
Followup	7,487	70	0.93%
Total	161,697	1,007	0.62%

The following discussion bullets and Section 2, "Detailed Data Analysis," support the overall conclusion. The following also provides some staff insights into the performance at operating reactors and those under construction to highlight the specific challenges faced by these licensees; the staff continues its assessment of these insights and continues its trend analysis.

- **The overall industry positive rate was 0.62 percent for illicit drug use, alcohol misuse, and testing refusals⁸ continues to be low and consistent with previous years.** Further, the individual trends for pre-access, for-cause (except for the C/V random testing rate), and

⁶ An adverse trend is one in which the NRC would evaluate the necessity to undertake a scalable response based on the severity or significance of the trend. NRC response could include, but not be limited to: inspection, issuance of guidance, licensing, or rulemaking.

⁷ See NRC's Supporting Statement for 10 CFR Part 26, Fitness for Duty Programs, OMB Clearance No. 3150-0146, located in NRC ADAMS, accession number ML14042A031.

⁸ Test refusals includes adulterated, substituted and subverted drug testing results.

random testing continue to indicate downward trend and appear to be leveling as illustrated in Charts 3 – 6.

For the C/V random rate, data illustrates an increasing trend beginning in about CY 2007. This may correlate to the increasing positive rates observed in the general population and federally-mandated workforce drug testing programs⁹ since the commercial nuclear workforce is augmented by workers from the general population (i.e., C/Vs).

- **The total number of tests conducted in CY 2013 (161,697) declined from the previous year by 9.7 percent, the first decline since 2002.** This decline was caused by a relatively significant reduction in the number of pre-access tests conducted (12,251) indicating that the industry had approximately 10 percent fewer persons seeking access (i.e., employment) to a facility subject to Part 26 D&A testing.
- **Pre-access testing markedly contributed to public health and safety by preventing persons, who have attempted to subvert a drug test or were associated with illegal drug use and the misuse of legal drugs and alcohol, from gaining access to NRC-licensed facilities (e.g., operating and construction reactor sites).** Approximately 65 percent of all positive test results and testing refusals occurred at pre-access testing in CY 2013 with random testing identifying a sizable remainder of positive test results at 19 percent (percentages calculated using data in Table 9). A positive pre-access test for any individual prevents that individual from gaining access to the NRC-licensed facility for at least 14 days. However, many licensees have implemented more stringent sanctions than the NRC-required minimum sanction, thereby preventing these individuals from gaining authorization to the NRC-licensed facility for a longer period of time. This was most evident at the reactor construction sites that have implemented what amounts to a zero-tolerance D&A-use program. As a result, industry pre-access and random testing programs provide improved assurance that persons using illegal drugs or misusing legal drugs or alcohol are prevented from gaining or maintaining access, to the protested area (PA) of entities subject to Part 26.
- **Pre-access testing identifies the most subversion attempts.** As noted in the previous bullet and based on e-reported data, pre-access testing significantly contributed to safety by identifying 76 percent of all subversion attempts in CY 2013 (Chart 23). This performance makes sense because pre-access testing is a predictable event, whereas random and followup testing are not; therefore, individuals have an opportunity to plan a subversion attempt. Fortunately, NRC licensees and collectors understand this and maintain heightened vigilance to identify subversion attempts. E-reported data also indicated that 97 percent of subversion attempts are made by C/Vs, indicating the prevalence of drug abuse in the C/V workforce and perhaps a false attitude that a federally-mandated drug test can be subverted. The identification of these individuals permanently denies their access to NRC-licensed facilities (i.e., prevents their employment within the PA of an NRC-licensed facility) and indicates that NRC licensees have maintained high vigilance for subversion attempts during the specimen collection process.

⁹ Quest Diagnostics' *Drug Testing Index*TM located at <http://www.questdiagnostics.com/home/physicians/health-trends/drug-testing.html>. This report indicates a 4.1 percent positive rate for the general workforce and 1.6 percent for federally-mandated drug tests, both for CY 2012, with results prior to an MRO review.

- **Three substances (marijuana¹⁰, alcohol, and cocaine¹¹) accounted for approximately 81 percent of all positive test results.** In comparison to 1990, the first year of NRC-required D&A testing, the preferences of substance users has changed and the staff believes preferences will continue to change primarily based on changes in societal use of marijuana and amphetamine-based drugs. For the CY 2013 period:
 - Marijuana continued to be the most detected substance, while alcohol¹² is now the second most detected substance. The data also indicated that for licensee employees alcohol is the substance of choice, whereas marijuana is the substance of choice for C/Vs, as described below.
 - Positive test results from alcohol use continued to be high which may be indicative of its acceptance and use in society. However, alcohol like marijuana can cause impairment and its potential adverse effects on safety and security are unacceptable. To address this challenge, the NRC implemented time-dependent alcohol cutoff levels for confirmatory testing in 2008, which effectively lowered the alcohol cutoff by 50 percent (0.04 BAC¹³ to 0.02 BAC based on time-on-site). Therefore, over the last 5 years, licensees and other entities have identified more persons at lower alcohol levels than ever before. This improved identification effectiveness has contributed to the overall alcohol positive rates and enhanced public health and safety and the common defense and security by removing persons from safety and security sensitive positions.
 - The percent of total positives that cocaine comprised has decreased from 29.0 percent in CY 1990 to 12 percent in CY 2013. Although still identified in the commercial nuclear industry, the number of cocaine positive results remains very low at 0.076 percent of all tests conducted, 3.5 times lower than the 0.27 percent of cocaine positives identified in federally-mandated drug tests¹⁴.
- **Amphetamine positives continued to increase in percentage of total positive results.** An adverse upward trend over the past 5 years has been the increasing share of amphetamine¹⁵ positive test results (see table below). While accounting for a relatively small percentage of total positives in CY 2013 at 8.0 percent, amphetamines positives continued to grow in comparison to previous years. For example, the share of amphetamines positives as a percentage of all positive results in CY 2013 is 2.2 times higher than the percentage for CY 2009 (3.62 percent).

¹⁰ Part 26 requires the testing of marijuana metabolites for initial testing and delta-9-tetrahydrocannabinol-9-carboxylic acid (THCA) for confirmatory testing.

¹¹ Part 26 requires the testing of cocaine metabolites for initial testing and benzoylecgonine (a cocaine metabolite) for confirmatory testing.

¹² Based on e-reported data presented in Chart 22, 31 percent of alcohol positives in CY 2013 were due to the cutoff level changes.

¹³ BAC is blood alcohol concentration.

¹⁴ Quest Diagnostics' *Drug Testing Index*[™], Table 5, Positivity Rates by Drug Category, located at <http://www.questdiagnostics.com/home/physicians/health-trends/drug-testing.html>. Note that the Quest data is presented as (number of positives)/(total number of tests conducted).

¹⁵ Part 26 tests for amphetamines on initial testing and amphetamines and methamphetamines on confirmatory testing.

- The staff notes that the increased use of amphetamines within the commercial nuclear industry may be the result of increased use in society as presented in the *Drug Testing Index™* that illustrates increasing amphetamine use in both the general workforce and federally-mandated drug testing programs.
- The staff also notes that the amphetamine positive test results presented in the *Drug Testing Index™* are based on lower cutoffs than that required in Part 26. As a result, the staff posits that once lower cutoffs are implemented in Part 26, additional amphetamine-based positives may be identified within the commercial nuclear industry. A positive rate increase may also be seen when the cocaine cutoff is also lowered as well. The staff's evaluation of amphetamine and cocaine trends and associated staff-proposed rulemaking may be viewed by accessing the NRC's ADAMS at <http://adams.nrc.gov/wba/> and typing "ML13094A179" into the "Document Content" search field.

Abuse Substances of Choice¹

Substance	1990	2008 ²	2009 ²	2013	Change (1990 – 2013)
Marijuana	47.4%	55.1%	51.7%	51.3%	3.9%
Alcohol	18.6%	19.3%	27.9%	25.5%	6.9%
Cocaine	29.0%	20.0%	16.2%	13.2%	-15.9%
Amphetamines	2.8%	3.81%	3.9%	8.9%	6.1%
Total	97.8%	98.2%	98.9%	98.9%	

Notes

1. These percentages are calculated by (number of positives for the particular substance)/(total number of all positives)
2. On March 31, 2008, a substantial revision to Part 26 was published; CY 2009 was the first year in which FFD performance data was received by the NRC pursuant to the amended regulations.

- **Whether an individual was a licensee employee or C/V was predictive of substance use.** In CY 2013, C/Vs tested positive at a rate of 0.81 percent and licensee employees at a rate of 0.25 percent; this 3-to-1 ratio has been consistent since 1993 and demonstrates two distinct substance using populations (Table A- 4). This trend is most notable in pre-access testing (Chart 5) and random testing (Chart 6) and indicative of the challenges faced by the licensees who contract large C/V populations.
- **The two reactor construction sites conducted 5.8 percent of the industry tests in CY 2013, but accounted for 17.7 percent of the positive test results and testing refusals.** V.C. Summer (Units 2 and 3) and Vogtle (Units 3 and 4) reported performing 9,394 tests with a 178 positive drug and alcohol tests results and testing refusals. Positive tests and testing refusals primarily were identified during pre-access testing (120) with the remaining results as follows: random (34), for-cause (15), post-event (2) and followup (7). **The industry positive rate for random testing remained stable.** The random testing positive rate in CYs 2012 and 2013 was 0.30 percent. Over the past 20 years, the industry random positive rate has fluctuated from 0.23 percent to 0.39 percent (Table 9 and A-2).
- **For-cause testing had the highest industry positive testing rate.** The for-cause testing positive rate increased from 11.88 percent in CY 2012 (Table 9) to 13.40 percent in CY

2013 and it remains the highest positive rate for all test types across all years of testing (Table A- 2). The staff continues to assess the significance of this performance noting that the for-cause positive rate is dependent on a licensee's ability to effectively identify a person under the influence of drugs or alcohol and whether the person actually tests positive for one or more of the paneled substances. To help inform licensee behavioral observation programs, the NRC recently issued NUREG/CR-7183, "Best Practices for Behavioral Observations Programs at Operating Reactors and Power Reactor Construction Sites," which can be viewed at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/>.

- **Limit of Detection (LOD)¹⁶ testing significantly improved the ability of licensees to detect illicit drug use and identify persons of questionable trustworthiness and reliability because of their deceitful attempt to subvert the drug test through excessive hydration. Notably, LOD testing is implemented by 84 percent of all facilities.** These 64 of 76 facilities demonstrated a strong commitment to achieving a drug-free workplace by implementing the NRC's optional drug testing policy to conduct LOD testing of "dilute"¹⁷ specimens. The effectiveness of LOD testing was demonstrated by the fact that this testing protocol resulted in a positive rate 2.7 times higher than the overall industry positive rate (0.62 percent). As a result, LOD testing was and remains a strong contributor to safety and security because it resulted in the removal of impaired and/or dishonest persons from the PA of NRC-licensed facilities that would not have been identified through normal testing alone.
- **A small number of facilities used more stringent drug testing cutoff levels than required by rule.** Only 4 of 76 facilities used more stringent cutoff levels than the cutoffs required by Part 26, and only for the testing of marijuana.
- **Approximately 13 percent of facilities tested for additional controlled substances not in the NRC testing panel.** Ten (10) of 76 facilities reported testing for one or a combination of the following controlled substances: barbiturates, benzodiazepines, hydrocodone, hydromorphone, methadone, oxycodone, oxymorphone, and propoxyphene. Four positives for additional substances were reported in CY 2013 (Table 7). Based on discussions with industry representatives, the staff has learned that many licensees desire to implement an expanded panel of drugs to be tested, such as including benzodiazepines and/or semi-synthetic opiates, to better identify persons that may be using or abusing such narcotics or adversely affected by their pharmacology; however, only 13 percent of all facilities licensees have implemented an expanded drug testing panel despite regulatory latitude (see Paragraph 26.31(d)) for such an initiative. The staff notes that U.S. Department of Health and Human Services (HHS) is proposing changes to its Mandatory Guidelines for Federal Workplace Drug Testing Programs (HHS Guidelines) to, in part, increase the number of drugs in the drug testing panel because of concerns with substance abuse of semi-synthetic opiates (e.g., oxymorphone, oxycodone, hydromorphone, and hydrocodone). The staff plans to assess whether to propose by rulemaking the incorporation of these drugs and possibly others into the Part 26 drug testing panel.

¹⁶ The "limit of detection" is the lowest concentration of an analyte that a laboratory analytical procedure can reliably detect (see 10 CFR 26.5, "Definitions") and is dependent on specimen preparation, test equipment, procedures, and technician expertise.

¹⁷ A "Dilute" specimen is a validity testing result based on a laboratory determination that the creatinine and specific gravity (SG) concentrations are lower than expected for human urine (see 10 CFR 26.5).

- **Forty 24-hour reportable events were received in CY 2013.** Licensees and other entities reported 40 events requiring a 24-hour event report to the NRC Operations Center under Paragraph 26.719(b). These reports inform the NRC of significant violations of an FFD program involving supervisory or NRC-licensed individuals, transportation issues, and/or programmatic deficiencies (Table 1 and Table 2). Seventeen (17) events were associated with supervisors and 12 events involved NRC-licensed operators. The data shows that the substance of abuse is alcohol and marijuana and a potential increasing trend with reportable events involving licensed operators; this trend is being reviewed by the staff. Further, all 24-event reports are reviewed by the NRC and inspection and enforcement actions are implemented, as necessary, to improve performance and preclude recurrence.
- **Fifteen 30-day reports were received by the NRC in CY 2013.** Licensees and other entities reported 15 performance issues associated with specimen testing at licensee testing facilities (LTFs) and/or HHS-certified laboratories. As detailed in Table 3, these issues involved equipment malfunctions, human errors, and process/procedure problems with the blind performance test sample (BPTS) program. The number of reports received increased by 166 percent from CY 2012 (6 events) and were dominated by performance issues associated with BPTS (13 of 15 events). The staff continues to work with the industry and coordinate with HHS to help improve performance.



SECTION 2, DETAILED DATA ANALYSIS

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Section 2a. Detailed Data Analysis Summary

This section summarizes key observations on the D&A testing information for CY 2013 contained in this report.¹⁸ Consult the referenced table(s) associated with each observation for additional information.

- The industry performed a total of 161,697 D&A tests. The total number of tests steadily increased each year from CYs 2003 to 2012 and yet, CY 2013 marks the first year that a decline has been noted in comparison to previous year testing. In CY 2013, the total tests performed decreased by 9.7 percent compared to CY 2012. (Table 9) Specifically, declines were seen in each test type conducted: pre-access (12,251 fewer), random (4,265 fewer), for-cause¹⁹ (97 fewer), post-event (165 fewer), and followup (660 fewer). (Table 9)
- Approximately 65 percent of all positive test results occurred at pre-access testing. As a result, a significant percentage of illicit drug use and alcohol misuse is identified before a licensee ever allows a person unescorted access to an NRC-licensed facility. (Table 9)
- The industry positive rate for all tests conducted remained low at 0.62 percent. The industry positive rate has declined since 2000 (a high of 1.09 percent). (Table 9)
- The industry positive rate for random tests was 0.30 percent. (Table 9) The random testing positive rate has remained low since required testing began in 1990 (fluctuating between a low of 0.23 percent as recently as 2008 and a high of 0.39 percent in 2000). (Table A- 2)
- The industry positive rates by employment category for all tests remained low. (Table 6)
 - Licensee employees: 0.25 percent
 - Contractors/Vendors (C/V): 0.81 percent
- C/Vs continued to have significantly higher positive testing rates than licensee employees; a pattern consistent across all testing years and all test types. Since 1993, C/Vs have had an overall positive test rate that is, on average, 3.6 times greater than that of licensee employees. (Chart 5, Chart 6, Chart 7, Table A- 4, Table A- 5, Table A- 6, and Table A- 7)
- Industry positive rates are low (less than 1 percent) for pre-access and random testing, but the range in positive rate by site is rather large (see below). The trend of distinct differences in positive rates by employment category continued as in previous years; data indicated that C/Vs test positive at a much higher rate than licensee employees. (Table 10)

Pre-access testing positive rates:

- Licensee employees: 0.35 percent (site specific range²⁰: 0 to 3.85 percent)
- C/Vs: 0.78 percent (site specific range: 0 to 2.43 percent)

¹⁸ In SECY 04 0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," issued October 2004, the NRC described guidance for designating sensitive unclassified non-Safeguards Information relating to nuclear power reactors. The NRC applied this guidance to information in this report, in part, to prevent persons from subverting the effectiveness of the D&A testing provisions in Part 26.

¹⁹ Although the term "for cause" is not hyphenated in Part 26, hyphens have been added in this report for clarity and grammatical accuracy.

²⁰ The positive-rate range is across all facilities and indicates the lowest and the highest positive rates reported in CY 2013. These values do not directly correlate to performance.

Random testing positive rates:

- Licensee employees: 0.14 percent (site specific range: 0 to 0.8 percent)
- C/Vs: 0.57 percent (site specific range: 0 to 2.01 percent)
- Three substances (marijuana, alcohol, and cocaine) accounted for approximately 81 percent of positive results. In comparison to 1990, the first year of NRC required drug and alcohol testing, the preferences of substance users appears to be changing. (Table 7)
 - Marijuana, 47 percent of substances in 1990; 46 percent in 2013
 - Alcohol, 19 percent of substances in 1990; 23 percent in 2013
 - Cocaine, 29 percent of substances in 1990; 12 percent in 2013
- Substance use preferences continued to be different by employment category (Table 7):
 - Licensee employees: alcohol (47 percent); marijuana (32 percent); cocaine (12 percent)
 - C/Vs: marijuana (48 percent); alcohol (19 percent); cocaine (12 percent)
- Thirty-one (31) percent of alcohol positives reported via the e-reporting system in CY 2013 were associated with a blood alcohol concentration (BAC) level below 0.04. The 2008 FFD final rule implemented time-dependent BAC levels effectively lowering the confirmatory alcohol testing cutoff levels resulting in a significant increase in alcohol detection. (Chart 21 and Chart 22)
- A significant trend over the past five years is the increasing share of amphetamines positive test results. While accounting for a relatively small percentage of total positives in CY 2013 at 8.0 percent of all positive results, amphetamines positives continued to grow in comparison to previous years. For example, the share of amphetamines positives as a percentage of all positive results in CY 2013 is 2.2 times higher than the percentage for CY 2009 (3.62 percent). Prior year amphetamines positive rates are 5.48 percent (CY 2012), 7.56 percent (CY 2011), 5.28 percent (CY 2010), and 3.62 percent (CY 2009). This is an upward trend, with the exception of CY 2012 results, that is being reviewed by the staff.
- For-cause testing accounted for the highest industry positive rate at 13.40 percent which is somewhat expected because this test type is only conducted when signs of impairment are observed by a trained individual or credible information about illicit drug use or alcohol misuse is received and testing is conducted. Positive for-cause testing rates appear to be converging between C/Vs and licensee employees since 2010. NRC staff believes this convergence is due to use of the e-reporting system which enhances the accuracy and clarity of information reported to the NRC. (Chart 7)
- Subversion attempts accounted for 14.9 percent of the 975 testing violations reported via the e-reporting system in CY 2013. By comparison, in CY 2012, subversion attempts accounted for 15.9 percent of testing violations that were e-reported. The subversion map in Figure 1 presents a detailed evaluation of when and how individuals attempted to subvert the FFD testing process and when and how each subversion attempt was identified this information helps licensees target their efforts to prevent donor subversion of the drug testing programs.

- In CY 2013, 36 facilities reported conducting LOD testing on 652 dilute specimens, with 11 positive results. This correlates to a 1.7 percent positive rate for LOD testing, which is 2.7 times higher than the overall industry positive rate for all tests conducted (0.62 percent).

In CY 2013, two construction sites (V.C. Summer Units 2 and 3, Vogtle Units 3 and 4)²¹ reported performing 9,394 tests (5.8 percent of industry tests performed), with a 178 positive drug and alcohol tests results and testing refusals (17.7 percent of industry positives). The positive tests and testing refusals primarily were identified during pre-access testing (120) with the remaining results as follows: random (34), for-cause (15), post-event (2) and followup (7). If the FFD data from the construction sites were removed from the industry totals, the industry positive rates would be:

- All tests, the industry positive rate would drop from 0.62 to 0.54 percent;
 - Pre-access tests, the industry positive rate would drop from 0.73 to 0.64 percent; and,
 - Random tests, industry positive rate would drop from 0.30 to 0.26 percent.
- Fifteen 30-day reportable events were received in CY 2013. Licensees and other entities reported 15 events associated with specimen testing at licensee testing facilities (LTFs) and/or HHS-certified laboratories. These events involved equipment malfunctions, human errors, and issues associated with blind performance test samples (BPTS). The number of events reported increased by 166 percent from CY 2012 (6 events). Thirteen (13) of 15 events were associated with BPTSs. (Table 3)
 - Forty 24-hour reportable events were received in CY 2013. Licensees and other entities reported 40 events requiring a 24-hour event report to the NRC Operations Center under Paragraph 26.719(b), as a result of individual employee violations of FFD program requirements or other FFD programmatic deficiencies (Table 1 and Table 2). Seventeen (17) events were associated with supervisor FFD program violations; twelve (12) events involved NRC-licensed operators.

²¹ Does not include results for Watts Bar Unit 2, the licensee restarted construction in 2008, but has chosen to include the construction site personnel in the operating reactor drug and alcohol testing program at the co-located facility, instead of in a separate 10 CFR Part 26, Subpart K program (i.e., the minimum FFD program requirements required at a reactor construction site). Segregating results for construction site personnel was not possible.

Section 2b. Licensee and Other Entity Reportable Events

Licensees and other entities reported FFD-related events involving 30 individual employee violations (Table 1) and 10 other programmatic issues (Table 2) to the NRC Operations Center under Section 26.719, "Reporting Requirements," (i.e., 24-hour event reports). Information presented in Table 1 and Table 2 was collected from a variety of sources (e.g., hard copy FFD program performance reports, Single Positive Test Forms (SPTF), Annual Reporting Forms (ARF), and 24-hour event reports. The hard copy reports and the electronic SPTF and ARF are available in the NRC's Agencywide Documents Access and Management System (ADAMS) and the event reports are available at the NRC's Event Notification Report website, <http://www.nrc.gov/reading-rm/doc-collections/event-status/event/>. For additional information, on drug prevalence within the licensed operator work category see Charts 18 and 20.

Table 1. 24-Hour Reportable Events Resulting from Individual Employee Violations

Event Type	Facility	Employment Type	Labor Category	Substance	NRC Event Number
Random Test	Calvert Cliffs	C/V	Supervisor	Alcohol	49463
	Clinton	Employee	Supervisor	Alcohol	48740
	Fort Calhoun	C/V	Supervisor	Marijuana	49056
		C/V	Supervisor	Cocaine	48668
	Grand Gulf	Employee	Licensed Operator	Marijuana	48973
		Employee	Supervisor	Cocaine	49210
		Employee	Licensed Operator/Supervisor	Cocaine	49625
	Limerick	Employee	Supervisor	Alcohol	48963
		Employee	Supervisor	Alcohol	49024
		Employee	Licensed Operator	Alcohol	49644
	Nine Mile Point	Employee	Licensed Operator/Supervisor	Alcohol	48883
	Oconee	Employee	Licensed Operator	Alcohol	49468
	Oyster Creek	Employee	Supervisor	Alcohol	49221
	Palisades	Employee	Licensed Operator	Alcohol	49298
	Pilgrim	Employee	Supervisor	Marijuana	49187
Quad Cities	Employee	Licensed Operator	Marijuana	49321	
Wolf Creek	Employee	Supervisor	Alcohol	49065	

Table 1. 24-Hour Reportable Events Resulting from Individual Employee Violations

Event Type	Facility	Employment Type	Labor Category	Substance	NRC Event Number
For-Cause Test	Grand Gulf	Employee	Licensed Operator	Alcohol	49030
	Harris	C/V	Supervisor	Marijuana	49518
	Millstone	Employee	Licensed Operator	Alcohol	48934
	Nine Mile Point	Employee	Supervisor	Alcohol	49596
	Nuclear Fuel Services	Employee	Supervisor	Alcohol	49368
	V.C. Summer 1	C/V	Supervisor	Alcohol	49336
	Surry	Employee	Licensed Operator	Alcohol	49456
Followup Test	V.C. Summer 2&3	C/V	Supervisor	Alcohol	49253
PDI	Saint Lucie	Licensee	Licensed Operator	Arrested while off duty for possession of "a controlled substance"	48882
	Turkey Point	C/V	Supervisor	Arrested while off-site for possession of "a controlled" substance"	49096
	Waterford	Employee	Licensed operator	Arrested while off-duty for driving under the influence of alcohol	49252
Unknown	Oconee	C/V	Supervisor	Not specified	49291
	Prairie Island	Not specified	FFD program staff	"FFD policy violation" no additional information provided	49387

PA Protected area (see Section 26.5 for definition)
PDI Potentially Disqualifying Information (see Section 26.5 for definition)
Employee Licensee Employee

Table 2. 24-Hour Reportable Events Resulting from Substances Discovered in the Protected Area, Laboratory Testing, and Programmatic Failures or Discovered Vulnerabilities

Event Type	Facility	Description	Event Number
Laboratory Testing	Duke Energy (fleet)	HHS-certified laboratory reported a false negative result for a BPTS formulated to return an "adulterated" validity test result.	49359
	Indian Point	Incorrect test result for a blind performance test sample. MRO did not discover error; identified during NRC inspection.	49573

Table 2. 24-Hour Reportable Events Resulting from Substances Discovered in the Protected Area, Laboratory Testing, and Programmatic Failures or Discovered Vulnerabilities

Event Type	Facility	Description	Event Number
Programmatic Failure or Discovered Vulnerability	North Anna / Surry	Changes in the Dominion FFD program resulted in 11 supplemental personnel not being included in the current random testing pool (two were actively badged, nine were not badged but perform duties requiring them to be subject to the FFD D&A program).	49629
		The error occurred in 2010 when it was decided that contract employees would no longer be placed in a select labor pool. When this occurred, FFD program personnel no longer monitored the particular labor pool in the belief that it no longer existed. Upon discovering that the labor pool did still exist, the licensee included the personnel in the random testing pool.	49630
	Susquehanna	Computer program error resulted in two behavioral observation program (BOP) inquiries being accepted without required documentation to continue unescorted access authorization (UAA) and without verification of an actual observation within the required 30-day timeframe. The computer error resulted in the answers for two of the three questions in the BOP form not being recorded when the form was submitted. This resulted in the two security accounts being re-zeroed and allowing UAA for an additional 15 days. The BOP supervisor was contacted and verified that both individuals were intended to continue with UAA. At no time were these individuals removed from the FFD or BOP programs.	48777
Programmatic Failure or Discovered Vulnerability (continued)	V.C. Summer 1	<p>An error in the random testing software (EMPACT – Employee Plant Access Control Tracking) resulted in 53 employees that had returned to the site in the previous six years not being included in the random testing pool.</p> <p>When an employee terminated employment, the “Exclude from Random” feature was selected in EMPACT to remove the individual from the random testing pool. If the former employee returned to the site for re-employment, a “new request” was selected in EMPACT which was supposed to automatically deselect the “Exclude from Random” selection. This process did not work.</p> <p>When the error was discovered, all affected employees were contacted to report for D&A testing, a standdown of the EMPACT program was put in place, the software vendor was contacted to correct the problem, and other utilities known to use EMPACT software were notified.</p>	49213
Substance Discovered in Protected Area (PA)	Braidwood	An alcohol container (very old bottle of gin) was concealed above ceiling tiles in a bathroom in the Administration Building located in the PA (discovered during remodeling).	48877
		Two alcohol containers (very old bottles of blackberry brandy) were concealed above ceiling tiles in a bathroom in the Administration Building located in the PA (discovered during remodeling).	48885
	Monticello	An alcohol container (50 mL small bottle, approximately two-thirds full) was concealed beneath a desk structure to a temporary trailer in the PA.	49023
	Oyster Creek	Alcohol discovered in the project area near the dilution plant trash raking system. The intake canal was identified as the source.	49510
	Watts Bar	Construction employee discovered alcohol in the PA by Unit 2.	49609

Laboratories

licensee and other entity reports on the performance of LTFs and HHS-certified laboratories. Performance errors in technique, methodologies, quality control, or urine specimen processing. To meet the reporting requirements of 42 CFR 26.719(c), the licensee or other entity submits a report to the NRC (called a “30 day report”) describing the actions taken or planned. The ADAMS accession number (ML) for each 30-day report is referenced in the “Summary” column in Table 3.

Errors reported in CY 2013 were associated with the preparation or laboratory testing of blind performance test

Table 3. Laboratory Testing Performance Issues²²

Performance Issue Summary	Cause(s) of Issue	Corrective Action
<p>The HHS-certified laboratory (Quest-Lenexa) reported inconsistent test results for four BPTSs formulated by Professional Toxicology.</p> <p>Two BPTSs were formulated to return dilute negative test results; both returned negative test results.</p> <p>Two BPTSs were formulated to return a positive marijuana test result; both returned as positive for marijuana but also dilute.</p> <p>ADAMS Accession No.: ML13269A097 (letter: 09/25/2013)</p>	<p><u>Dilute negative BPTSs</u>: The BPTS supplier was unable to provide a plausible explanation regarding why the results were inconsistent with the specimen formulation.</p> <p><u>Dilute positive marijuana BPTSs</u>: The BPTS supplier determined that a mathematical error was made (a decimal point was misplaced) and 10 times the anticipated creatinine was added to the lot. As a result, the specimen yielded a normal creatinine level instead of a dilute result.</p>	<p>(1) The BPTS supplier discarded both lots associated with the BPTSs.</p> <p>(2) Entergy fleet plants were notified of the BPTS lot numbers in question.</p> <p>(3) Replacement BPTSs from new batches were submitted for testing; the dilute negative samples processed correctly; the positive marijuana samples did not return consistent results (again returning dilute positive results). [No additional corrective action was noted in the licensee report.]</p>

²² The NRC determined the “Cause(s) of Issue” and “Corrective Actions” presented in this table. This report does not evaluate the effectiveness of the corrective actions.

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
BPTS: Incorrect Result	Arkansas Nuclear One	<p>The HHS-certified laboratory (Quest-Lenexa) reported inconsistent test results for two BPTSs formulated by Professional Toxicology to test positive for amphetamines</p> <p>The HHS-certified laboratory reported both specimens to be positive for amphetamine, but also "invalid" due to low creatinine levels (specimens were submitted for testing on October 28 and 29, 2013).</p> <p>Specimens from the same lot (1307N-AMP) also were processed by Entergy site Vermont Yankee and non-Entergy licensees (Nine Mile Point and Dominion), with invalid results also received.</p> <p>ADAMS Accession Nos.: ML14030A217 (letter: 01/16/2014) ML14028A199 (letter: 01/16/2014)</p>	<p>The BPTS supplier provided the following suggestions regarding the depleted creatinine levels, but a definitive determination could not be identified:</p> <p>(1) A residual amount of bleach solution used to rinse the shipping container could have caused the chemical breakdown of the creatinine molecules (ruled out because a non-bleach solution was subsequently used by the BPTS supplier and the new lot of amphetamine positive specimens continued to produce depleted creatinine levels).</p> <p>(2) Dietary changes in one of the drug free urine providers used by Professional Toxicology may have caused the depleted creatinine levels. However, two additional amphetamines specimens from a new lot were obtained from Professional Toxicology which was supposed to have been prepared from urine obtained from new providers; the results for both specimens indicated depleted creatinine levels.</p> <p>Note: This event report also is associated with a 30-day event report submitted by Vermont Yankee which utilized amphetamine positive BPTSs from the same supplier and same lot).</p>	<p>1) Entergy fleet plants were notified of the BPTS lot numbers in question.</p> <p>2) Another BPTS supplier will be utilized throughout the Energy fleet until Professional Toxicology is able to identify and correct the issues its BPTSs.</p>

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
BPTS: Incorrect Result	Beaver Valley	<p>The HHS-certified laboratory (MedTox) reported an "invalid" test result for a BPTS formulated by EISOHLY Laboratories to return an adulterated validity test result for nitrites.</p> <p>ADAMS Accession No.: ML13226A006 (letter: 08/12/2013)</p>	<p>MedTox initially suggested the discrepancy was possibly due to the presence of other oxidants such as chromium.</p> <p>The licensee requested that MedTox send the Bottle B split specimen to a second HHS-certified laboratory for testing; testing confirmed an adulterated test result for nitrites.</p> <p>MedTox then determined that the Certifying Scientist failed to adequately investigate and resolve an inconsistency between the screening and confirmatory test results which resulted in incorrectly reporting an "invalid" test result.</p>	<p>(1) The procedure for comparison of initial screening and confirmation data and corrective action for discrepant results was reviewed with the Certifying Scientist.</p> <p>(2) All Certifying Scientists completed additional training.</p> <p>(3) The laboratory standard operating procedure for "Analysis of Nitrite in Urine" was revised to be more rigorous in the comparison of the initial and confirmatory results prior to reporting.</p>
BPTS: Incorrect Result	Duke Energy	<p>The HHS-certified laboratory (LabCorp) reported a negative test result for a BPTS formulated by EISOHLY Laboratories to return an adulterated validity test result for nitrites.</p> <p>ADAMS Accession No.: ML13324A539 (letter: 11/06/2013)</p>	<p>The Bottle "B" split specimen was sent to the BPTS supplier for testing, an aliquot of the original sample was sent to another HHS-certified laboratory for testing, and the BPTS supplier also tested a separate sample from the same BPTS batch. All testing correctly reported an adulterated validity test result for nitrite.</p> <p>LabCorp determined the likely cause of the reporting error to be a lack of procedural guidance to challenge a disparity between the initial "presumptive positive" and the "confirmatory negative" result. Additional testing should have been performed by the technician to resolve the discrepancy.</p>	<p>The laboratory revised the SOP for "Nitrite Confirm in Urine by Ion Chromatography" to add a step to address potential disparities between initial screenings and confirmatory test results. The new step requires the laboratory technician to positively reconcile discrepancies between the initial screening result and confirmatory test result for nitrites.</p>

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
BPTS: Incorrect Result	Indian Point	<p>NRC inspectors identified during a baseline inspection on November 21, 2013, that the HHS-certified laboratory (Quest) test result for a BPTS formulated by Professional Toxicology was inconsistent with the expected result.</p> <p>The BPTS was formulated to return a dilute negative drug test result; the laboratory reported a negative test result (creatinine 15.7 mg/dL; but the specific gravity value did not meet the dilute criteria).</p> <p>ADAMS Accession No.: ML14038A152 (letter: 01/29/2014)</p>	<p><u>MRO review of BPTS test result:</u> The licensee received testing documentation from the MRO during a Refueling Outage when "Shared Services" personnel (other site personnel to augment workload escalation due to the outage) were assisting in performing the initial review of laboratory test results. The licensee concluded that poor use of Human Performance tools, multi-tasking and failure to use place keeping, resulted in the MRO's staff not identifying the inconsistent test result.</p> <p><u>Laboratory testing:</u> The BPTS supplier retested a small frozen sample retained of the original lot. The test confirmed that the specimen was dilute. However, the test was performed on a frozen sample that had not been subjected to the same storage conditions as the shipped BPTS to the laboratory for testing.</p> <p>The HHS-certified laboratory that performed the initial testing on March 5, 2013, could not retest the original specimen because it had been discarded within 7 days after initial testing per the laboratory SOP. As a result, it was not possible to verify proper testing of the BPTS.</p> <p>The licensee concluded that insufficient evidence existed to determine the cause of the inconsistent test result.</p>	<p>(1) The lead access authorization (AA) coordinator and AA/FFD staff were coached on management expectations on use of Human Performance tools and emphasized the potential for errors when multitasking and to ensure distractions are minimized during review of HHS-Certified Laboratory results.</p> <p>(2) AA shared the event with the fleet access group to include all AA/FFD supervisors and AA/FFD shared resources stressing the potential for errors when multi-tasking.</p> <p>(3) Changed the BPTS review process such that only the AA/FFD staff can complete reviews of HHS-certified laboratory results.</p> <p>(4) Changed BPTS supplier.</p>

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
BPTS: Incorrect Result	Nine Mile Point	<p>The HHS-certified laboratory (Quest – Norristown) reported an “invalid” test result for a BPTS formulated by Professional Toxicology to return a dilute negative drug test result.</p> <p>Quest reported that the specimen met the criteria for dilute but also met the criteria for “invalid” due to pH.</p> <p>ADAMS Accession No.: ML13339A315 (letter: 11/14/2013)</p>	<p>The licensee contacted the HHS-certified laboratory, the BPTS supplier, and industry counterparts to evaluate if other utilities experienced the same issue with the BPTS lot. Three other utilities experienced the same issue.</p> <p>The BPTS supplier did not offer an explanation for the results obtained, but indicated that once samples are shipped from their facility, variables in shipment and storage can affect the outcomes of test results.</p>	Licensee is exploring the use of another BPTS supplier.
BPTS: Incorrect Result	Nine Mile Point	<p>The HHS-certified laboratory (Quest-Norristown) reported an “invalid” and positive amphetamines test result for a BPTS formulated by Professional Toxicology only to test positive for amphetamines.</p> <p>The invalid test result was due to the creatinine level of the specimen.</p> <p>ADAMS Accession No.: ML14024A442 (letter: 01/07/2014)</p>	<p>The licensee contacted the HHS-certified laboratory, the BPTS supplier, and industry counterparts to evaluate if other utilities experienced the same issue with the BPTS lot. Three other utilities experienced the same issue.</p> <p>The BPTS supplier did not offer a definitive explanation for the issue, but did suggest that it could have been caused from the bleach wash of containers or one of the drug-free donor’s recent change in dietary supplements.</p>	Licensee changed the BPTS supplier.

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
BPTS: Incorrect Result	Palisades	<p>A BPTS was formulated by EISOHLY Laboratories as positive for codeine, morphine, and 6-acetylmorphine (6-AM).</p> <p>The HHS-certified laboratory (Quest-Lenexa) reported the BPTS test results as positive for codeine and morphine positive and also reported an invalid result due to gas chromatography-mass spectrometry (GC-MS) interference.</p> <p>ADAMS Accession No.: ML13263A111 (letter: 09/18/2013)</p>	<p>The specimen was sent for testing to a second HHS-certified laboratory (MedTox) and testing confirmed the presence of codeine and morphine, but could not confirm 6-AM because of insufficient quantity of remaining specimen for testing.</p> <p>Quest indicated that interference can be caused by a number of factors such as specimen storage and transport conditions, specimen matrix, specimen container contamination, and preservatives used in blind samples. Quest was unable to identify the cause of the GC-MS interference.</p> <p>Since Quest correctly identified 6-AM in two other BPTS tested for the licensee, it appears that interference was isolated to the one BPTS tested, and not the result of a systematic problem with the laboratory's confirmation procedures for 6-AM.</p>	<p>(1) Notified Entergy fleet plants of discrepancy.</p> <p>(2) Notified the Manager, Access Authorization/FFD, and the Medical Review Officer.</p>
BPTS: Incorrect Result	R.E. Ginna	<p>The HHS-certified laboratory (Quest) reported inconsistent test results for two BPTS formulated by Professional Toxicology.</p> <p>The first BPTS was formulated to be positive for amphetamines and methamphetamines. The laboratory returned the correct positive drug test results but also reported the specimen was "invalid" due to low creatinine.</p> <p>The second BPTS was formulated to be positive for marijuana. The laboratory returned the correct positive drug test result, but also reported the specimen was "invalid" due to low creatinine.</p> <p>ADAMS Accession No.: ML14015A366 (letter: 01/13/2014)</p>	<p>In both instances, the laboratory and the BPTS supplier were contacted. The BPTS supplier indicated that a reduction in the creatinine concentration might be a result of the bleach rinse they use on their sample containers; or the result of the donor sample composition.</p> <p>After the first event, the licensee benchmarked the industry and identified that three other utilities with the same issue with the same lot number. Recent operating experience identified seven other utilities having recent issues with the BPTS supplier.</p> <p>After the second event, the industry was benchmarked and one other utility was discovered to have had multiple issues with this blind sample provider.</p>	<p>Replaced BPTS supplier.</p>

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
BPTS: Incorrect Result	Surry	<p>HHS-certified laboratory (Quest-Norristown) reported a cocaine positive drug test result for a BPTS formulated by Professional Toxicology. The MRO questioned the quantitation of the laboratory test result which was more than double the target value of 540 ng/mL.</p> <p>ADAMS Accession No.: ML13107A607 (letter: 04/09/2013)</p>	<p>The HHS-certified laboratory investigated the discrepancy and determined that the forensic scientist may not have properly primed the pipet prior to addition of the internal standard to the sample. Correct internal standard addition is a critical step in the extraction process to perform accurate quantitative analysis</p>	<p>(1) The laboratory reviewed the incident with appropriate staff.</p> <p>(2) The forensic scientist who performed the original confirmation tests was retrained by his supervisor and his performance on the bench was observed for competency evaluation.</p>
BPTS: Incorrect Result	V.C. Summer	<p>The HHS-certified laboratory (Alere Toxicology) reported a negative test result for a BPTS formulated by EISOhly Laboratories to test positive for hydrocodone.</p> <p>ADAMS Accession No.: ML13189A282 (letter: 06/27/2013)</p>	<p>The BPTS was reactive to the opiates immunoassay, but the quantitative value was below the cutoff level for the test panel. The laboratory suggested that the BPTS supplier only use material containing the primary drug to be tested. In the case of opiates, immunoassay vendors primarily use morphine as the calibrator for assay controls. Using other opiates which are not as reactive will result in double blind failures.</p> <p>The BPTS supplier agreed with the investigative report from the laboratory.</p> <p>The determination was confirmed when the BPTS supplier sent another sample to Alere for testing which was positive for hydrocodone and hydromorphone. The sample registered just above the cutoff level, confirming the cause.</p>	<p>Based on discussions between the HHS-certified laboratory, the licensee, and the BPTS supplier, the BPTS supplier agreed to increase the concentration of morphine in future samples.</p>

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
BPTS: Incorrect Result	Vermont Yankee	<p>The HHS-certified laboratory (Quest-Norristown) reported inconsistent test results for BPTSs formulated by Professional Toxicology.</p> <p>Three BPTSs formulated to test positive for amphetamines, were reported by the HHS-certified laboratory as positive for amphetamine, but also "invalid" due to low creatinine levels (specimens were submitted for testing on October 17 and 24, 2013).</p> <p>Four BPTSs formulated to test positive for marijuana, were reported by the HHS-certified laboratory as positive for marijuana positive but also "invalid" due to low creatinine levels. (dates the specimens were submitted for testing were not provided)</p> <p>The depleted creatinine concentrations of the specimens in question were confirmed by two independent HHS-certified laboratories.</p> <p>ADAMS Accession No.: ML14042A198 (letter: 02/05/2014)</p>	<p>The BPTS supplier provided the following suggestions regarding the depleted creatinine levels in the specimen lots with invalid results:</p> <p>(1) A residual amount of bleach solution used to rinse the shipping container could have caused the chemical breakdown of the creatinine molecules (ruled out because a non-bleach solution was subsequently used by the BPTS supplier and the new lot of amphetamine positive specimens continued to produce depleted creatinine levels).</p> <p>(2) Dietary changes in one of the drug free urine providers used by Professional Toxicology may have caused the depleted creatinine levels.</p> <p>Note: This event report also is associated with a 30-day event report submitted by Arkansas Nuclear One which utilized amphetamine positive BPTSs from the same supplier and same lot number (1307N-AMP).</p>	<p>(1) Entergy fleet plants were notified of the BPTS lot numbers in question.</p> <p>(2) Another BPTS supplier will be utilized throughout the Energy fleet until Professional Toxicology is able to identify and correct the issues its BPTSs.</p> <p>(3) The BPTS supplier changed the solution it used to rinse shipping containers.</p> <p>(4) The BPTS no longer is using the drug free urine provider who drastically changed his diet.</p> <p>(5) The BPTS supplier contacted SAMHSA regarding the issue, but representatives were unable to offer an acceptable explanation for the testing anomalies.</p>

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
False positive result (donor specimen)	Browns Ferry	<p>A false positive testing error on a donor specimen obtained during the donor's followup drug test.</p> <p>The initial specimen provided by the donor was out of the acceptable temperature range; this specimen tested negative at the HHS-certified laboratory. The second specimen collected under direct observation tested positive for amphetamines.</p> <p>The donor challenged the negative result for the initial specimen; split specimen testing was performed at a second HHS-certified laboratory (Quest) and positive results for amphetamines and methamphetamines were reported.</p> <p>Further testing by the second HHS-certified laboratory at the request of the licensee to evaluate the discrepancy returned a negative test result.</p> <p>ADAMS Accession No.: ML13144A576 (letter: 05/22//2013)</p>	<p>Quest determined the discrepant result for the split specimen testing of the donor's initial specimen was due to sample handling error during the original confirmation procedure, resulting in two consecutive samples with the same confirmatory test results.</p> <p>The job performance of the individuals who performed the testing (i.e. the individual who removed the test aliquot from the original specimen container; the individual who prepared the test aliquot for confirmation analysis); was reviewed and no apparent issues were noted.</p> <p>[Note: based on resolution of the split specimen testing at Quest on the initial specimen provided by the donor, the licensee determined that the donor had attempted to subvert the testing process (the initial out of temperature specimen tested negative and the second specimen collected under direct observation tested positive) and a permanent denial was issued by the licensee for a subversion attempt.]</p>	<p>(1) Quest updated the standard operating procedure to required repeat analysis of any sample containing discrepant results from the primary testing laboratory.</p> <p>(2) Quest will perform and document retraining of each individual to ensure consistent performance.</p>

Table 3. Laboratory Testing Performance Issues²²

Issue	Facility	Performance Issue Summary	Cause(s) of Issue	Corrective Action
Specimen accessioning paperwork error	Calloway	<p>The laboratory technologist at the HHS-certified laboratory (Toxicology & Drug Monitoring Laboratory, University of Missouri) failed to provide required signatures on the Specimen Receiving Section (Step 4) of six (6) Federal Custody and Control Forms (CCFs).</p> <p>ADAMS Accession No.: ML13277A114 (letter: 10/03/2013)</p>	<p>The laboratory technologist who received and accessioned specimens failed to follow the standard operating procedure (SOP) for handling specimens.</p> <p>The laboratory discovered the error during the review process performed the same day as specimen accessioning and testing, but the technologist had left for the day and the annotations could not be made until the next day. The laboratory transmitted the test results and the CCFs without the required laboratory technologist signatures.</p> <p>Corrections were made to the CCFs the day after testing was performed, but the corrected paperwork was not sent to the licensee.</p>	<p>(1) The laboratory technologist was required to re-read the specimen receiving and accessioning SOP and signed a document attesting to understanding and compliance with the procedure.</p> <p>(2) A supervisory staff member oversaw the receiving and accessioning steps performed by the laboratory technologist for five working days commencing with the next shipment of Calloway specimens.</p>
Specimen accessioning paperwork error	DC Cook	<p>A specimen was rejected for testing because the tamper-evident seals were not verified as intact at the time of specimen receipt at the HHS-certified laboratory (South Bend Medical Foundation).</p> <p>ADAMS Accession No.: ML13261A147 (letter: 09/13/2013)</p>	<p>The laboratory investigation determined that the individual who received and opened the leak-resistant bag containing the specimen failed to document in real time the condition of the specimen bottle seals (i.e., at the time of receipt) as required by laboratory protocol and the National Laboratory Certification Program.</p> <p>Although scientifically valid test results were obtained and negative, failure to document the condition of the tamper seals requires the certifying laboratory to report the specimen as "Specimen Rejected: Tamper-evident seals were not verified as intact at time of receipt of specimen."</p>	<p>(1) Upon notification of the rejected specimen, a second specimen was collected and the test results were negative.</p> <p>(2) The laboratory updated the standard operating procedure (SOP) to require that "Prior to creating an aliquot from an unopened specimen bottle or specimen tube..., the individual that breaks the tamper-evident seal MUST verify that the condition of the tamper-evident seal on the specimen(s) has been annotated on the CCF." The laboratory believed this additional review step would minimize the potential for recurrence of the issue.</p>

Section 2d. Program and System Management

This section summarizes program and system management initiatives reported by licensees and other entities in CY 2013 associated with their drug and alcohol testing programs. These initiatives, enabled by regulation, demonstrated licensee commitment to helping ensure that persons subject to Part 26 can safely and competently perform assigned duties. In addition, the lowering of D&A cutoff levels, LOD testing, and testing for additional substances are powerful means to identify illicit D&A use, enhance deterrence, and inform reviewing official decisions concerning the trustworthiness and reliability of individuals.

Alcohol Testing

The confirmatory BAC percentage considered a positive test result is provided in Section 26.103, "Determining a Confirmed Positive Test Result for Alcohol;" this positive test result is based on the Part 26 time-dependent alcohol testing cutoff levels. Part 26 does not permit licensees or other entities to lower these cutoffs when conducting NRC-required alcohol tests or applying NRC-required sanctions under Section 26.75, "Sanctions." However, for followup testing, licensees and other entities are required to determine whether the affected individual has abstained²³ from D&A use and for such cases licensees can implement licensee-administered sanctions and are required to adjudicate authorization pursuant to Paragraph 26.69(d), "Maintaining authorization with other potentially disqualifying FFD information," et al. Some licensees or other entities have also established "corporate" or "employment" alcohol limits to screen applicants before employment.

- In CY 2013, one facility used a lower alcohol testing cutoff level than permitted by rule for pre-access and followup testing (BAC of 0.02). It appears that the facility sanctions under its own authority if an individual tests positive at a BAC below the NRC cutoff level.
- In CY 2013, the NRC staff continued to hear of examples where licensees and other entities have implemented lower D&A cutoffs for the conduct of followup testing to ascertain abstinence pursuant to Substance Abuse Expert-administered alcohol treatment and followup plans, implemented pursuant Sections 26.3, 26.69 and 26.189 and assigned to individuals that have been determined to be in violation of an FFD policy.

Drug Testing

The NRC drug testing cutoff levels are specified in Sections 26.133 and 26.163, both entitled, "Cutoff Levels for Drugs and Drug Metabolites." Some licensees or other entities used lower drug testing cutoff levels during the reporting period, as authorized by Paragraph 26.31(d).

A. Lower Drug Cutoff Levels

In CY 2013, four facilities used lower marijuana testing cutoff levels.

²³ As described in 10 CFR 26.31(c)(4), a followup test verifies an individual's continued abstinence from substance abuse. This type of testing, required by 10 CFR 26.69, "Authorization with Potentially Disqualifying Fitness-for-Duty Information," is one of several criteria that licensees are required to use to determine whether to grant or maintain authorization. A licensee may define what constitutes abstinence in its procedures.

B. LOD Testing²⁴, Paragraph 26.163(a)(2)

In CY 2013, 84 percent of facilities (64 of 76) reported implementing the voluntary LOD testing policy, as permitted by Paragraph 26.163(a)(2). This demonstrated a strong commitment to identifying illicit drug use, which, in turn, increased the likelihood that authorized personnel are fit for duty and that persons determined to be unfit for duty are subject to the sanctions and actions prescribed in Section 26.75, "Sanctions," and Section 26.77, "Management Actions Regarding Possible Impairment," respectively, and are afforded employee assistance, if applicable.

In CY 2013, 36 facilities reported conducting LOD testing on 652 dilute specimens, with 11 positive results (i.e., a 1.7 percent positive rate, which was 2.7 times the overall industry positive rate for all tests conducted (0.60 percent)). Use of LOD testing resulted in nine (9) pre-access and two (2) random testing positives.

C. Testing for Additional Substances, Paragraphs 26.31(d)(1)(i) and (d)(1)(ii)

Licensees and other entities may consult with local law enforcement authorities, hospitals, and drug counseling services to determine whether the local workforce maybe using drugs that are not included in the drug testing panel specified by NRC regulations. If so, licensees and other entities may add drugs to their drug testing panels and establish cutoff levels for these additional substances, based on established forensic toxicology science and review. Licensees and other entities are not required to test for additional drugs or drug metabolites.

In CY 2013, ten (10) facilities tested for additional drugs or drug metabolites. The additional substances included barbiturates, benzodiazepines, hydrocodone, hydromorphone, methadone, oxycodone, oxymorphone, and propoxyphene.

In CY 2013, one facility also reported testing an individual for tramadol, as permitted by 26 CFR 26.31(d)(1)(ii). The test was negative.

Section 2e. Other Program and System Management Issues²⁵

This section presents a variety of program and system management issues reported by licensees and other entities in CY 2013. The descriptions including any adjectives and assessments used in this section, even though not within quotations, were provided by the listed licensees and entities; the NRC staff made only grammar and editorial changes to improve

²⁴ LOD testing is a powerful method to identify illicit drug use in instances where an individual may be attempting to subvert the testing process through urine specimen dilution. Although many legitimate reasons may cause a donor to provide a urine specimen with a dilute validity test result, specimen dilution is a method that individuals may use to subvert the testing process by consuming large quantities of fluid prior to providing a specimen to decrease the concentration of drug(s)/drug metabolite(s) in their specimen. As a result, the concentration of a drug may be below the Part 26 cutoffs for the drug or drug metabolite—this would give a false negative drug test result and could be adverse to safety and security. However, if a specimen has been determined to be dilute and LOD testing is conducted, the ability to detect illicit drug use is markedly improved, because the LOD testing technique uses the lowest concentration of the target analyte that can be reliably detected. This concentration level is typically significantly lower than the cutoff level. A dilute positive test result would be a strong indicator that the individual attempted to subvert the test.

²⁵ In this section, NRC staff used the descriptive terminology provided by the licensee in its report; however, in some cases, the staff clarified the description to aid understanding.

clarity and provided no observations within this section. The table includes a wide variety of information including computer system upgrades, expanded drug testing panels, internal audit results, specimen collection procedural changes, program policy and procedure improvements, and noted program deficiencies.

Table 4. Program and System Management Issues

Issue Topic	Program and System Management Issue Description	Licensee/ Facility
Blind Performance Test Samples (BPTSs)	The licensee “experienced issues (bad samples)” with the BPTS supplier. ²⁶ The licensee replaced the supplier.	Fort Calhoun
	A self-check determined that an insufficient number of samples were submitted in the third quarter of 2013 to meet the one percent requirement in 10 CFR 26.168(a)(2). Additional samples were submitted immediately upon discovery (October 7, 2013) and the issue was entered and processed through the corrective action program.	Salem/ Hope Creek
Collection Sites	All five breath alcohol technicians completed technician training and factory authorized calibration training for the Intoxilyzer evidential breath testing device. An authorized equipment representative conducted the training.	Nuclear Fuel Service, Erwin
	Implemented use of a breath alcohol content (BAC) questionnaire at all collection sites for instances when an individual provides a specimen that contains alcohol, but is not positive by Part 26 requirements.	Southern Nuclear (fleet)
	Renovated collection site to increase control measures and to improve donor privacy during collections.	Fort Calhoun
	Merged the two Medical/FFD stations at the Vogtle site into a single Medical/FFD department in the new Vogtle Support Center. This change improved the efficiency of operations.	Vogtle
	Purchased Intoxilyzer 8000 model evidential breath testing devices to replace Intoxilyzer 5000 models. Equipment upgrades were made based on a quality assurance audit recommendation.	Cooper
	Purchased 14 new Intoximeter RBTIV evidential breath testing devices.	Susquehanna
Computer Systems	<ul style="list-style-type: none"> • Corporate Medical Services and FFD program staff spent significant time to design, develop, and test major builds and patches deployed within the FFD/Access database (EmPACT). Three (3) major application revisions and four (4) application “patches” were completed. • FFD program staff also checked and assisted the Access Authorization department in verifying the accuracy of any FFD associated data entered in the database. 	Southern Nuclear (fleet)
	<ul style="list-style-type: none"> • Upgraded to EmPACT 4.0 to enhance badging and FFD tracking. 	V.C. Summer Unit 1
	<ul style="list-style-type: none"> • Use EmPACT for the Access Authorization and FFD programs. 	V.C. Summer

²⁶ A 24-hour event report (48792) was made to the NRC Operations Center under 10 CFR 26.719 on February 28, 2013. Two positive BPTSs formulated by Professional Toxicology to test positive for a drug (unspecified in report) failed to yield positive results when tested by the HHS-certified laboratory (Clinical Reference Laboratory). The licensee retracted the 24-hour event report on March 8, 2013, after the licensee determined that the samples were not correctly formulated by the BPTS supplier.

	<ul style="list-style-type: none"> When drug and alcohol results are entered into EmPACT, a second member of the FFD program personnel now verifies that information is entered correctly. 	Units 2 and 3
Corporate FFD Program Management	<ul style="list-style-type: none"> Fleet management oversight, direction and technical guidance for the FFD programs at all plant sites is provided from the Southern Nuclear corporate (SNC) office. The direct responsibility for the SNC fleet Medical Services and FFD Programs is assigned to and fulfilled by the Medical Services Manager at the corporate office. Management direction and responsibilities are provided by a Site FFD Supervisor at each plant site. An SNC FFD Coordinator assists the Site FFD Supervisors with routine daily site functions of the FFD Program, and assists site FFD personnel by serving as the subject matter expert for FFD/Access information database and all technically associated areas and processes. SNC FFD program management spent a significant amount of time and various resources in the fleet standardization of more FFD processes and procedures. This improved the efficiency and quality of the work processes and procedures, and allowed for a higher level of quality when cross-coverage by labor forces is required. In 2013, the Access Authorization department was separated from the Medical and FFD Services department and moved under Fleet Security. 	Southern Nuclear (fleet)
Expanded Drug Testing Panel	<ul style="list-style-type: none"> Instituted an expanded panel to include 10 benzodiazepine drugs for followup testing programs when individuals are known to have abused any substances in the panel. 	Dominion Generation (fleet)
Failure to Report for Testing	<ul style="list-style-type: none"> Due to a process error, FFD staff did not identify that an individual did not report to the collection site as scheduled after notification to report was made by their supervisor. The individual realized that he had not reported for testing at the end of his shift, but prior to leaving the site. He attempted to contact the FFD staff, but they had left for the day. He advised his supervisor that he missed his appointment time. As soon as he reported to work the next morning, he reported to the FFD testing facility and the test was completed. A licensee investigation determined the individual did not intentionally try to subvert the FFD test. FFD staff immediately implemented corrective action to change the process in which individuals are checked into the collection facility so that any late or missing individuals would be immediately noted. 	Diablo Canyon
FFD Program Policies	<ul style="list-style-type: none"> Revised its FFD Policy Statement to meet the intent of 10 CFR 26.27; posted the policy in areas with bulletin boards, on the company website, and at the entrance to the collection site. 	Comanche Peak
	<ul style="list-style-type: none"> Strengthened employee access conditions for those in a followup testing program who have been referred to an employee assistance program on at least two occasions. Employees are denied access following an FFD event while in a followup testing program if there have been two previous denials. Supplemental vendors are denied after a first time violation of the followup program. 	Dominion Generation (fleet)
	<ul style="list-style-type: none"> Revised a Security Implementing Procedure to enhance guidance on acceptance criteria for blind performance test sample results. Included a table that eliminates the need for FFD staff to perform mathematical calculations to determine if test results are satisfactory with regard to percentages of cutoff levels. 	Fermi 2

FFD Program Procedures	Access authorization and FFD program staff members validated the FFD procedures against 10 CFR Part 26 and NEI 03-02 to verify compliance and improve awareness.	D.C. Cook
	Reviewed and revised FFD procedures to more clearly align with 10 CFR Part 26.	Fort Calhoun
	Revised FFD Program procedures to improve efficiency of the testing program and ensure continued compliance with 10 CFR Part 26.	Nuclear Fuel Services, Erwin
	Reviewed all FFD procedures for compliance and for training of new personnel.	V.C. Summer Unit 1
Followup Testing Not Performed	<ul style="list-style-type: none"> A determination of fitness for an individual resulted in a followup testing recommendation that was not entered into the licensee's test tracking system. As a result, followup testing was not conducted. The licensee self-identified this incident through a condition report. Corrective actions were implemented to ensure compliance with regulations and company policies and procedures. 	Indian Point
HHS-Certified Laboratory Testing	In 2012, the licensee identified a potential issue with 6-acetylmorphone testing during the review of a Nuclear Energy Institute (NEI) shared audit of Quest (Lenexa). <ul style="list-style-type: none"> The laboratory is currently screening specimens for 6-AM after the specimen has been confirmed to contain morphine at or above 2000 ng/mL. If the screening test is negative no further testing for 6-AM is performed. If the screening test is positive then confirmatory testing is conducted for 6-AM. The licensee asked NEI to pursue clarification of the 10 CFR 26.163(b) requirement. 	Callaway
	The laboratory did not meeting the five (5) day result reporting requirement in 10 CFR Part 26.169 in three instances: <ul style="list-style-type: none"> A bad reagent delayed testing of a blind performance test sample. An issue (not specified in the licensee report) delayed testing of a blind performance test sample positive for opiates. A pre-access test that confirmed positive for opiates. The laboratory changed the Standard Operating Procedure to perform 6-AM testing at the same time as the GC/MS testing to reduce result time. 	South Texas Project
Internal Audit Results	A self-assessment of the FFD program made two recommendations and two observations that were documented in the Corrective Action Program.	Fermi 2
	Procedures were modified to enhance and clarify definitions based upon recommendations from program audit.	FirstEnergy Nuclear (fleet)
	Even though an internal oversight inspection was not required, Southern Nuclear performed an annual inspection on all FFD program MROs. Acceptable results were received.	Southern Nuclear (fleet)
Internal Audit Results (continued)	The construction C/V underwent a FFD program audit, which was performed by a shared audit team comprised of an internal C/V audit team and the licensee audit team (Southern Nuclear). <ul style="list-style-type: none"> Two findings were related to improper specimen collection. One finding was related to MRO responsibilities. Two findings were related to improper performance of audits. One audit finding was related to use of a Federal Custody and Control Form. 	Vogtle Units 3 and 4

	The construction C/V FFD manager reported addressing all audit findings in the Corrective Action Program.	
Licensee Testing Facility (LTF)	<ul style="list-style-type: none"> The licensee administrative withdraws authorization pending the HHS-certified laboratory test result for any individual with an LTF positive initial test result for marijuana or cocaine (as permitted by 10 CFR 26.75(i)). In CY 2013, the licensee reported that it could not administratively withdraw authorization because less than 85 percent of the LTF test results in the calendar year confirmed positive at the HHS-certified laboratory: <ul style="list-style-type: none"> Cocaine: 5 of 9 positives (all LTF locations) confirmed (55 percent) Marijuana: 39 of 52 positives (all LTF locations) confirmed (75 percent). 	Exelon (fleet)
	The LTF equipment manufacturer (Siemens) conducted an on-site, hands-on class covering a preset and defined agenda developed by the Southern Nuclear FFD subject matter expert on the technical aspects of laboratory testing. The training improved and updated the V-Twin Drug Testing System knowledge and the testing and technical skills of all testing technicians.	Southern Nuclear (fleet)
	<ul style="list-style-type: none"> Improved quality control (QC) of on-site validity testing by incorporating fleet calculated QC ranges, rather than manufacturer calculated ranges. Fleet calculated QC ranges are much narrower and require stricter result adherence in the testing assays. 	Southern Nuclear (fleet)
Random Testing Pool	<ul style="list-style-type: none"> Throughout 2013, Duke focused on merging the two legacy FFD programs into a single program. One step was the merging of the random testing capability. Beginning in June the company began cross-company testing. The purpose of this cross-company testing was to ensure timely testing of individuals selected for random drug and alcohol testing. Many factors were considered prior to implementing this cross-testing initiative and it was determined by management that testing processes, procedures, test protocols, and contract laboratory operations were similar enough that there would be no noticeable difference to the individual employee, no differences to the collectors, and no identifiable difference in laboratory reporting and therefore no practical reason not to make the transition. Throughout 2013, Duke continued to manage nuclear workers in two separate security software systems, and consequently workers who maintained unescorted access at facilities of both legacy fleets were included in the random pools for both legacy fleets. As a result, some workers may have been tested more frequently under random testing because of inclusion in two separate random pools. 	Duke Energy (fleet)
Random Testing Pool (continued)	<ul style="list-style-type: none"> A member of the licensee's FFD Program Personnel was not included in the random testing pool. The licensee added the individual to the random testing pool. The licensee created a "Fitness For Duty Program (FFDPP) Personnel Non-Badged Checklist" and provided the checklist to Access Screening qualified FFD collectors for review and use. MRO Staff were not included in FFD random testing pool. The licensee revised the "FFDPP Non-Badged Checklist" to add additional steps and detailed guidance on specific steps. A step was added to verify the ID on the consent form in the Security Screening Information System (SSIS) and to complete the Check-in step in SSIS, which will ensure individuals are placed in the random pool. 	Wolf Creek
Spousal Use of Prescription Drug	A C/V tested positive for opiates on random testing. The MRO determined by interview that the individual had taken his wife's prescription cough medication. The individual was initially denied access for 3 years, appealed the denial, and an independent reviewer reduced the sanction. The individual was required to have remedial FFD/BOP training and was allowed to apply for unescorted	FitzPatrick

	access. The individual was processed and the potentially disqualifying information was adjudicated.	
Subpart K Construction Site C/V Program Oversight	<ul style="list-style-type: none"> Southern Nuclear provided oversight of the construction C/V's FFD program to ensure compliance with 10 CFR Part 26. As reported, Southern maintained a close daily presence in the guidance and oversight of the operations of the C/V FFD and access programs. The licensee stated that its primary objective in CY2013 was to improve and strengthen the construction C/V's operational and procedural functions of the FFD and Access programs. As reported, improvement in the following general operational areas was achieved: <ul style="list-style-type: none"> Reporting of LTF drug/validity test results without data entry errors. Turn-around-time of negative LTF drug/validity testing results. Quality and accuracy of FFD associated data input into the Personal Access Data System (PADS) database. 	Vogtle Units 3 and 4
Substance Discovered	<ul style="list-style-type: none"> The licensee identified a contract worker attempting to introduce Schedule II narcotics (Oxycodone) into the Protected Area in an unlabeled container. Further investigation determined that the prescription was not valid. The individual was subject to for-cause testing; the test result was negative. The individual was denied access based on an FFD Policy violation for attempting to introduce a controlled substance into the Protected Area of a nuclear station. 	Oconee
Unescorted Access Not Withdrawn	<ul style="list-style-type: none"> Unescorted access was not administratively withdrawn for an individual. Implemented actions to monitor the "Pending Specimen Collected Report" in the licensee software tracking system, also known as the "Critical Drug Results" to identify individuals requiring removal of unescorted access. This tasked has been assigned as a daily activity of FFD program management. 	Wolf Creek
Urine Specimens Lost in Transit	Specimens for 39 pre-access tests were lost by the courier in transit to the HHS-certified laboratory (MedTox). A condition report was generated, specimens were recollected, and the individuals were not granted unescorted access until the negative drug test results were received. All results were negative.	Beaver Valley
	Specimens for two (2) random tests were lost by the courier in transit to the HHS-certified laboratory (Quest). Both individuals were retested with negative results.	St. Lucie

Table 5. Test Results by Test Category

Test Category*	Number Tested	Number Tested Positive	Percent Positive
Pre-Access	89,187	654	0.73%
Random	63,678	194	0.30%
For Cause	627	84	13.40%
Post-Event	718	5	0.70%
Followup	7,487	70	0.93%
Total	161,697	1,007	0.62%

* "Test Category" corresponds to the conditions requiring testing listed in Paragraph 26.31(c).

Table 6. Test Results by Test and Employment Categories

Test Category	Licensee Employees			C/Vs		
	Number Tested	Number Positive	Percent Positive	Number Tested	Number Positive	Percent Positive
Pre-Access	10,143	36	0.35%	79,044	618	0.78%
Random	39,140	53	0.14%	24,538	141	0.57%
For Cause	187	21	11.23%	440	63	14.32%
Post-Event	226	0	0.00%	492	5	1.02%
Followup	3,781	25	0.66%	3,706	45	1.21%
Total	53,477	135	0.25%	108,220	872	0.81%

**Table 7. Positive Test Results by Substance and Employment Category
(All Test Types, including Testing Refusals)**

Positive Test Result	Licensee Employees		C/Vs		Total†	
	Number	Percent	Number	Percent	Number	Percent
Marijuana	44	32.1%	436	48.1%	480	46.0%
Alcohol	65	47.4%	173	19.1%	238	22.8%
Cocaine	16	11.7%	107	11.8%	123	11.8%
Refusal to Test*	3	2.2%	102	11.2%	105	10.1%
Amphetamines	8	5.8%	76	8.4%	84	8.0%
Opiates	1	0.7%	9	1.0%	10	1.0%
Other ‡	0	0.0%	4	0.4%	4	0.4%
Total†	137	100.0%	907	100.0%	1,044	100.0%

* This category includes adulterated and substituted specimen validity test results and refusal-to-test actions (only those events without a positive test result). Subversion attempts that involved a positive test result are reported in Table 3 under the associated substance category. Section 7 presents additional information on subversion attempts, including refusal-to-test actions.

‡ In CY 2013, two facilities reported one positive for each of the following “other” drugs not included in the NRC-minimum testing panel: benzodiazepines, methadone, oxycodone, and oxymorphone.

† The totals in this table are higher than those reported in Table 5 and Table 6 because some individuals tested positive for more than one substance.

Chart 1. Positive Test Results by Substance, Licensee Employees

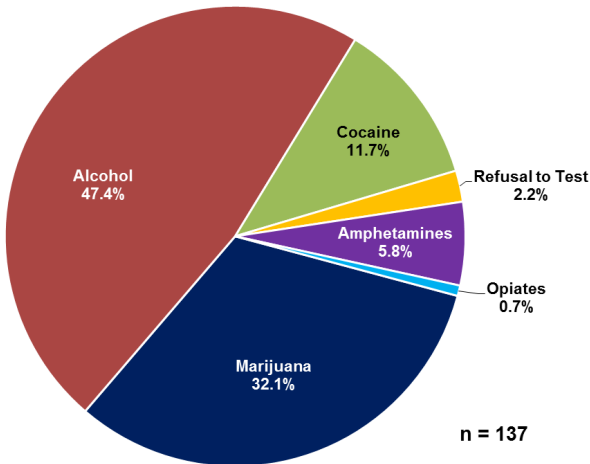


Chart 2. Positive Test Results by Substance, Contractors/Vendors

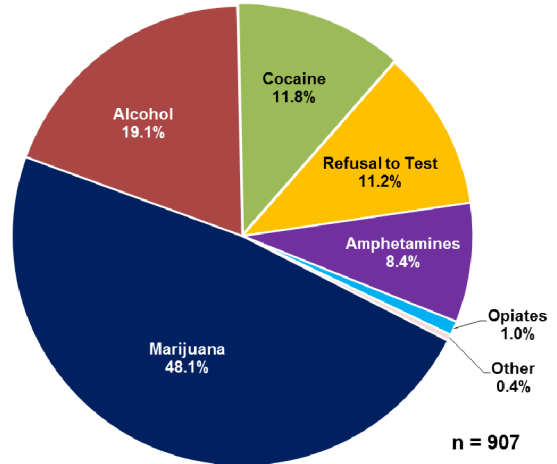


Table 8. Significant Fitness-for-Duty Events*

Year	Reactor Operators	Licensee Supervisors	C/V Supervisors	FFD Program Personnel	Substances Found	Other Events[†]	Total
2004	9	7	4	0	9	-	29
2005	5	13	14	1	9	-	42
2006	3	6	6	0	2	-	17
2007	3	7	1	1	0	-	12
2008	2	8	6	1	0	-	17
2009	1	5	4	1	2	-	13
2010	4	7	3	2	3	-	19
2011	2	10	14	2	3	6	31
2012	6	9	13	1	4	2	35
2013	12	9 [‡]	8	1	5	5	40

* This table presents 24-hour reportable events per 10 CFR 26.719(b). Refer to

Table A- 1 in the report appendix for data from 1990 through 2003.

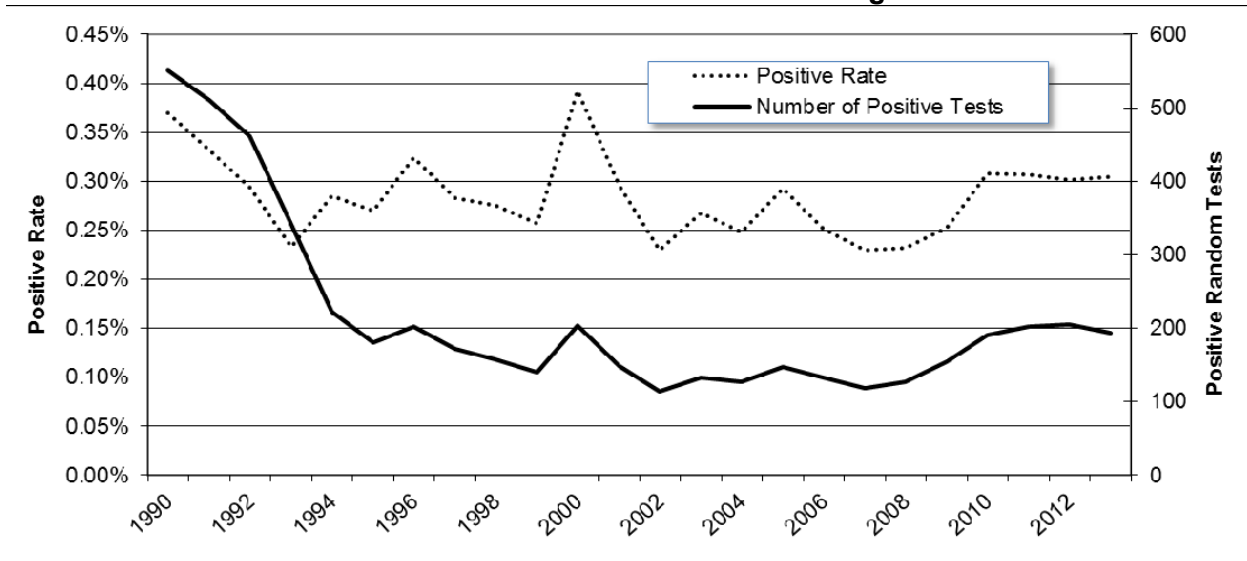
- † This new data column was added in CY 2013 to capture 24-hour reportable events that were either not associated with an individual employee violation (e.g. program deficiencies, HHS laboratory errors) or for which sufficient information was not provided to categorize the event under the associated labor category. Information for 2011 and 2012 also were included in this new column. For prior years in this table, NRC staff did not tabulate results as historical information was not readily available.
- ‡ Two events reported both reactor operator and supervisor as the labor category (Table 1). These results are included under the “reactor operators” field in this table to avoid double-counting.

Table 9. Trends in Testing by Test Type

Type of Test	2002	2003	2004	2005	2006	2007	2008	2009*	2010	2011	2012	2013
Pre-Access												
Number Tested	73,155	72,988	76,119	79,005	79,980	81,932	87,468	95,878	96,543	103,848	101,438	89,187
Number Positive	805	757	737	648	747	668	664	677	677	741	766	654
Percent Positive	1.10%	1.04%	0.97%	0.82%	0.93%	0.82%	0.76%	0.71%	0.70%	0.71%	0.76%	0.73%
Random												
Number Tested	49,741	49,402	51,239	50,286	52,557	51,665	54,759	60,877	62,008	65,778	67,943	63,678
Number Positive	114	132	127	147	132	117	127	154	191	202	205	194
Percent Positive	0.23%	0.27%	0.25%	0.29%	0.25%	0.23%	0.23%	0.25%	0.31%	0.31%	0.30%	0.30%
For-Cause												
Number Tested	617	637	701	671	716	720	797	547	549	856	724	627
Number Positive	110	123	134	105	104	81	94	108	47	73	86	84
Percent Positive	17.83%	19.31%	19.12%	15.65%	14.53%	11.25%	11.79%	19.74%	8.56%	8.53%	11.88%	13.40%
Post-Event												
Number Tested	455	415	458	490	905	895	986	893	884	802	883	718
Number Positive	2	3	5	1	5	10	7	1	6	7	7	5
Percent Positive	0.44%	0.72%	1.09%	0.20%	0.55%	1.12%	0.71%	0.11%	0.68%	0.87%	0.79%	0.70%
Followup												
Number Tested	2,892	3,142	3,752	4,057	4,766	4,991	5,756	6,252	6,657	7,302	8,147	7,487
Number Positive	21	42	31	31	37	31	44	53	60	57	50	70
Percent Positive	0.73%	1.34%	0.83%	0.76%	0.78%	0.62%	0.76%	0.85%	0.90%	0.78%	0.61%	0.93%
TOTAL												
Number Tested	126,860	126,584	132,269	134,509	138,924	140,203	149,766	164,447	166,641	178,586	179,135	161,697
Number Positive	1,052	1,057	1,034	932	1,025	907	936	993	981	1,080	1,114	1,007
Percent Positive	0.83%	0.84%	0.78%	0.69%	0.74%	0.65%	0.62%	0.60%	0.59%	0.60%	0.62%	0.62%

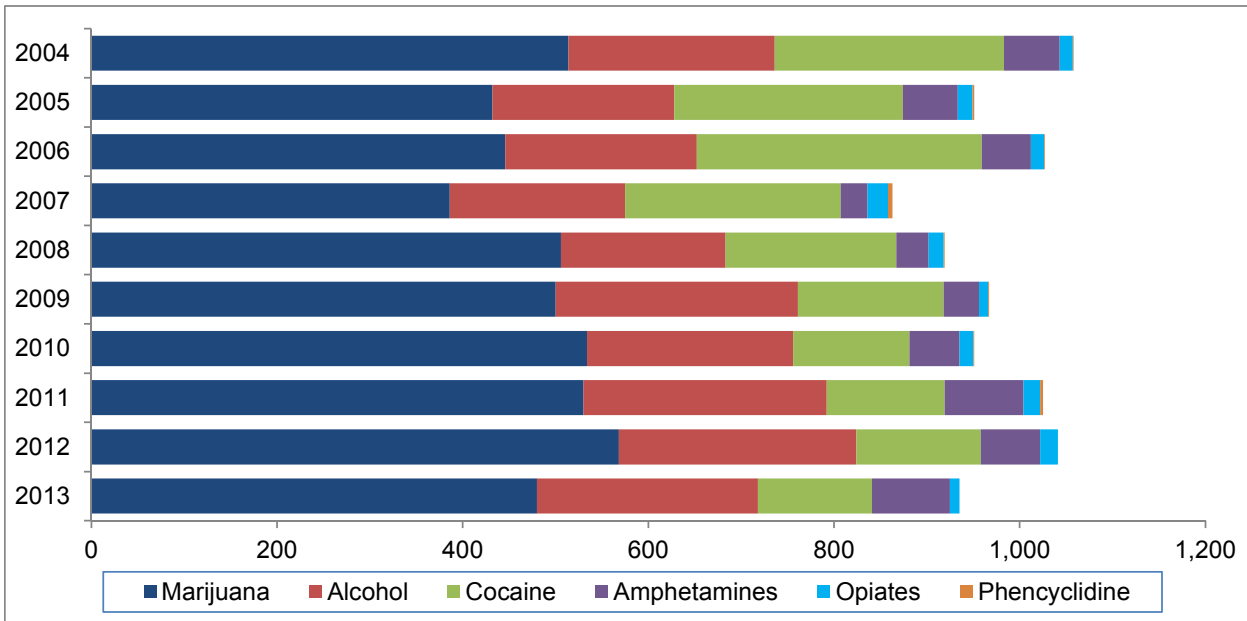
* On March 31, 2009, all licensees and other entities were required to implement the March 31, 2008, final rule. Refer to Table A- 2 for historical data (1990–2001).

Chart 3. Trends in Positive Random Testing Rates*



* Beginning in 1994, the NRC reduced the minimum annual random testing rate from 100 percent to 50 percent of the subject population.

Chart 4. Trends in Substances* Identified



* Chart 4 displays positive test results for substances that licensees and other entities must test for in each urine specimen per Paragraph 26.31(d). Refer to Table A- 3 in the report appendix for the data used to create this chart, as well as historical data for all years since NRC-required testing began in 1990.

Chart 5. Trends in Positive Pre-Access Testing Rates by Employment Category*

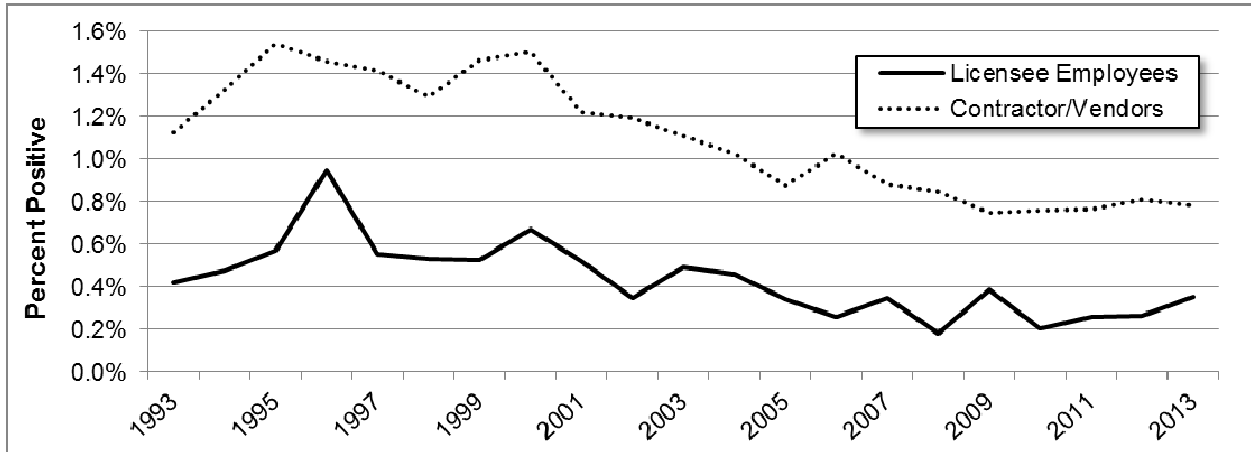


Chart 6. Trends in Positive Random Testing Rates by Employment Category*

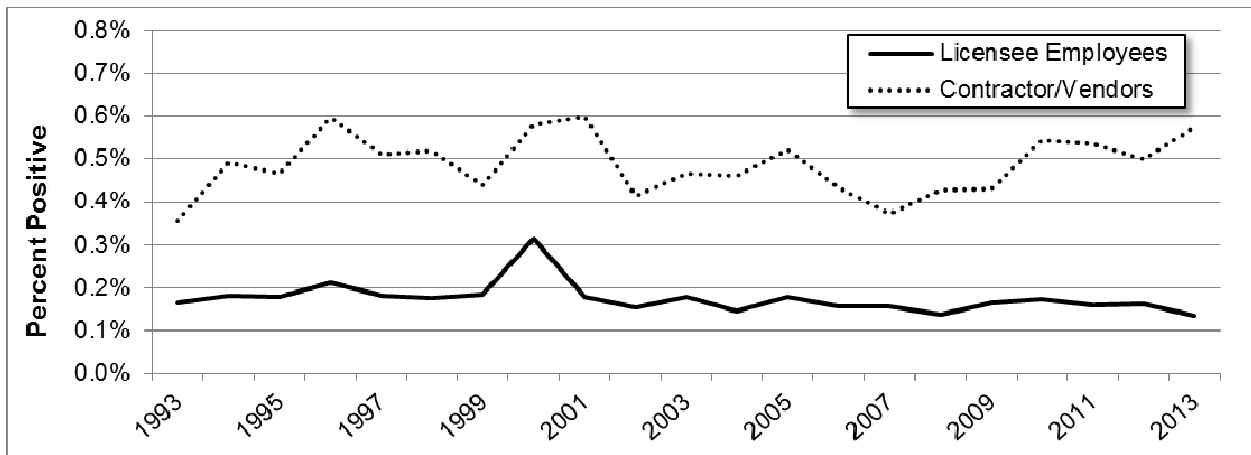
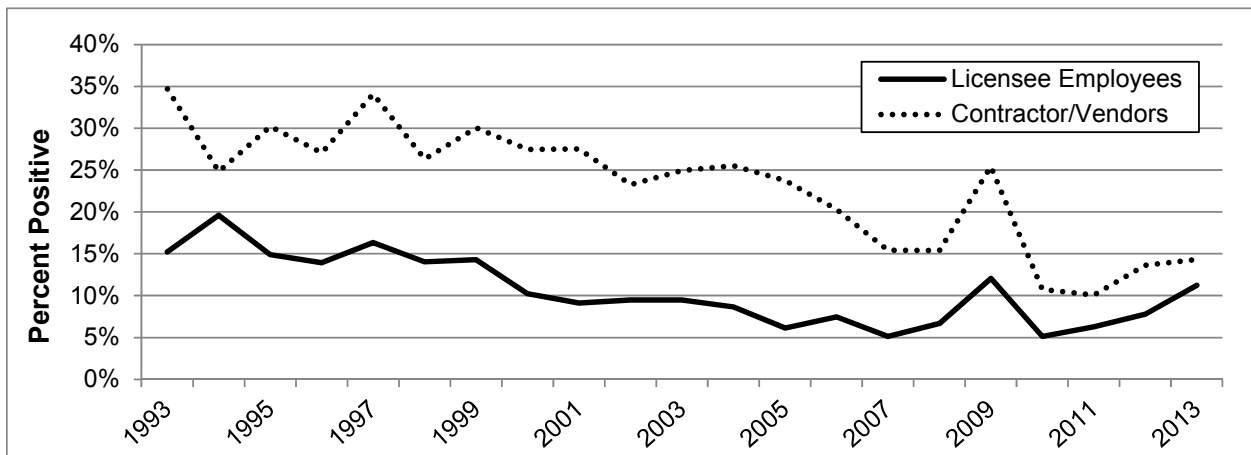


Chart 7. Trends in Positive For-Cause Testing Rates by Employment Category*



* Refer to Table A- 5, Table A- 6, and Table A- 7 in the report appendix for the data used to create these charts. The peak in Chart 7 in CY 2009 may have been due to the initial use of the e-reporting system.

Observations on Chart 5, Chart 6, and Chart 7

- The pre-access positive testing rate for C/Vs has remained stable from CYs 2010 through 2013. (Chart 5)
- The random positive testing rate for C/Vs increased in CY 2013 to its highest level since 2001; although still very low at 0.57 percent. (Chart 6)
- For-cause testing positive rates for licensee employees and C/Vs have converged, beginning in CY 2010. The NRC staff believes this trend is associated with improved information collection from the e-reporting system because of increased consistency and accuracy of information provided to the NRC. (Chart 7)

The NRC staff acknowledges that human performance assessments are intrinsically very difficult and recognizes the uncertainty in assessing human behavior, noting that behavior can either be qualitatively assessed (such as by observation or information review) or quantitatively assessed (such as by expert analysis of drug or alcohol test results). The NRC staff notes that to help achieve an effective for-cause testing program, the for-cause testing rate²⁷ should not be:

- too high to result in the possibility of individual harassment or an adverse impact on the work environment (e.g., testing of individuals that do not exhibit signs of impairment or where credible information has not been received on current substance abuse), nor
- too low such that random and post-event tests are overly relied upon to identify persons unfit for duty, resulting in a reduction in the defense in depth afforded by the NRC's FFD requirements.

²⁷ For the CY 2012 performance report, the staff used the for-cause *positive* testing rate for its assessment; this year to enhance clarity, the staff uses the for-cause testing rate to better focus on the actual number of tests being conducted.

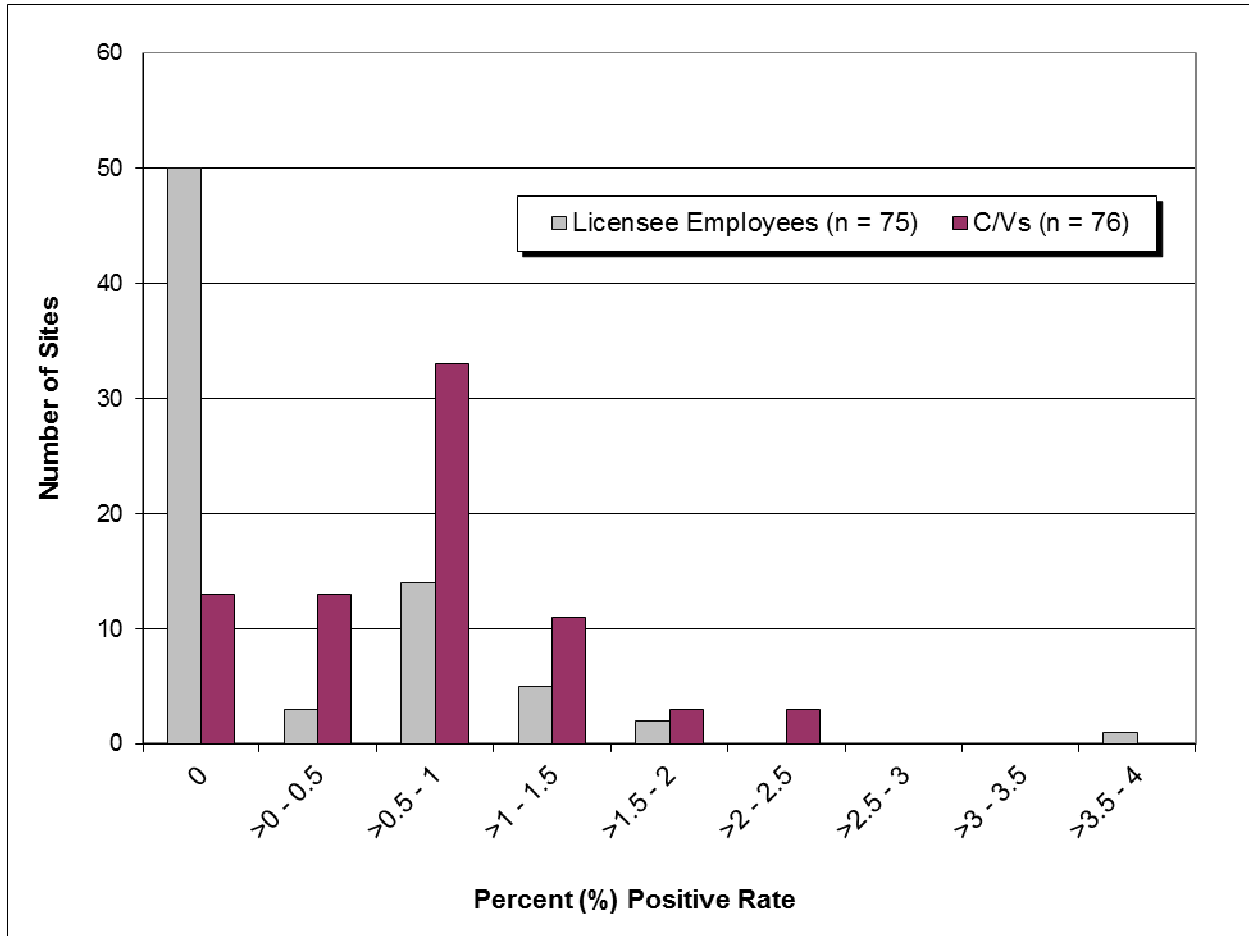
FFD Performance Testing Results by Positive Rate Ranges and Number of Sites

This section presents distributional information by site for pre-access, random, and for-cause testing to provide licensees and other entities with additional information to evaluate site specific performance against industry testing performance.

Table 10. Industry Positive Test Results for Pre-Access, Random, and For-Cause Testing by Employment Category

Employment Category	Tests	Positive Tests	Sites Reporting Test Results	Industry % Positive	Range of % Positive (by Site)
Pre-Access Testing					
Licensee Employees	10,143	36	75	0.35	0 - 3.85
Contractors/Vendors	79,044	618	76	0.78	0 - 2.43
Random Testing					
Licensee Employees	39,140	53	75	0.14	0 - 0.8
Contractors/Vendors	24,538	141	76	0.57	0 - 2.01
For-Cause Testing					
Licensee Employees	187	21	58	11.23	0 - 100
Contractors/Vendors	440	63	58	14.32	0 - 100

Chart 8. Comparison of Pre-Access Testing Positive Rate Ranges by Employment Category and Number of Sites

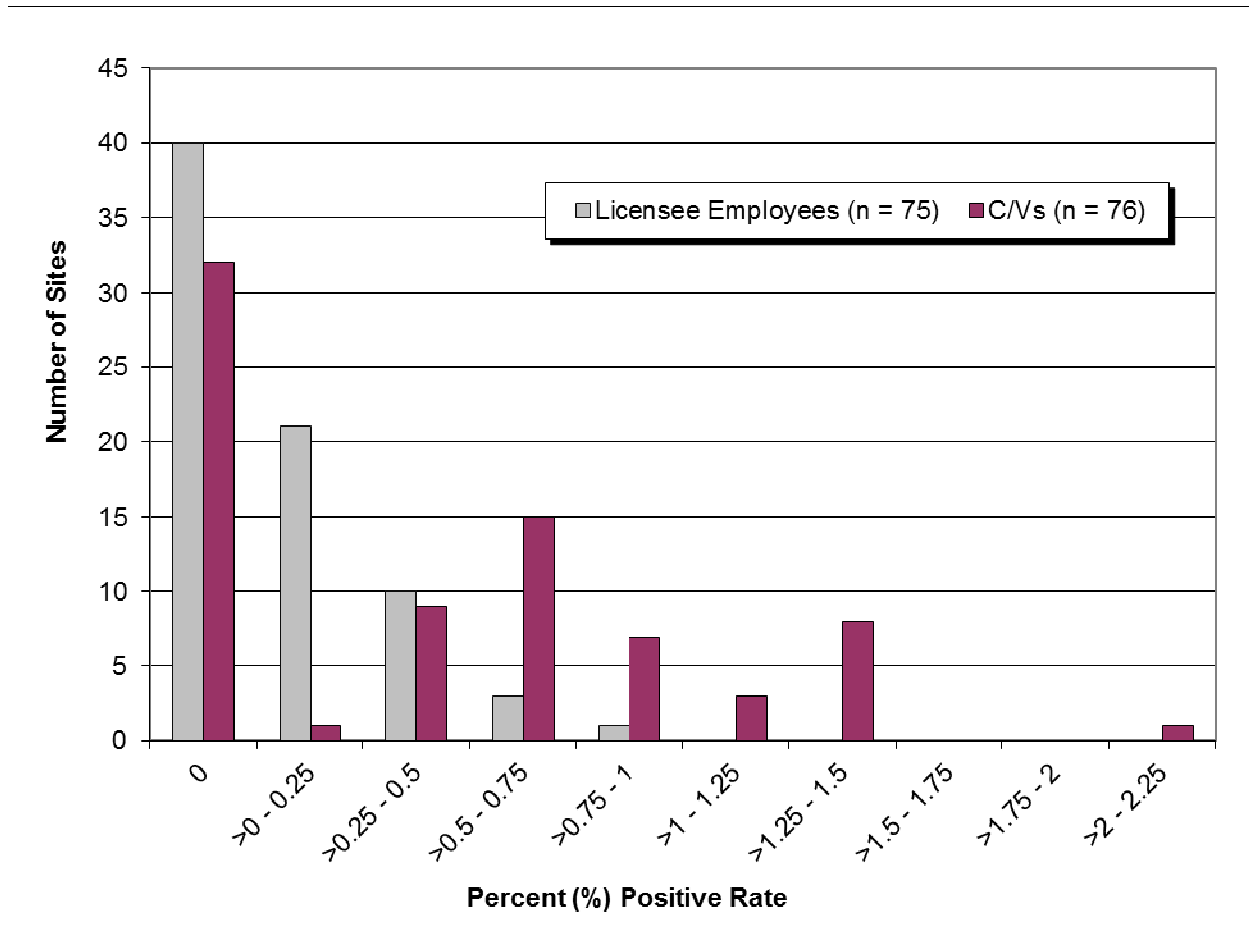


* Refer to Table A- 8 in the report appendix for the data used to create this chart.

Observations on Chart 8

- C/Vs test positive during pre-access testing much more often than licensee employees. This is evident in that for almost all percent positive bins that are greater than 0.0 percent, the C/V bars are higher than the licensee employee bars.
- Fifty (50) sites (67 percent of sites that conducted pre-access testing for licensee employees) had no licensee employee pre-access positives. By contrast, 63 sites (83 percent of sites that conducted C/V pre-access testing) did report C/V pre-access positives, with 50 sites (67 percent) reporting pre-access positive rates greater than 0.5 percent.
- The highest pre-access positive testing rate for a site is seen to the far right of the chart, where 1 site tested positive at a rate of 3.85 percent (1 in 26 tests conducted was positive).

Chart 9. Comparison of Random Testing Positive Rate Ranges by Employment Category and Number of Sites

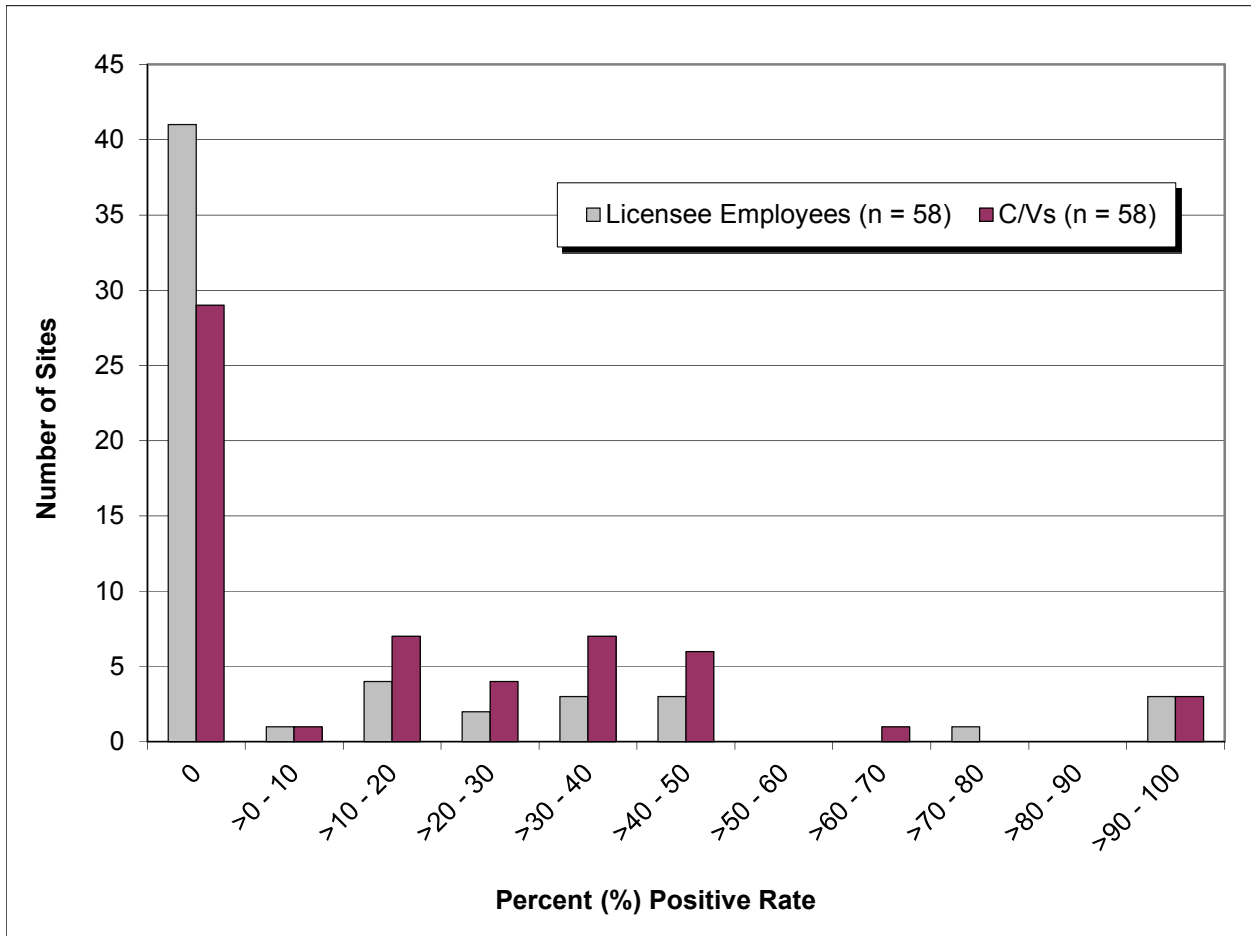


* Refer to Table A- 9 in the report appendix for the data used to create this chart.

Observations on Chart 9

- A greater range in site specific random testing positive rates was seen for C/Vs as compared to licensee employees.
- C/V random positive rates ranged from 0.0 to 2.01 percent, whereas licensee random positive rates ranged from 0 to 0.8 percent, with 71 sites (95 percent of sites that conducted licensee employee random testing reported positive rates of 0.5 percent or less). The C/V random positive range expanded in CY 2013 in comparison to CY 2012 due to one facility with a random positive rate of 2.01 percent. All other facilities had random positive rates of less than 1.5 percent.
- C/Vs tend to test positive at a higher rate during random testing than licensee employees. Of the sites that conducted C/V random testing, 34 sites (45 percent) reported C/V random positive rates greater than 0.5 percent. By comparison, only four sites (five percent of those that conducted licensee employee random testing) reported licensee employee random positive rates greater than 0.5 percent.

Chart 10. Comparison of Site For-Cause Testing Positive Rate Ranges by Employment Category and Number of Sites



* Refer to Table A- 10 in the report appendix for the data used to create this chart.

Observations on Chart 10

- For-cause testing did not consistently yield positive results in CY 2013.
- Many sites that conducted for-cause testing reported no positives, including 41 sites for licensee employees (71 percent) and 29 sites for C/Vs (50 percent).
- A handful of sites reported for-cause testing positive rates greater than 50 percent, including four (4) sites for licensee employees (7 percent) and four (4) sites for C/Vs (7 percent).

Section 2f. Evaluation of E-Reported Data

This section provides a more detailed analysis of FFD program performance data provided by licensees and other entities that chose to use the voluntary e-reporting system. Increased industry use of the e-reporting system enable trends analyses across years and inclusion of new exhibits to further enhance the communication of FFD program performance. Electronic reporting significantly improves the clarity, consistency, and accuracy of information reported to the NRC; allows the NRC to conduct a more sophisticated analysis of FFD policy violations and provide generic and site-specific performance information to the industry; and, enables the industry to target corrective actions at specific areas of concern (e.g., pre-access testing, testing of certain substances).

Licensee use of the E-Reporting System

Calendar Year	2009	2010	2011	2012	2013
Number Tests	46,162	111,248	141,234	157,528	151,323
Number Positive	290	684	918	1,003	975
Number of Facilities Using System	19	51	61	67	71
Percent of Facilities Using System	25%	69%	80%	88%	93%

The FFD e-reporting system for D&A consists of two electronic reporting forms (e-forms); if the licensee or entity voluntarily elects to use the e-forms, both forms must be used to satisfy the 10 CFR 26.717 reporting requirement:

- **Annual Reporting Form for Drug and Alcohol Tests (ARF)** — One ARF is completed per facility. The information reported is analogous to that which industry has historically provided in hard copy paper reports.
- **Single Positive Test Form** — One SPTF is used to report information on a positive test result or subversion attempt (e.g., refusal to test, adulterated or substituted specimen test result). A facility will submit one SPTF for each positive result or subversion attempt.

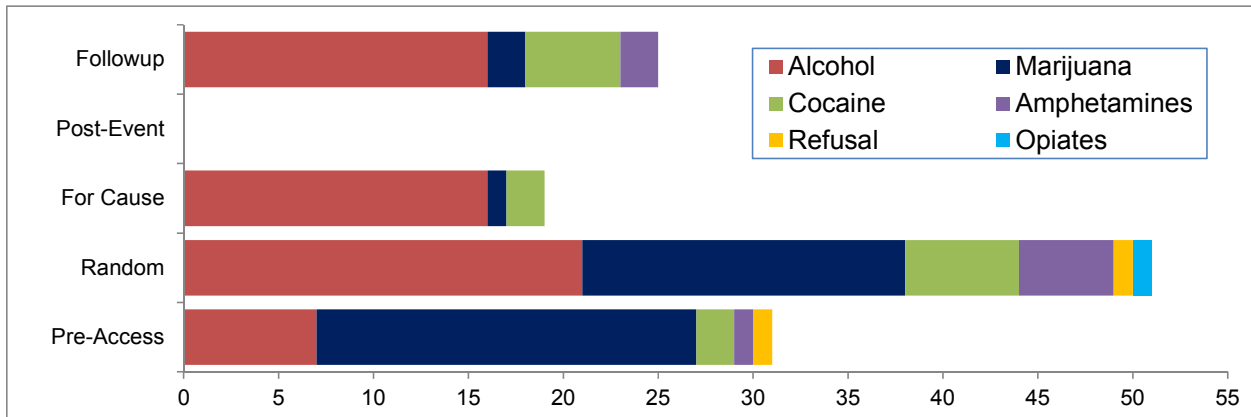
Table 11. Test Results for Each Test Category (E-Reported Data)

Test Category	Number of Tests	Positive Test Results	Percent Positive
Pre-Access	84,166	632	0.75%
Random	58,797	189	0.32%
For-Cause	602	80	13.29%
Post-Event	667	5	0.75%
Followup	7,091	69	0.97%
Total	151,323	975	0.64%

Observations on Table 11.

- Licensees and other entities reported information on 151,323 D&A tests using the e-reporting system. The e-reported data covers a significant percentage (approximately 94 percent) of the 161,697 total D&A tests conducted by industry in CY 2013. (Table 5)
- The analysis includes positive results and testing refusals for 975 individuals. The data cover 97 percent of the 1,007 individuals who tested positive or refused to test in CY 2013. (Table 5)
- This table reflects the number of individuals who tested positive, subsequent illustrations may represent the number of substances that were identified.

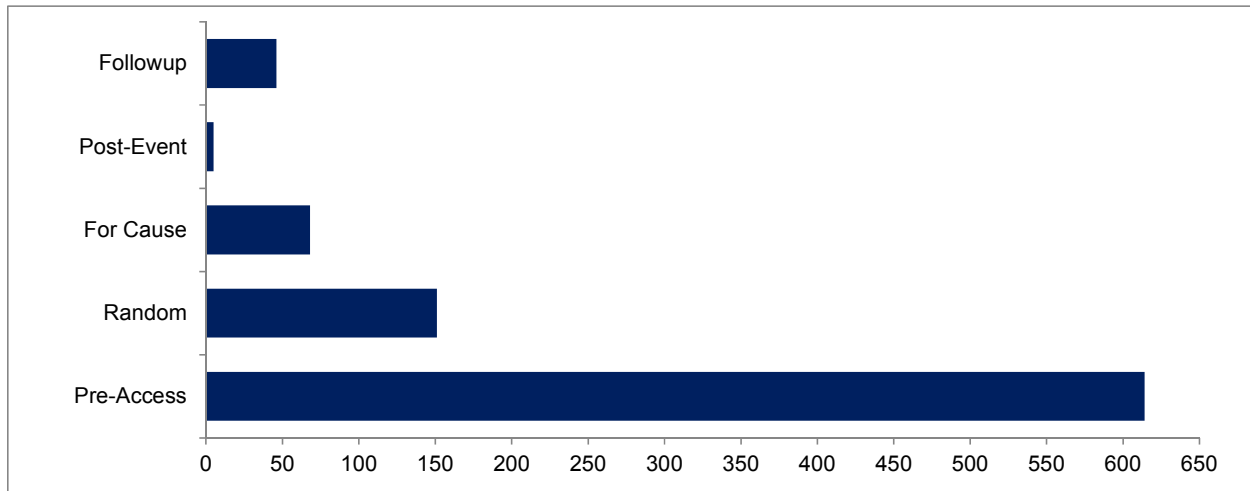
Chart 11. Licensee Employees, Positive Results by Substance and Reason for Test (E-Reported Data)



Observations on Chart 11

- Licensee employee testing resulted in 126 positives, and testing refusals. By comparison, C/V testing in CY 2013 resulted in 884 positives and testing refusals. (Chart 12)
- Random testing accounted for 40 percent of positive test results (51). The share of positive test results due to random testing decreased from 52 percent in CY 2012. A smaller number of positive results were reported for pre-access (31), for-cause (19), and followup (20) testing. The share of positive test results due to followup testing increased from 12 percent in CY 2012 to 20 percent in CY 2013.
- Alcohol was the predominant substance detected in licensee employees (60 positives, or 48 percent of the 126 total positives and testing refusals). A smaller number of positive test results were reported for marijuana (40), cocaine (15), amphetamines (8), testing refusals (2), and opiates (1).
- Alcohol accounted for 84 percent of for-cause test positive
- Testing refusals occurred during pre-access and random testing.
- There were no licensee post-event positives in CY 2013.

Chart 12. Contractors/Vendors, Substances Detected (Including Testing Refusals) by Reason for Test (E-Reported Data)

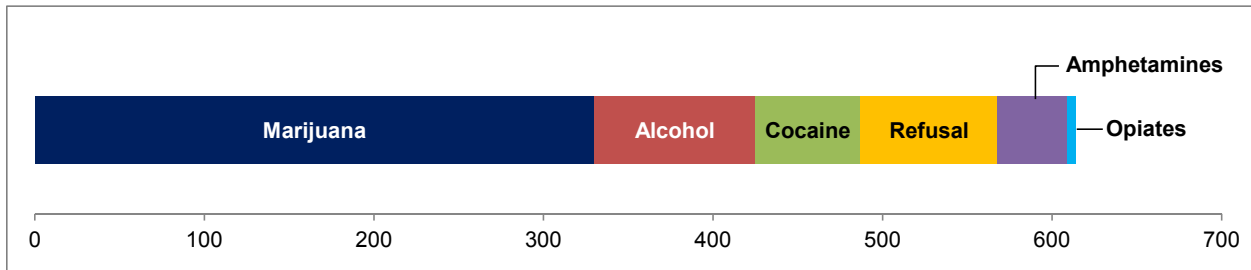


Observations on Chart 12

- C/V testing resulted in 884 positives, including testing refusals. By comparison, 126 positives and testing refusals were reported for licensee employees in CY 2013.
- Sixty-nine (69) percent of positive test results occurred during pre-access testing (614) and seventeen (17) percent occurred during random testing (151). A smaller number of positive results were reported for for-cause (68), post-event (5), and followup (46) testing.

On the next page, Chart 13 and Chart 14 are presented. These charts illustrate the substances used by C/Vs as identified by reason for test. The C/V data is divided into two charts, because the vast majority of positive test results occur during pre-access testing (Chart 12). To improve the clarity of this illustration, pre-access testing results are reported separately.

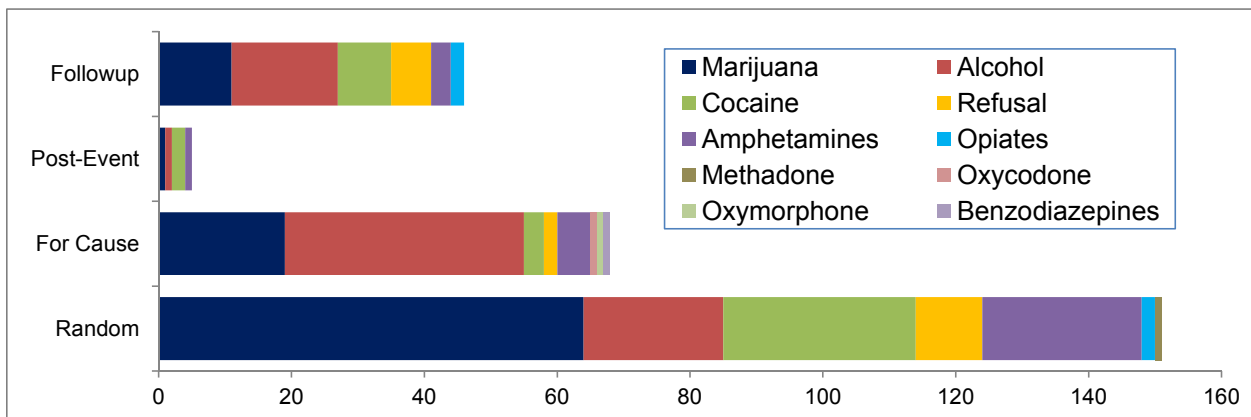
Chart 13. Contractors/Vendors, Pre-Access Positive Results by Substance (E-Reported Data)



Observations on Chart 13

- Sixty-nine (69) percent of pre-access positive test results were associated with two substances: marijuana (330) and alcohol (95).
- Fewer positive test results were reported for testing refusals (81), cocaine (62), amphetamines (41), and opiates (5).

Chart 14. Contractors/Vendors, Positive Results by Substance and Reason for Test (E-Reported Data)*



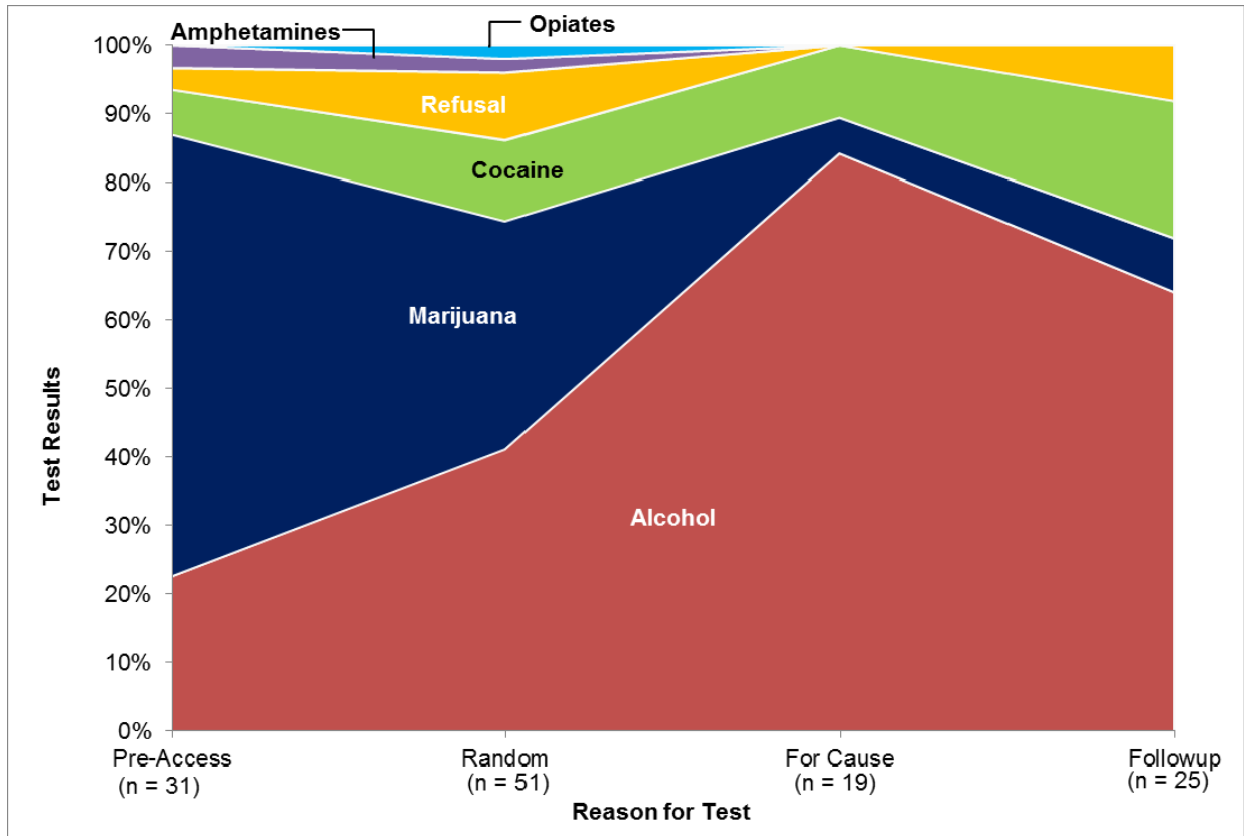
* See Chart 13 for pre-access testing results.

Observations on Chart 14

- Most of the random, for-cause, post-event, and followup positives (63 percent) were associated with two substances: marijuana (95) and alcohol (74).
- Testing also identified cocaine (42), amphetamines (33), testing refusals (18), opiates (4), oxycodone (1), oxymorphone (1), methadone (1), and benzodiazepines (1). The share of amphetamine random positive test results (out of the total number of random positive test results) increased from 6 percent in CY 2012 to 16 percent in CY 2013.
- Alcohol was the most detected substance during for-cause testing for C/Vs, accounting for 53 percent of for-cause positives.
- Testing refusals accounted for 13 percent of both pre-access and followup positives.

Chart 15 and Chart 16 highlight the percentage of positive results associated with each substance by reason for test and employment category. These charts provide an easy way to identify the relative percentage of positive results by substance for each test type.

Chart 15. Licensee Employees, Percentage of Positive Results by Substance and Reason for Test (E-Reported Data)

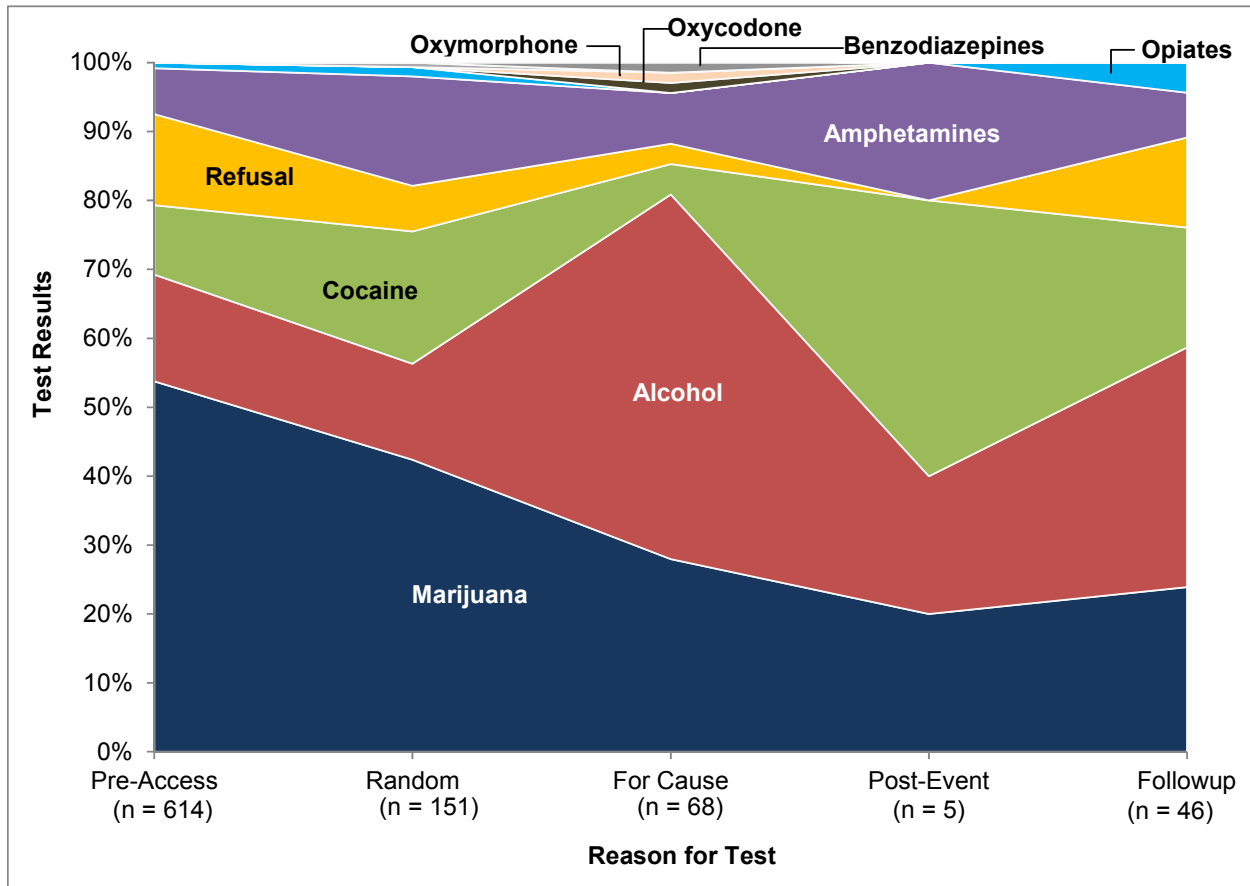


* This chart includes all test categories except "Post-Event". No tests were reported for this test type category in CY 2013. Refer to Table A- 11 for the data used to create this chart.

Observations on Chart 15

- Marijuana and alcohol accounted for at least 72 percent (and up to 89 percent) of substances detected, regardless of the reason for test.
- Alcohol constituted 84 percent of for-cause positives compared to 100 percent in CY 2012.
- Refusals occurred during pre-access, random, and followup testing.
- Note that marijuana positive test results are relatively prevalent at pre-access and still detected on random testing. The NRC staff is assessing this prevalence data because it could possibly indicate that individuals are purposely abstaining from marijuana use prior to pre-access testing in order to "pass" that test to achieve employment (i.e., authorization, Section 26.5) and then elect to still use marijuana once employed. If this is found to be the case, it would represent a trustworthiness and reliability concern.
- Note that alcohol prevalence increases from pre-access to random and for-cause testing. This could indicate, for example: individuals changed their substance of choice from marijuana to alcohol or have taken up alcohol as a substance of choice after gaining employment. Similar to the previous bullet, the NRC staff is monitoring this usage pattern.

Chart 16. Contractors/Vendors, Percentage of Positive Results by Substance and Reason for Test* (E-Reported Data)



* Refer to Table A- 12 in the report appendix for the data used to create this chart.

Observations on Chart 16

- Marijuana and alcohol accounted for at least 40 percent (and up to 81 percent) of substances detected, regardless of the reason for test.
- Alcohol accounted for 53 percent of for-cause testing positives. This indicates that alcohol use results in physiological changes that are apparent by observation or performance.
- Testing refusals constituted between zero and 13 percent of positives by reason for test, including 13 percent of pre-access and followup testing positives.
- The share of random testing results that were amphetamine positives increased from 6 percent in CY 2012 to 16 percent in CY 2013.
- The percentage of for cause test results due to marijuana increased from 5 percent in CY 2012 to 28 percent in CY 2013. Testing refusals as a percentage of for cause test results dropped from 13 percent in CY 2012 to 3 percent in CY 2013.
- C/Vs tested positive for three additional substances (oxymorphone, oxycodone, and benzodiazepines).

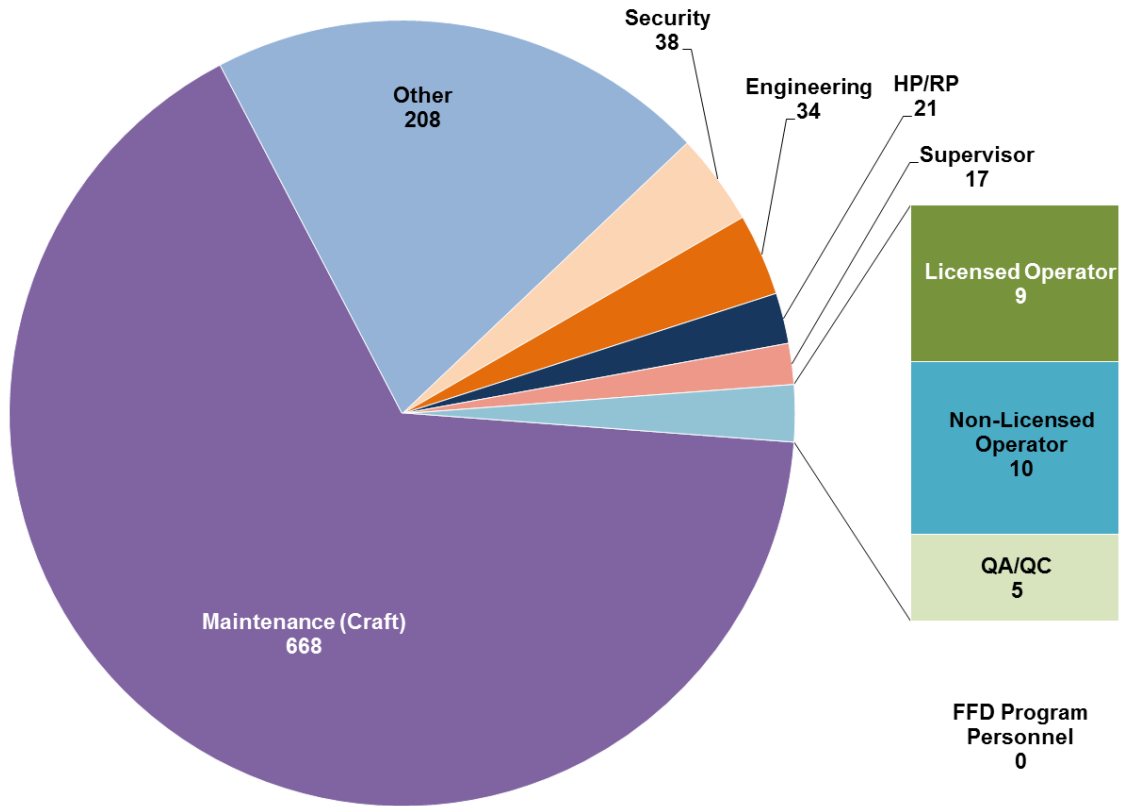
Chart 17. Positive Results by Substance and Employment Category (E-Reported Data)



Observations on Chart 17

- C/Vs accounted for the large majority of substances detected, including:
 - 98 percent of testing refusals,
 - 91 percent of marijuana positives,
 - 90 percent of opiates positives, and
 - 90 percent of amphetamines positives.
- Alcohol and marijuana were the most detected substances in licensee employee tests.

Chart 18. Positive Results by Labor Category (E-Reported Data)

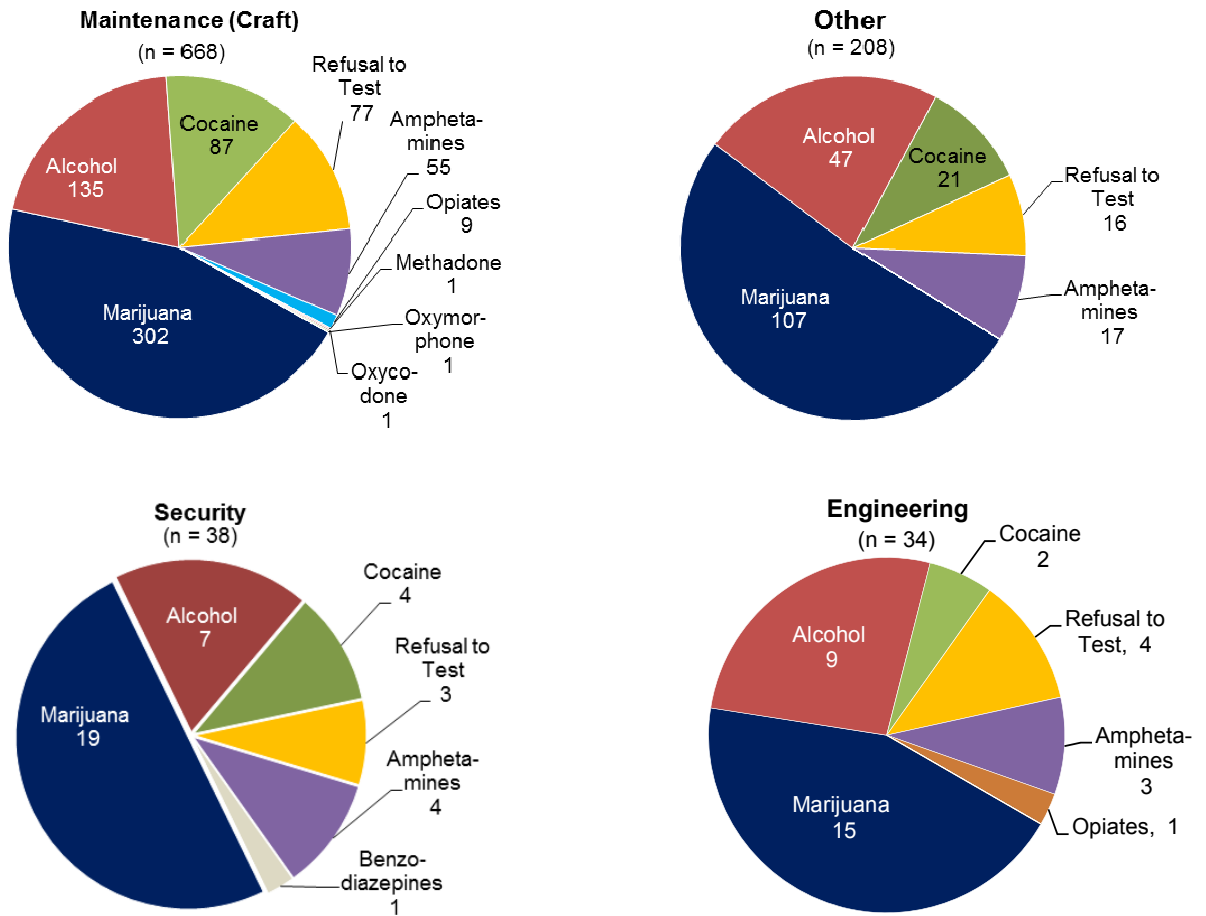


Observation on Chart 18

- 87 percent (876 of 1,011*) of all positive tests were associated with the “Maintenance (Craft)” (668) and “Other” (208) labor categories.
- The top four labor categories (Maintenance (Craft), Other, Security, and Engineering) accounted for 94 percent of all substances detected (948 of 1,011). Chart 19 provides additional detail and the substances detected within each labor category.
- The “Other” labor category includes licensee and other entity supplied labor categories descriptions such as: Carpenter, Contract IT, Contract Laborer, Electrician, Food Service, Janitorial, Technician, and Training Instructor.

* There were 1011 substances identified of the 975 individuals who tested positive, see Table 11. This means that some individuals tested positive for more than one substance.

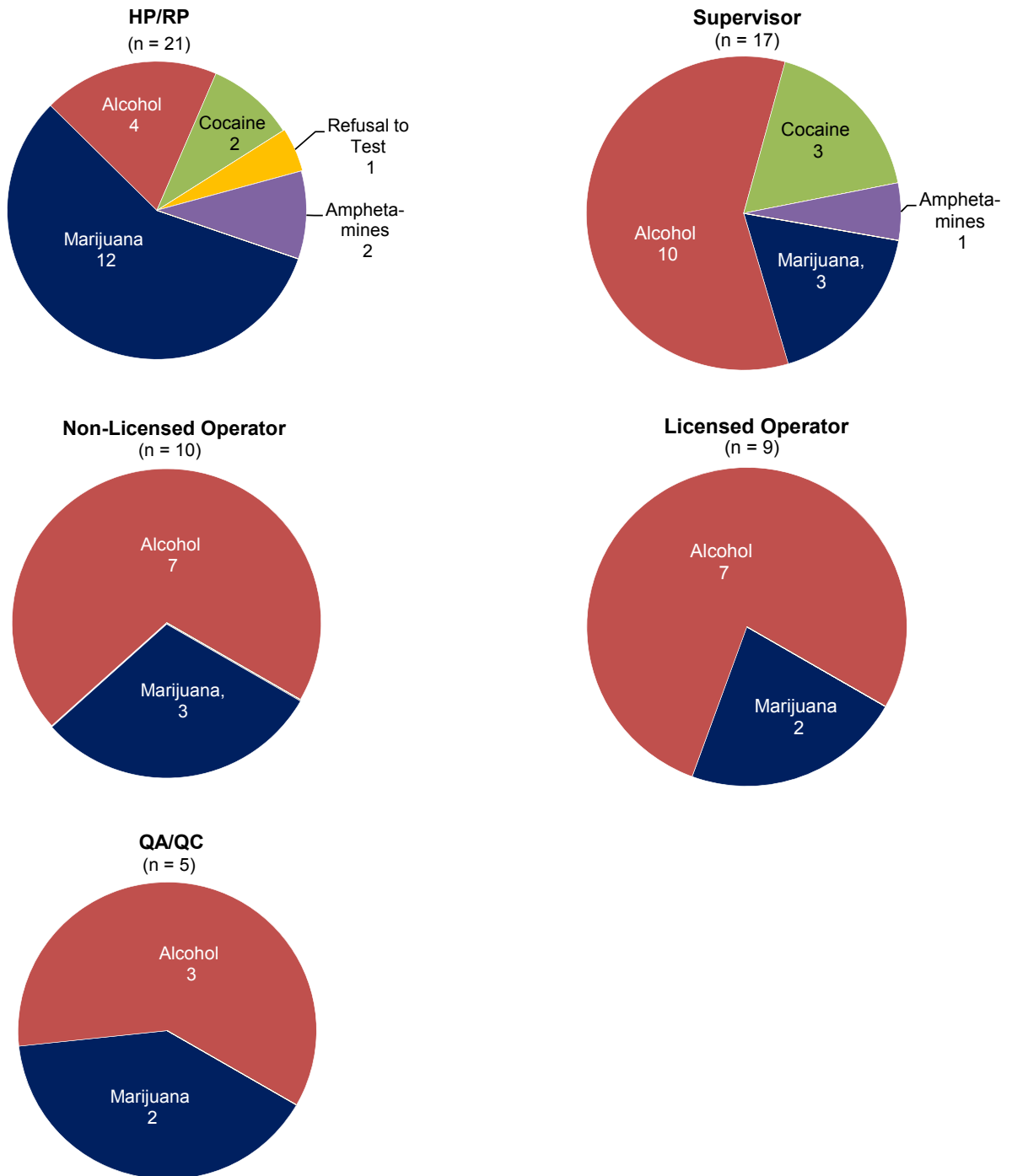
Chart 19. Individual Pie Charts Displaying Test Results for Top Four Labor Categories (E-Reported Data)



Observations on Chart 19

- Across the top four labor categories there is a fairly consistent substance use pattern with marijuana and alcohol making up the majority of substances detected, followed by cocaine, refusal to test, and amphetamines.
- A small number of additional drugs (not in the NRC-required testing panel) were detected in maintenance (craft) category.

Chart 20. Individual Pie Charts Displaying Test Results for Remaining Six Labor Categories (E-Reported Data)



Observations on Chart 20

- Alcohol positives made up 50 percent (31 of 62) and marijuana positives made up 35 percent (22 of 61) of all substances detected for the remaining six labor categories.
- No positive test results were reported for FFD Program Personnel in CY 2013 (no chart).

Chart 21. Alcohol Positives by BAC Level and Reason for Test (E-Reported Data)

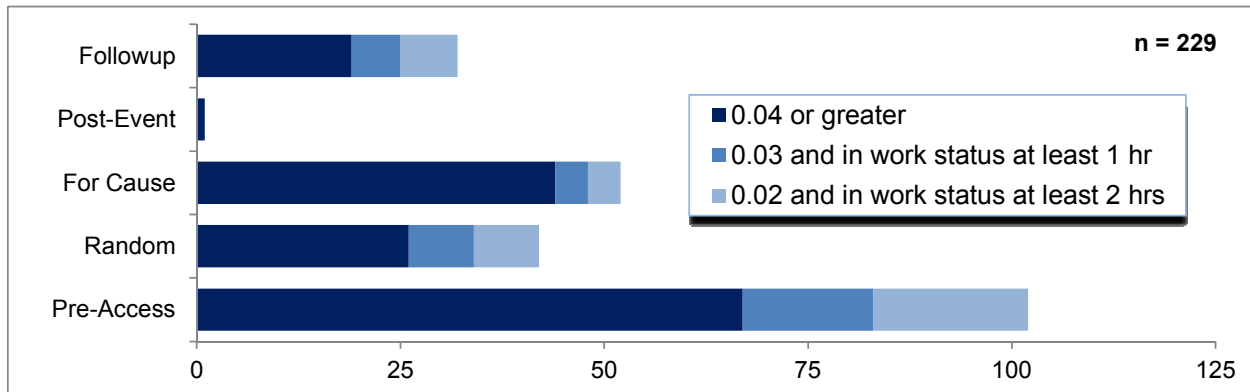
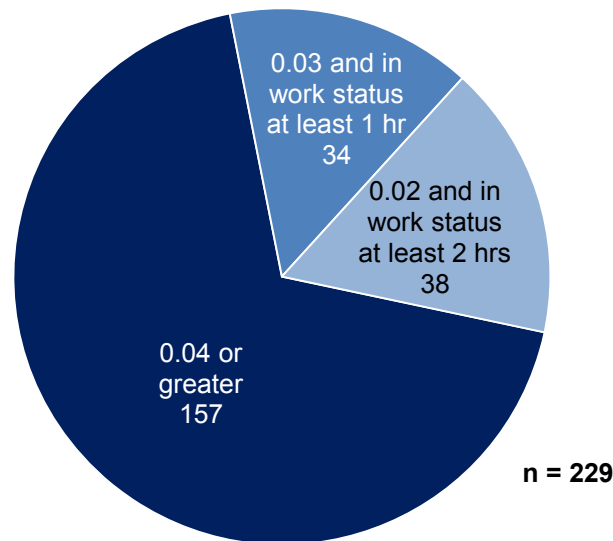


Chart 22. Alcohol Positives by BAC Level (E-Reported Data)



Observations on Chart 21 and Chart 22

- Chart 21 displays that 102 alcohol positives (45 percent) occurred during pre-access testing, while 42 (18 percent) and 52 (23 percent) occurred during random and for-cause testing, respectively.
- Chart 22 highlights that 72 of the 229 alcohol positives (31 percent) involved BAC levels below 0.04 (i.e., either 0.02 and in work status at least two hours or 0.03 and in work status at least one hour).

Section 2g. Subversion Attempts

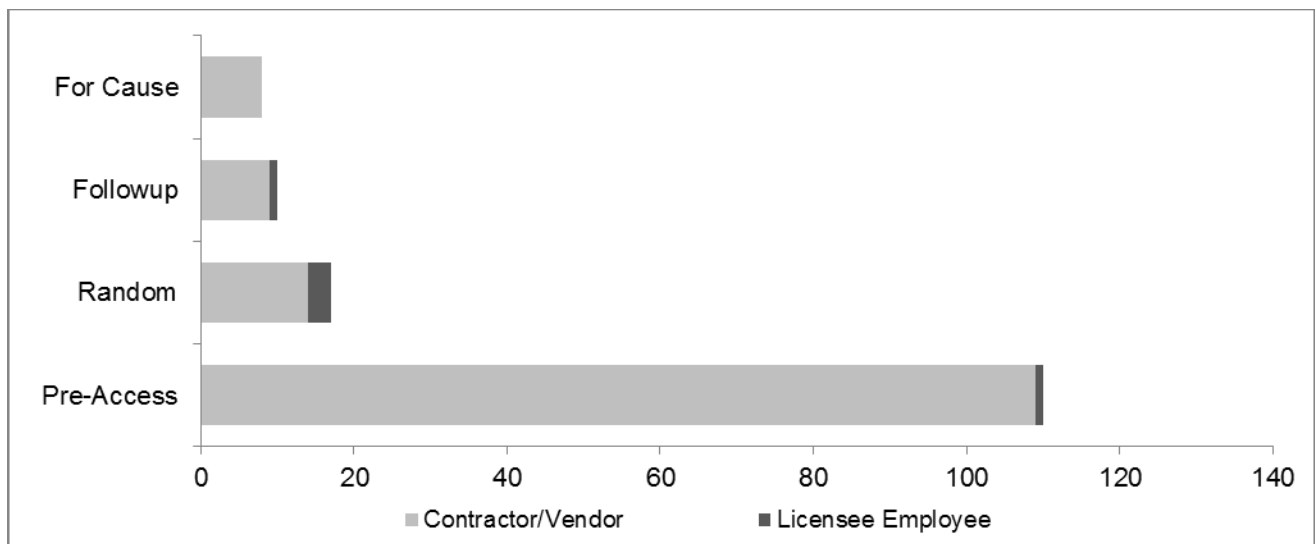
This section presents information on subversion attempts observed in CY 2013. Subversion attempts include efforts to avoid testing (e.g., refusing to provide a specimen), as well as efforts to cause an inaccurate test result (e.g., adulterating a specimen, using a specimen other than the donor's) to prevent detection of substance use or abuse.

E-reporting has enabled increasingly sophisticated analysis of data on subversion attempts. Major improvements to the SPTF in CY 2011 included the addition of descriptive checkboxes and improvements to the user-interface, which have facilitated more accurate and precise reporting of subversion attempts. Particularly, e-reporting provides information on the following:

- When subversion attempts occur (e.g., during what type of testing, at what stage in the testing process);
- Who commits subversion attempts (e.g., which employment and labor categories); and
- How subversion attempts are detected (e.g., based on what indicators – such as specimen temperature).

Chart 23 and Chart 24 illustrate the relative contribution of licensee employees and C/Vs to the subversion attempt counts for each reason for test and labor category.

Chart 23. Subversion Attempts by Reason for Test and Employment Category (E-Reported Data)

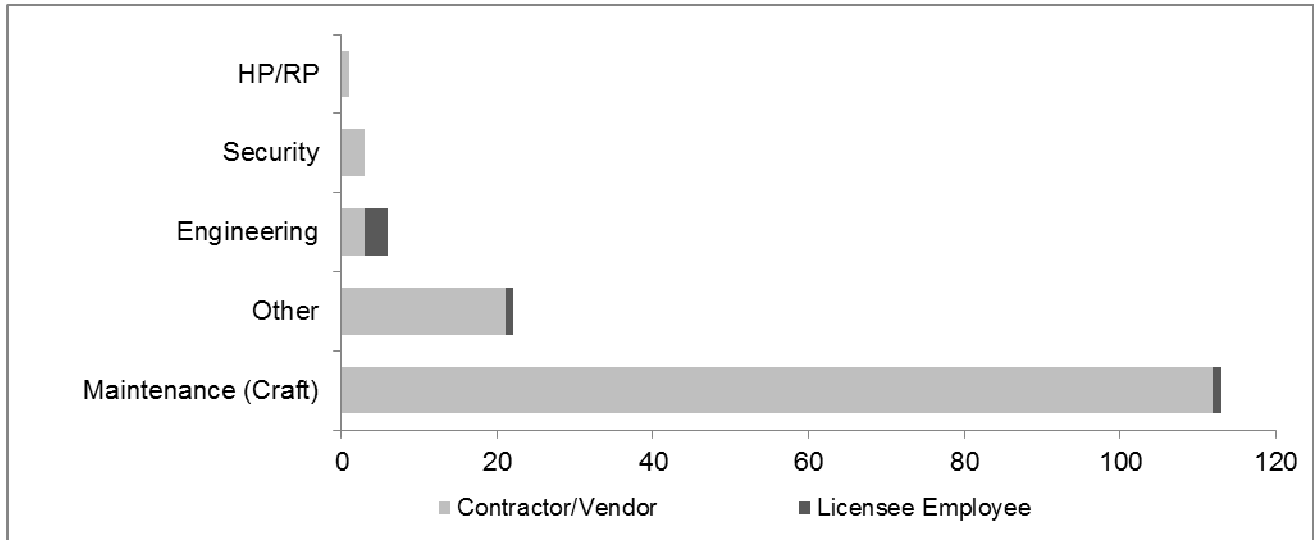


* Refer to Table A- 13 in the report appendix for the data used to create this chart.

Observations on Chart 23

- C/Vs were responsible for 97 percent of all subversion attempts in CY 2013.
- Seventy-six (76) percent of subversion attempts occurred during pre-access testing.
- No subversion attempts were reported via the e-reporting system for post-event testing.

Chart 24. Subversion Attempts by Labor Category* and Employment Category (E-Reported Data)



* Chart 24 only includes labor categories for which subversion attempts were reported. Refer to Table A- 14 in the report appendix for the data used to create this chart.

Observations on Chart 24

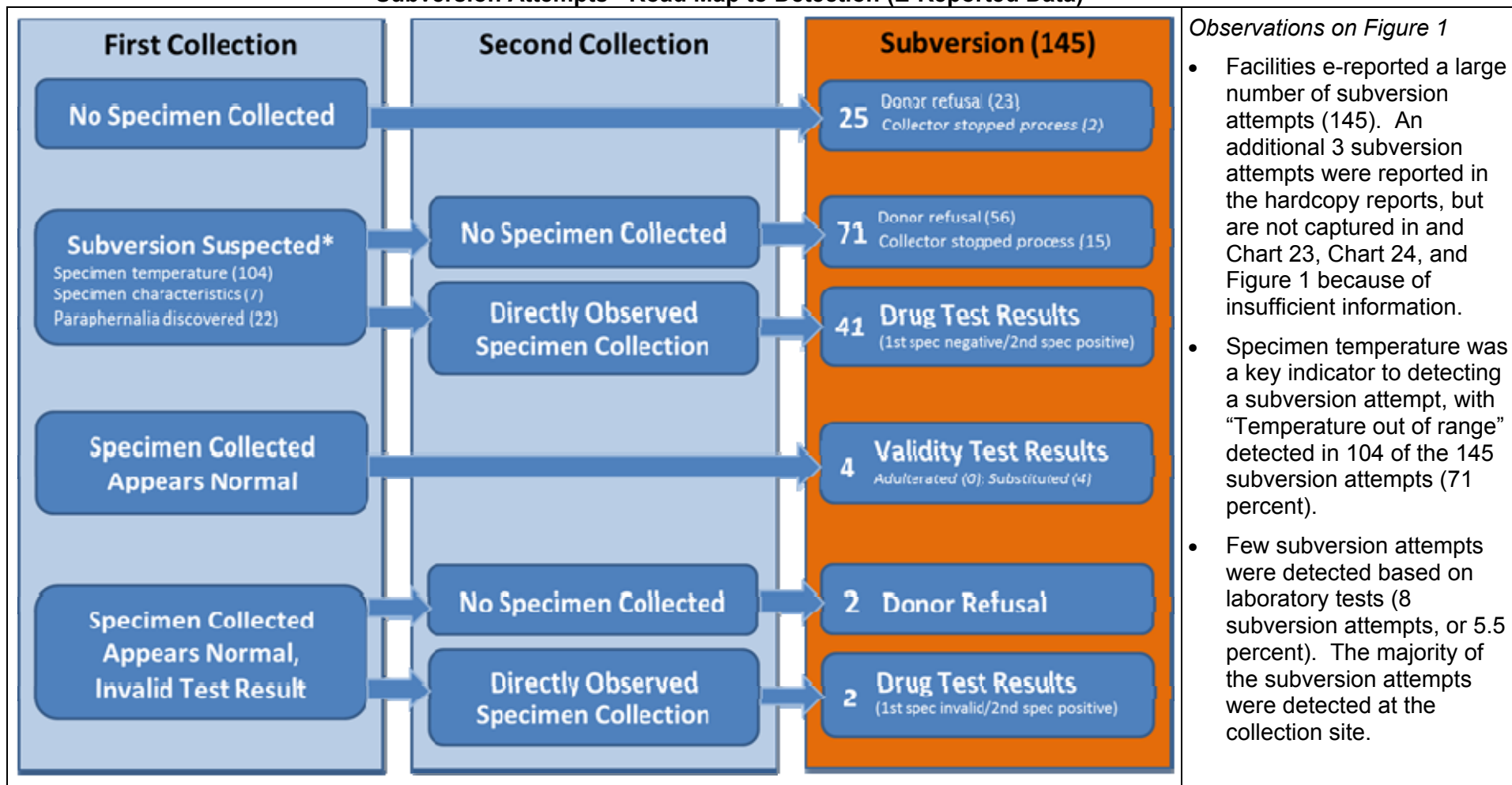
- C/Vs were responsible for 97 percent of all subversion attempts.
- A significant percentage of all subversion attempts (78 percent) were associated with the “Maintenance (Craft)” labor category.

Figure 1 maps the occurrences of subversion attempts in e-reported data for CY 2013. This “subversion map” includes three colored boxes, which represent three stages in the FFD testing process. Progressing from left to right, the three boxes represent (1) the first specimen collection; (2) the second specimen collection (if necessary); and (3) the resulting subversion attempt determination.

The subversion map identifies several paths to identifying a subversion attempt. Beginning in the “First Collection” box, the map presents a range of outcomes of the first collection, including no specimen collected, a specimen collected with an indication of a subversion attempt, and a seemingly normal specimen collected. The “Second Collection” box identifies outcomes of the second collection; either no specimen is collected or a specimen is collected under direct observation. Finally, the third box shows the ways in which the subversion attempts are ultimately identified, including a donor refusal, a test result, or the collector’s decision to terminate the process based on some other clear indicator of subversion.

The subversion map provides important information on the when and how of subversion attempts, which can guide efforts by licensees and other entities to detect and deter subversion attempts in their FFD programs. The subversion map is possible due to the combined reporting and analysis efforts of NRC and industry, resulting in a sophisticated analysis of subversion attempts that is unique among federal workplace testing programs.

Figure 1
Subversion Attempts - Road Map to Detection (E-Reported Data)



- Observations on Figure 1*
- Facilities e-reported a large number of subversion attempts (145). An additional 3 subversion attempts were reported in the hardcopy reports, but are not captured in and Chart 23, Chart 24, and Figure 1 because of insufficient information.
 - Specimen temperature was a key indicator to detecting a subversion attempt, with "Temperature out of range" detected in 104 of the 145 subversion attempts (71 percent).
 - Few subversion attempts were detected based on laboratory tests (8 subversion attempts, or 5.5 percent). The majority of the subversion attempts were detected at the collection site.

Table of Changes

This table highlights changes made to the tables in this report compared to the report for last year (i.e., Summary of Fitness for Duty Program Performance Reports for CY 2012).

CY 2012 Report		Current Report (CY 2013)		Changes Made
Table/ Chart No.	Table/ Chart Title	Table/ Chart No.	Table/ Chart Title	
-	E-Reporting System Use (CYs 2009-2012)	-	E-reporting System Use	<ul style="list-style-type: none"> Updated table title. Included 2013 data.
Table 1	Reportable Events Resulting from Individual Employee Violations	Table 1	24-Hour Reportable Events Resulting from Individual Employee Violations	<ul style="list-style-type: none"> Included a new column "Event Number" to cross reference each event to the NRC Event Notification Report. Changed name of first column from "Test Type" to "Event Type" to more accurately reflect the contents of the column.
Table 2	Laboratory Testing Performance Issues	Table 3	Laboratory Testing Performance Issues	<ul style="list-style-type: none"> Reordered the first two columns in the table in order to more effectively present topics for review. Renumbered table.
Table 3	Other Program and System Management Issues	Table 4	Other Program and System Management Issues	<ul style="list-style-type: none"> Renumbered table.
Table 4	Test Results by Test Category	Table 5	Test Results by Test Category	<ul style="list-style-type: none"> Renumbered table.
Table 5	Test Results by Test and Employment Categories	Table 6	Test Results by Test and Employment Categories	<ul style="list-style-type: none"> Renumbered table.
Table 6	Positive Test Results by Substance and Employment Category (All Test Types, Including Testing Refusals)	Table 7	Positive Test Results by Substance and Employment Category (All Test Types, Including Testing Refusals)	<ul style="list-style-type: none"> Renumbered table.
Chart 1	2012 Positive Test Results by Substance for Licensee Employees	Chart 1	Positive Test Results by Substance, Licensee Employees	<ul style="list-style-type: none"> Updated chart title.
Chart 2	2012 Positive Test Results by Substance for Contractors/Vendors	Chart 2	Positive Test Results by Substance, Contractors/Vendors	<ul style="list-style-type: none"> Updated chart title.

CY 2012 Report		Current Report (CY 2013)		Changes Made
Table/ Chart No.	Table/ Chart Title	Table/ Chart No.	Table/ Chart Title	
Table 7	Significant Fitness-for-Duty Events	Table 8	Significant Fitness-for-Duty Events	<ul style="list-style-type: none"> Renumbered table. Moved 2003 data to report appendix Table A-1. Included 2013 data. Added new column entitled "Other Events" to capture 24-hour reportable events either not associated with individual employee violations or for which sufficient information was not provided to categorize the event under the associated labor category. Updated new column to include available data from 2011-2013.
Table 8	Trends in Testing by Test Type	Table 9	Trends in Testing by Test Type	<ul style="list-style-type: none"> Moved 2001 data to report appendix Table A-2. Included 2013 data.
Chart 3	Trends in Positive Random Testing Rates	Chart 3	Trends in Positive Random Testing Rates	<ul style="list-style-type: none"> Included 2013 data.
Chart 4	Trends in Substances Identified	Chart 4	Trends in Substances Identified	<ul style="list-style-type: none"> Moved 2003 data to report appendix Table A-3. Included 2013 data.
Chart 5	Trends in Positive Pre-Access Testing Rates by Employment Category	Chart 5	Trends in Positive Pre-Access Testing Rates by Employment Category	<ul style="list-style-type: none"> Included 2013 data.
Chart 6	Trends in Positive Random Test Rates by Employment Category	Chart 6	Trends in Positive Random Testing Rates by Employment Category	<ul style="list-style-type: none"> Included 2013 data. Updated chart title.
Chart 7	Trends in Positive For-Cause Testing Rates by Employment Category	Chart 7	Trends in Positive For-Cause Testing Rates by Employment Category	<ul style="list-style-type: none"> Included 2013 data.
Table 9	Industry Positive Test Results for Pre-Access, Random, and For-Cause Testing by Employment Category	Table 10	Industry Positive Test Results for Pre-Access, Random, and For-Cause Testing by Employment Category	<ul style="list-style-type: none"> Renumbered table. Included columns for "Total Tests" and "Positive Test Results" for each test type and employment category. Including this information provides context for the reader to access results.
Table 10	Test Results for Each Test Category (E-Reported Data)	Table 11	Test Results for Each Test Category (E-Reported Data)	<ul style="list-style-type: none"> Renumbered table. Updated name of second column from "Positive Tests" to "Positive Test Results."

CY 2012 Report		Current Report (CY 2013)		Changes Made
Table/ Chart No.	Table/ Chart Title	Table/ Chart No.	Table/ Chart Title	
Chart 15	Licensee Employees, Percentage of Positive Tests by Substance and Reason for Test (E-Reported Data)	Chart 15	Licensee Employees, Percentage of Positive Results by Substance and Reason for Test (E-Reported Data)	<ul style="list-style-type: none"> Updated chart title.
Chart 19	Positive Results by Substance by Labor Category for Top Four Labor Categories (E-Reported Data)	-	-	<ul style="list-style-type: none"> Removed chart because information was presented in a clearer format in [new] Chart 19.
Chart 20	Positive Results by Substance by Labor Category for Remaining Six Labor Categories (E-Reported Data)	-	-	<ul style="list-style-type: none"> Removed chart because information already was presented in a clearer format in [new] Chart 20.
Chart 21	Individual Pie Charts Displaying Test Results for Top Four Labor Categories (E-Reported Data)	Chart 19	Individual Pie Charts Displaying Test Results for Top Four Labor Categories (E-Reported Data)	<ul style="list-style-type: none"> Renumbered chart.
Chart 22	Individual Pie Charts Displaying Test Results for Remaining Six Labor Categories (E-Reported Data)	Chart 20	Individual Pie Charts Displaying Test Results for Remaining Six Labor Categories (E-Reported Data)	<ul style="list-style-type: none"> Renumbered chart.
Chart 23	Alcohol Positives by BAC Level and Reason for Test (E-Reported Data)	Chart 21	Alcohol Positives by BAC Level and Reason for Test (E-Reported Data)	<ul style="list-style-type: none"> Renumbered chart.
Chart 24	Alcohol Positives by BAC Level (E-Reported Data)	Chart 22	Alcohol Positives by BAC Level (E-Reported Data)	<ul style="list-style-type: none"> Renumbered chart.
Chart 25	Subversion Attempts by Reason for Test and Employment Category (EIE results)	Chart 23	Subversion Attempts by Reason for Test and Employment Category (E-Reported Data)	<ul style="list-style-type: none"> Updated chart title. Renumbered chart.
Chart 26	Subversion Attempts by Labor Category and Employment Category (EIE results)	Chart 24	Subversion Attempts by Labor Category and Employment Category (E-Reported Data)	<ul style="list-style-type: none"> Updated chart title. Renumbered chart.
Figure 1	Subversion Attempts – e-Reporting Road Map to Detection (EIE Results)	Figure 1	Subversion Attempts - Road Map to Detection (E-Reported Data)	<ul style="list-style-type: none"> Updated figure title.
Table A-1	Significant Fitness-for-Duty Events (1990-2002)	Table A-1	Significant Fitness-for-Duty Events (1990-2003)	<ul style="list-style-type: none"> Updated table title. Moved 2003 data from Table 8 to this table.
Table A-2	Trends in Testing by Test Type (1990-2000)	Table A-2	Trends in Testing by Test Type (1990-2001)	<ul style="list-style-type: none"> Updated table title. Moved 2001 data from Table 9 to this table.
Table A-3	Trends in Substances Identified	Table A-3	Trends in Substances Identified	<ul style="list-style-type: none"> Updated table title. Included 2013 data.

CY 2012 Report		Current Report (CY 2013)		Changes Made
Table/ Chart No.	Table/ Chart Title	Table/ Chart No.	Table/ Chart Title	
Table A-4	Trends in Positive Test Rates (All Test Types) by Employment Category (1993-2012)	Table A-4	Trends in Positive Testing Rates (All Test Types) by Employment Category (1993-2013)	<ul style="list-style-type: none"> Updated table title. Included 2013 data.
Table A-5	Trends in Positive Pre-Access Testing Rates by Employment Category (1993-2012)	Table A-5	Trends in Positive Pre-Access Testing Rates by Employment Category (1993-2013)	<ul style="list-style-type: none"> Updated table title Included 2013 data.
Table A-6	Trends in Positive Random Test Rates by Employment Category (1993-2012)	Table A-6	Trends in Positive Random Testing Rates by Employment Category (1993-2013)	<ul style="list-style-type: none"> Updated table title. Included 2013 data.
Table A-7	Trends in Positive For-Cause Testing Rates by Employment Category (1993-2012)	Table A-7	Trends in Positive For-Cause Testing Rates by Employment Category (1993-2013)	<ul style="list-style-type: none"> Updated table title. Included 2013 data.
Table A-11	Licensee Employees, Percentage of Positive Tests by Substance and Reason for Testing (E-Reported Data)	Table A-11	Licensee Employees, Percentage of Positive Results by Substance and Reason for Testing (E-Reported Data)	<ul style="list-style-type: none"> Updated table title.
Table A-13	Subversion Attempts by Reason for Test and Employment Category (E-Reported Data)	Table A-13	Subversion Attempts by Reason for Test and Employment Category (E-Reported Data)	<ul style="list-style-type: none"> Updated table title.
Table A-14	Subversion Attempts by Labor Category and Employment Category (E-Reported Data)	Table A-14	Subversion Attempts by Labor Category and Employment Category (E-Reported Data)	<ul style="list-style-type: none"> Updated table title.

The following table presents information on new tables and charts included in the CY 2013 report. The presentation of each table or chart is consistent with the order of appearance in the report.

New Tables and Charts

Table/ Chart	Title	Description
Table 2	24-Hour Reportable Events Resulting from Substances Discovered in the Protected Area, Laboratory Testing, and Programmatic Failures or Discovered Vulnerabilities	New table created to present Section 26.719 reportable events not related to individual employee violations.

SECTION 3, HISTORICAL INFORMATION

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Table A- 1. Significant Fitness-for-Duty Events* (1990–2003)

Year	Reactor Operators	Licensee Supervisors	C/V Supervisors	FFD Program Personnel	Substances Found	Total
1990	19	26	12	1	6	64
1991	16	18	24	5	8	71
1992	18	22	28	0	6	74
1993	8	25	16	0	2	51
1994	7	11	11	1	0	30
1995	8	16	10	0	5	39
1996	8	19	8	2	5	42
1997	9	16	10	0	4	39
1998	5	10	10	3	0	28
1999	5	2	12	2	2	23
2000	5	11	8	0	3	27
2001	4	9	12	0	0	25
2002	3	3	12	3	1	22
2003	6	3	8	0	2	19

* This table presents 24-hour reportable events per Section 26.719.

Table A- 2. Trends in Testing by Test Type (1990–2001)

Type of Test	1990	1991	1992	1993	1994*	1995	1996	1997	1998	1999	2000	2001
Pre-Access												
Number Tested	122,491	104,508	104,842	91,471	80,217	79,305	81,041	84,320	69,146	69,139	68,333	63,744
Number Positive	1,548	983	1,110	952	977	1,122	1,132	1,096	822	934	965	720
Percent Positive	1.26%	0.94%	1.06%	1.04%	1.22%	1.41%	1.40%	1.30%	1.19%	1.35%	1.41%	1.13%
Random												
Number Tested	148,743	153,818	156,730	146,605	78,391	66,791	62,307	60,829	56,969	54,457	51,955	50,080
Number Positive	550	510	461	341	223	180	202	172	157	140	204	148
Percent Positive	0.37%	0.33%	0.29%	0.23%	0.28%	0.27%	0.32%	0.28%	0.28%	0.26%	0.39%	0.30%
For-Cause												
Number Tested	664	572	552	599	521	576	621	531	455	506	609	506
Number Positive	212	167	175	163	119	138	136	144	97	120	132	99
Percent Positive	31.93%	29.20%	31.70%	27.21%	22.84%	23.96%	21.90%	27.12%	21.32%	23.72%	21.67%	19.57%
Post-Event												
Number Tested	68	155	144	152	237	187	227	191	265	230	274	224
Number Positive	2	0	3	0	3	1	2	5	3	0	6	2
Percent Positive	2.94%	0.00%	2.08%	0.00%	1.27%	0.53%	0.88%	2.62%	1.13%	0.00%	2.19%	0.89%
Followup												
Number Tested	2,633	3,544	4,283	4,139	3,875	3,262	3,262	3,296	2,863	3,008	2,861	2,649
Number Positive	65	62	69	56	50	35	40	31	43	30	49	35
Percent Positive	2.47%	1.75%	1.61%	1.35%	1.29%	1.07%	1.23%	0.94%	1.50%	1.00%	1.71%	1.32%
TOTAL												
Number Tested	274,599	262,597	266,551	242,966	163,241	150,121	147,458	149,167	129,698	127,340	124,032	117,203
Number Positive	2,377	1,722	1,818	1,512	1,372	1,476	1,512	1,448	1,122	1,224	1,356	1,004
Percent Positive	0.87%	0.66%	0.68%	0.62%	0.84%	0.98%	1.03%	0.97%	0.87%	0.96%	1.09%	0.86%

* Beginning in 1994, the NRC reduced the minimum annual random testing rate from 100 percent to 50 percent of the subject population.

Table A- 3. Trends in Substances* Identified

Year	Marijuana	Cocaine	Alcohol	Amphetamines	Opiates	Phencyclidine	Total
1990	1,153	706	452	69	45	8	2,433
1991	746	549	401	31	24	11	1,762
1992	953	470	427	31	8	4	1,893
1993	781	369	357	51	13	5	1,576
1994	739	344	251	54	11	1	1,400
1995	819	374	265	61	17	7	1,543
1996	868	352	281	53	14	2	1,570
1997	842	336	262	49	39	0	1,528
1998	606	269	212	46	19	1	1,153
1999	672	273	230	40	16	2	1,233
2000	620	251	211	50	32	1	1,165
2001	523	225	212	50	17	2	1,029
2002	560	228	214	47	21	3	1,073
2003	518	228	199	64	17	0	1,026
2004	514	247	222	60	14	1	1,058
2005	432	246	196	59	16	2	951
2006	446	307	206	53	14	1	1,027
2007	386	232	189	29	22	5	863
2008	506	184	177	35	16	1	919
2009	500	157	261	38	10	1	967
2010	534	125	222	54	15	1	951
2011	530	127	262	85	18	3	1,025
2012	568	134	256	64	19	0	1,041
2013	480	123	238	84	10	0	935

* This table only includes positive test results for substances that licensees and other entities are required to test for per Paragraph 26.31(d).

Table A- 4. Trends in Positive Testing Rates (All Test Types)* by Employment Category (1993–2013)

Year	Licensee Employees			Contractors/Vendors		
	Total Tests	Number Positive	Percent Positive	Total Tests	Number Positive	Percent Positive
1993	109,375	274	0.25%	133,591	1,238	0.93%
1994	65,850	219	0.33%	97,391	1,153	1.18%
1995	58,801	197	0.34%	91,320	1,279	1.40%
1996	56,387	244	0.43%	91,071	1,268	1.39%
1997	55,402	187	0.34%	93,765	1,261	1.34%
1998	51,926	169	0.33%	77,772	953	1.23%
1999	49,046	159	0.32%	78,294	1,065	1.36%
2000	46,385	206	0.44%	77,647	1,150	1.48%
2001	46,466	147	0.32%	70,737	857	1.21%
2002	45,905	117	0.25%	81,095	935	1.15%
2003	44,892	146	0.33%	81,692	911	1.12%
2004	44,900	123	0.27%	87,369	911	1.04%
2005	44,405	122	0.27%	90,104	810	0.90%
2006	47,219	118	0.25%	91,705	907	0.99%
2007	47,974	115	0.24%	92,229	792	0.86%
2008	51,852	113	0.22%	97,914	823	0.84%
2009	54,845	153	0.28%	109,602	840	0.77%
2010	53,287	119	0.22%	113,354	862	0.76%
2011	54,203	127	0.23%	124,383	953	0.77%
2012	54,524	125	0.23%	124,611	989	0.79%
2013	53,477	135	0.25%	108,220	872	0.81%

* This table includes results for pre-access, random, for-cause, post-event, and followup testing.

**Table A- 5. Trends in Positive Pre-Access Testing Rates by Employment Category
(1993–2013)**

Year	Licensee Employees			Contractors/Vendors		
	Total Tests	Number Positive	Percent Positive	Total Tests	Number Positive	Percent Positive
1993	11,119	47	0.42%	80,352	905	1.13%
1994	10,254	49	0.48%	69,963	928	1.33%
1995	10,534	60	0.57%	68,771	1,062	1.54%
1996	9,901	94	0.95%	71,140	1,038	1.46%
1997	11,195	62	0.55%	73,125	1,034	1.41%
1998	9,422	50	0.53%	59,724	772	1.29%
1999	8,386	44	0.52%	60,753	890	1.46%
2000	7,613	51	0.67%	60,720	914	1.51%
2001	8,442	44	0.52%	55,302	676	1.22%
2002	8,050	28	0.35%	65,138	777	1.19%
2003	8,309	41	0.49%	64,679	716	1.11%
2004	7,661	35	0.46%	68,458	702	1.03%
2005	8,210	28	0.34%	70,795	620	0.88%
2006	9,336	24	0.26%	70,644	723	1.02%
2007	9,783	34	0.35%	72,149	634	0.88%
2008	11,498	21	0.18%	75,970	643	0.85%
2009	10,619	41	0.39%	85,259	636	0.75%
2010	10,312	21	0.20%	86,231	656	0.76%
2011	10,729	28	0.26%	93,119	713	0.77%
2012	10,529	28	0.27%	90,909	738	0.81%
2013	10,143	36	0.35%	79,044	618	0.78%

**Table A- 6. Trends in Positive Random Testing Rates by Employment Category
(1993–2013)**

Year	Licensee Employees			Contractors/Vendors		
	Total Tests	Number Positive	Percent Positive	Total Tests	Number Positive	Percent Positive
1993	95,103	157	0.17%	51,502	184	0.36%
1994*	52,493	96	0.18%	25,898	127	0.49%
1995	45,815	82	0.18%	20,976	98	0.47%
1996	44,183	94	0.21%	18,124	108	0.60%
1997	42,011	76	0.18%	18,818	96	0.51%
1998	40,415	71	0.18%	16,554	86	0.52%
1999	38,692	71	0.18%	15,765	69	0.44%
2000	36,784	116	0.32%	15,171	88	0.58%
2001	36,048	64	0.18%	14,032	84	0.60%
2002	35,608	55	0.15%	14,240	59	0.41%
2003	34,202	61	0.18%	15,200	71	0.47%
2004	34,723	51	0.15%	16,516	76	0.46%
2005	33,587	60	0.18%	16,699	87	0.52%
2006	34,818	55	0.16%	17,739	77	0.43%
2007	34,984	55	0.16%	16,681	62	0.37%
2008	36,721	50	0.14%	18,038	77	0.43%
2009	40,682	67	0.16%	20,195	87	0.43%
2010	39,588	69	0.17%	22,420	122	0.54%
2011	39,817	63	0.16%	25,961	139	0.54%
2012	39,951	65	0.16%	27,992	140	0.50%
2013	39,140	53	0.14%	24,538	141	0.57%

* Beginning in 1994, the NRC reduced the minimum annual random testing rate from 100 percent to 50 percent of the subject population.

Table A- 7. Trends in Positive For-Cause Testing Rates by Employment Category (1993–2013)

Year	Licensee Employees			Contractors/Vendors		
	Total Tests	Number Positive	Percent Positive	Total Tests	Number Positive	Percent Positive
1993	230	35	15.22%	369	128	34.69%
1994	199	39	19.60%	322	80	24.84%
1995	235	35	14.89%	341	103	30.21%
1996	244	34	13.93%	377	102	27.06%
1997	208	34	16.35%	323	110	34.06%
1998	185	26	14.05%	270	71	26.30%
1999	203	29	14.29%	303	91	30.03%
2000	205	21	10.24%	404	111	27.48%
2001	219	20	9.13%	287	79	27.53%
2002	243	23	9.47%	374	87	23.26%
2003	232	22	9.48%	405	101	24.94%
2004	266	23	8.65%	435	111	25.52%
2005	309	19	6.15%	362	86	23.76%
2006	322	24	7.45%	394	80	20.30%
2007	292	15	5.14%	428	66	15.42%
2008	329	22	6.69%	468	72	15.38%
2009	232	28	12.07%	315	80	25.40%
2010	214	11	5.14%	335	36	10.75%
2011	350	22	6.29%	506	51	10.08%
2012	218	17	7.80%	506	69	13.64%
2013	187	21	11.23%	440	63	14.32%

Table A- 8. Distribution of Pre-Access Testing Positive Rate Ranges by Employment Category and Number of Sites

Positive Rate Range (%)	Licensee Employees	Contractors/Vendors
0	50	13
>0 - 0.5	3	13
>0.5 – 1	14	33
>1 - 1.5	5	11
>1.5 – 2	2	3
>2 - 2.5	0	3
>2.5 – 3	0	0
>3 - 3.5	0	0
>3.5 – 4	1	0
Total Sites*	75	76

* Total site counts may differ if a site did not test any individuals in an employment category.

Table A- 9. Distribution of Random Testing Positive Rate Ranges by Employment Category and Number of Sites

Positive Rate Range (%)	Licensee Employees	Contractors/Vendors
0	40	32
>0 - 0.25	21	1
>0.25 - 0.5	10	9
>0.5 - 0.75	3	15
>0.75 – 1	1	7
>1 - 1.25	0	3
>1.25 - 1.5	0	8
>1.5 - 1.75	0	0
>1.75 – 2	0	0
>2 - 2.25	0	1
Total Sites*	75	76

* Total site counts may differ if a site did not test any individuals in an employment category.

**Table A- 10. Distribution of For-Cause Testing Positive Rate Ranges
by Employment Category and Number of Sites**

Positive Rate Range (%)	Licensee Employees	Contractors/Vendors
0	41	29
> 0-10	1	1
>10-20	4	7
>20-30	2	4
>30-40	3	7
>40-50	3	6
>50-60	0	0
>60-70	0	1
>70-80	1	0
>80-90	0	0
>90-100	3	3
Total Sites*	58	58

* Total site counts may differ if a site did not test any individuals in an employment category.

Table A- 11. Licensee Employees, Percentage of Positive Results by Substance and Reason for Test (E-Reported Data)

Substance	Reason for Test				
	Pre-Access	Random	For-Cause	Post-Event	Followup
Alcohol	23%	41%	84%	-	64%
Marijuana	65%	33%	5%	-	8%
Cocaine	6%	12%	11%	-	20%
Amphetamines	3%	10%	0%	-	8%
Refusal to Test	3%	2%	0%	-	0%
Opiates	0%	2%	0%	-	0%
Total*	100%	100%	100%	-	100%
	(Total = 31)	(Total = 51)	(Total = 19)	(Total = 0)	(Total = 25)

* The parenthetical "Total" for each Reason for Test column represents the number of occurrences.

Table A- 12. Contractors/Vendors, Percentage of Positive Results by Substance and Reason for Test (E-Reported Data)

Substance	Reason for Test				
	Pre-Access	Random	For-Cause	Post-Event	Followup
Marijuana	54%	42%	28%	20%	24%
Alcohol	15%	14%	53%	20%	35%
Cocaine	10%	19%	4%	40%	17%
Refusal to Test	13%	7%	3%	0%	13%
Amphetamines	7%	16%	7%	20%	7%
Opiates	1%	1%	0%	0%	4%
Benzodiazepines	0%	0%	1%	0%	0%
Methadone	0%	1%	0%	0%	0%
Oxycodone	0%	0%	1%	0%	0%
Oxymorphone	0%	0%	1%	0%	0%
Total*	100%	100%	100%	100%	100%
	(Total = 614)	(Total = 151)	(Total = 68)	(Total = 5)	(Total = 46)

* The parenthetical "Total" for each Reason for Test column represents the number of occurrences.

Table A- 13. Subversion Attempts by Reason for Test and Employment Category (E-Reported Data)

Reason for test	Contractor/Vendor	Licensee Employee	Total
Pre-Access	109	1	110
Random	14	3	17
For-Cause	9	1	10
Followup	8	0	8
Post-Event	0	0	0
Other	0	0	0
Total	140	5	145

Table A- 14. Subversion Attempts by Labor Category* and Employment Category (E-Reported Data)

Labor Category	Contractor/Vendor	Licensee Employee	Total
Maintenance (Craft)	112	1	113
Other	21	1	22
Engineering	3	3	6
Security	3	0	3
HP/RP	1	0	1
Total	140	5	145

* This table includes only the labor categories for which subversion attempts were reported.