

# Background Illustrations for

## **PUBLIC MEETING REGARDING FITNESS-FOR-DUTY PROGRAM EFFECTIVENESS, REQUIREMENTS, GUIDANCE, AND OPTIONS TO MINIMIZE FUTURE POLICY CHANGES**

April 19, 2016



# Disclaimer

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# Initializations & Acronyms

Part 26	10 CFR Part 26
§ 26.717	10 CFR 26.717 or Section 26.717
FFD	Fitness for Duty
C/V	Contractor/Vendor
LE	Licensee Employee
BOP	Behavioral Observation Program
AA	Access Authorization

## How NRC staff obtains its FFD Performance Information

Licensees and other entities subject to Part 26 are required to report the following FFD performance information to the NRC:

- Annual drug and alcohol testing program test results, subversion attempts, and program information (§ 26.717). To report this information, the industry uses two electronic forms located at <http://www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/submit-ffd-reports.html>. This staff commends the industry for electronic reporting and sharing operational experience.
- FFD-related events reports. Based on the significance of the event, the licensee will report the information to the NRC within 24 hours or 30 days of the event (§ 26.719).

The NRC staff also obtains drug and alcohol testing information from NRC inspectors, Federal partners, and drug testing laboratories.

## What the NRC staff does with FFD Performance Information

Every year the NRC staff publishes an annual summary report describing FFD performance in the commercial nuclear industry. These reports can be viewed: <http://www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/performance-reports.html>.

The staff also uses the information to risk-inform and performance-base policy and guidance and the NRC's inspection program. For example:

- Site-specific pre-access testing rates may identify regions in the U.S. where substance abuse is prevalent
- For-cause and post-event testing rates could indicate how well individuals at a site follow the licensee's FFD program

Industry-wide drug testing information is shared with Federal partners to inform the National strategy on substance use and abuse.

# Overall Industry Performance, 2014

**75**            **FFD programs**

**166,590**      **Individuals drug & alcohol tested** (*up 3% from 2013*)

**1,133**            **Individuals that tested positive for a drug, alcohol, or refused a test**

67% identified at pre-access testing  
19% identified at random testing

**0.68%**            **Industry overall positive rate**    *up from 0.62% in 2013*  
0.23% LE positive rate            *down from 0.25% in 2013*  
0.88% C/V positive rate           *up from 0.81% in 2013*

**0.34%**            **Industry random positive rate**   *up from 0.31% in 2013*  
0.14% LE positive rate            *same as in 2013*  
0.62% C/V positive rate           *up from 0.57% in 2013*

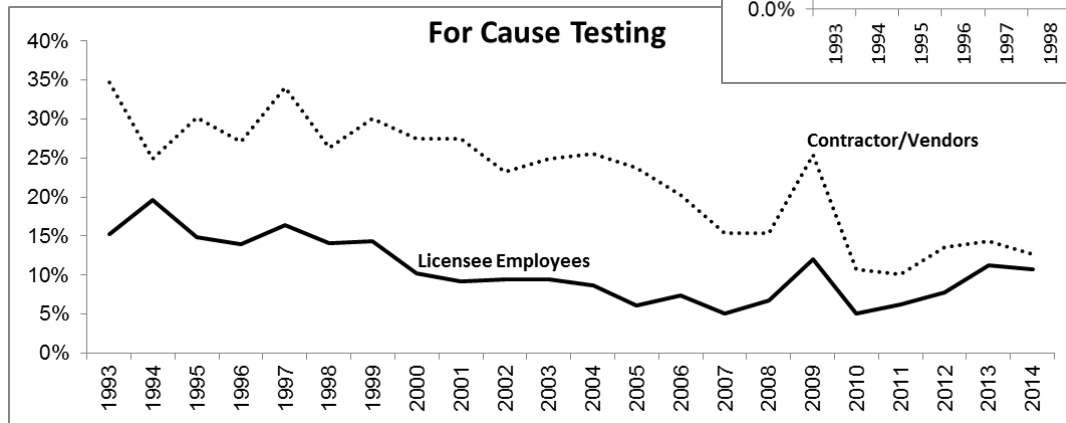
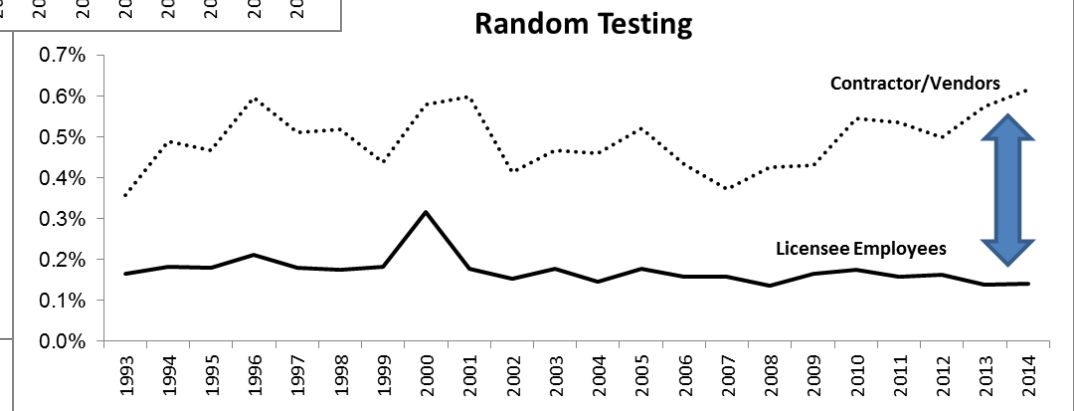
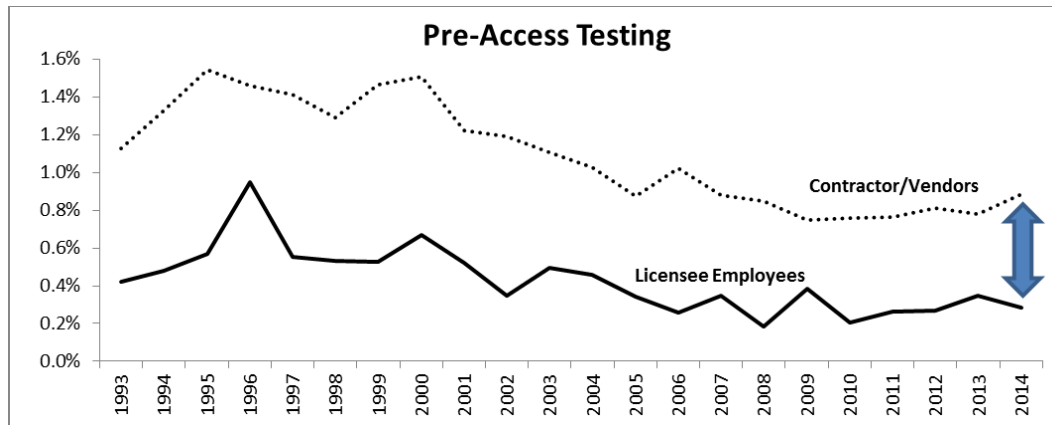
# Results by Test Type and Employment Category, 2014

Test Category	Licensee Employees			Contractor/Vendors			Total		
	Number Tested	Number Positive	Percent Positive	Number Tested	Number Positive	Percent Positive	Number Tested	Number Tested Positive	Percent Positive
Pre-Access	9,545	27	0.28%	82,823	736	0.89%	92,368	763	0.83%
Random	37,545	53	0.14%	27,144	167	0.62%	64,689	220	0.34%
For Cause	215	23	10.70%	479	61	12.73%	694	84	12.10%
Post-Event	241	1	0.41%	656	12	1.83%	897	13	1.45%
Followup	3,382	14	0.41%	4,560	39	0.86%	7,942	53	0.67%
<b>Total</b>	<b>50,928</b>	<b>118</b>	<b>0.23%</b>	<b>115,662</b>	<b>1,015</b>	<b>0.88%</b>	<b>166,590</b>	<b>1,133</b>	<b>0.68%</b>

- 90% of positives and testing refusals are from contractor/vendors
- Positives and testing refusals vary by employment type and test category

	<u>Pre-Access</u>	<u>Random</u>	<u>For-Cause</u>
C/Vs	73%	16%	6%
LEs	23%	45%	20%

# Positive Rates by Employment Category and Test Type

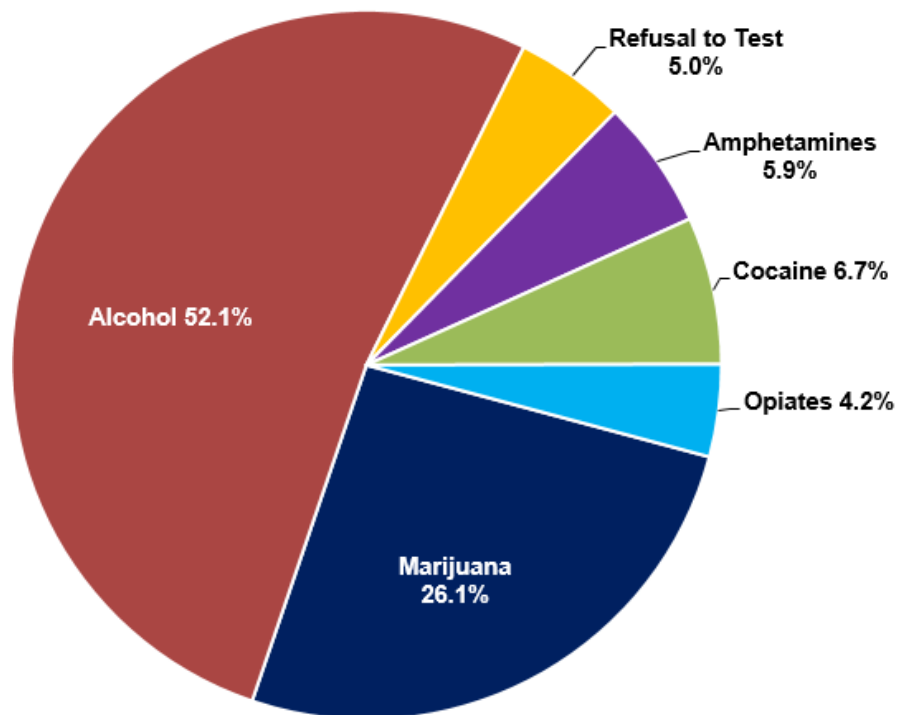




# Results by Employment Type, 2014

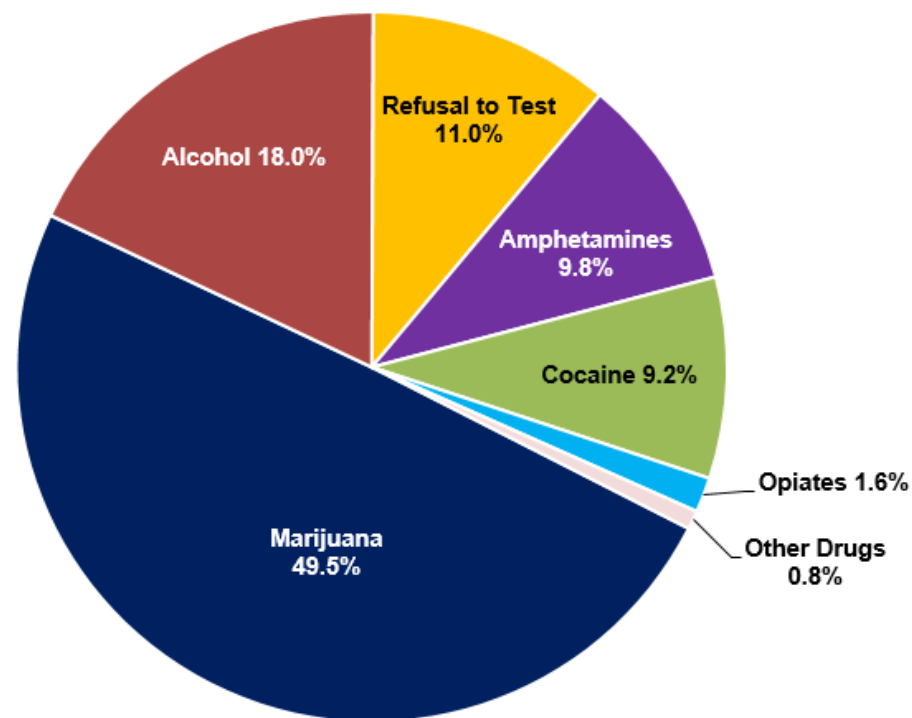
## Licensee Employees

(50,928 tested, 118 individuals positive)

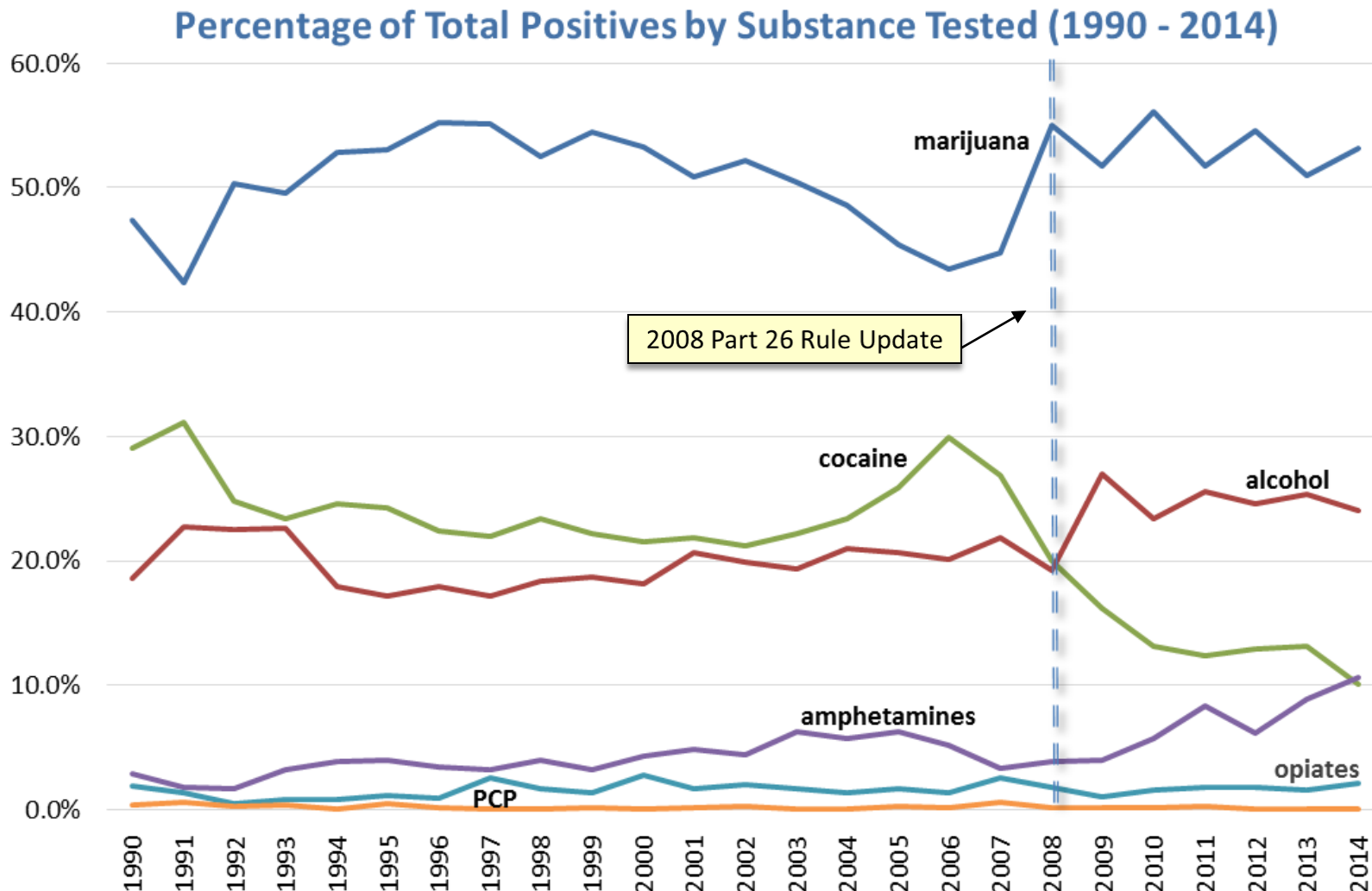


## Contractor/Vendors

(115,662 tested, 1,015 individuals positive)



# Detection Trends – NRC Testing Panel



## FFD Performance Trends

### Multi-year trends:

- **Amphetamine and methamphetamine** (increased detection)
- **Subversion attempts** (high prevalence)

Year	Amphetamines & Methamphetamines Percentage of Total Positives	Subversion Attempts Percentage of Violations
2012	6.15%	15.8%
2013	8.93%	14.7%
2014	10.6%	16.5%

### Multi-substance positives (2012–2014)

- 34-48 individuals per year tested positive for more than one substance
- 83-93% of these individuals tested positive for amphetamines, methamphetamines, and/or cocaine

### 24-hour reportable events (§26.719) to NRC (2012–2015)

- Two to six individuals in the “critical group” (i.e., operators, supervisors) test positive each year for amphetamines or cocaine

# Multi-Substance Positive Results, 2014

	Pre-Access	Random	For Cause	Followup	Grand Total
Amphetamines; Alcohol				1	1
Amphetamines; Cocaine		1	1		2
Amphetamines; Cocaine; Marijuana		1			1
Amphetamines; Marijuana	4				4
Amphetamines; Methamphetamines	12	6	1		19
Amphetamines; Methamphetamines; Cocaine	1				1
Amphetamines; Methamphetamines; Marijuana	3				3
Amphetamines; Methamphetamines; Other: Hydrocodone			1		1
Amphetamines; Opiate: Codeine			1		1
Methamphetamines; Marijuana		1			1
Cocaine; Marijuana	5				5
Cocaine; Opiate: Morphine	1				1
Marijuana; Alcohol	1	1	1		3
Opiate: Codeine; Opiate: Morphine		2			2
Other: Benzodiazepines; Other: Methadone; Marijuana	1				1
Other: Hydrocodone; Other: Oxycodone; Other: Oxymorphone			1		1
Other: Propoxyphene; Marijuana	1				1
<b>Grand Total</b>	<b>29</b>	<b>12</b>	<b>6</b>	<b>1</b>	<b>48</b>

48 of the 1,133 individuals with a drug and/or alcohol testing violation in 2014 tested positive for more than one substance (47 of these 48 individuals were contractor/vendors)

18 of 75 sites with an FFD program reported at least one multi-substance positive result in 2014

23 of 48 individuals that tested positive for more than one substance worked at a subpart K construction site

## 24-Hour Reportable Events (§ 26.719) Amphetamines and Cocaine Positives

### **2015**

- Reactor operators (1 cocaine of 7 reportable events)
- Supervisors (1 amphetamine of 16 reportable events)

### **2014**

- Reactor operators (1 cocaine of 9 reports events)
- Supervisors (2 cocaine of 27 reportable events)

### **2013**

- Reactor operators (1 cocaine of 12 reportable events)
- Supervisors (1 cocaine of 17 reportable events)

### **2012**

- Reactor operators (0 of 6 reportable events)
- Supervisors (6 cocaine of 25 reportable events)

# Heroin Test Results, 2010-2015

## **2015**      **4 positive results (3 sites) [not complete, still collecting data]**

2 Pre-Access      Point Beach: C/V; Outage worker; HR/RP; Reinstatement (6-30 days); 6-AM  
Waterford: C/V; Maint.(general facility); Initial Authorization; 6-AM, codeine, & morphine

2 Random      Millstone: C/V; Outage worker; Maint.(general facility); 6-AM, cocaine, & morphine  
Waterford: Licensee employee; Engineering; 6-AM, codeine, & morphine

## **2014**      **2 positive results (2 sites)**

Pre-Access      Dresden: C/V; Maintenance (Craft); Initial Authorization; 6-AM  
Pre-Access      Millstone: C/V; Maintenance (Craft); 6-AM

## **2013**      **1 positive result**

Pre-Access      V.C. Summer 2&3: C/V, Maintenance (Craft); 6-AM & morphine

## **2012**      **None**

## **2011**      **2 positive results (2 sites)**

Post-Event      Surry: CV, Maintenance (Craft); 6-AM  
Post-Event      Waterford: C/V, Security; 6-AM & morphine

## **2010**      **1 positive result**

Pre-Access      Palo Verde; Maintenance (Craft); Initial Authorization; 6-AM & morphine;  
subversion on initial specimen out-of-temperature range

# Subversion Trends, 2012-2014

Subversion attempt is any act or attempted act to subvert the testing process (e.g., refusing to provide a specimen, providing or attempting to provide a substituted or adulterated specimen).

Results in a permanent denial of authorization (§26.75)

## Subversion Attempts

2012  $\Rightarrow$  177 of 1,114 violations = 15.8% subversions

2013  $\Rightarrow$  148 of 1,007 violations = 14.7% subversions

2014  $\Rightarrow$  187 of 1,133 violations = 16.5% subversions

## In 2014

72% of subversion attempts occur at pre-access testing

96% of subversion attempts were made by C/Vs



## How subversions were identified, 2014

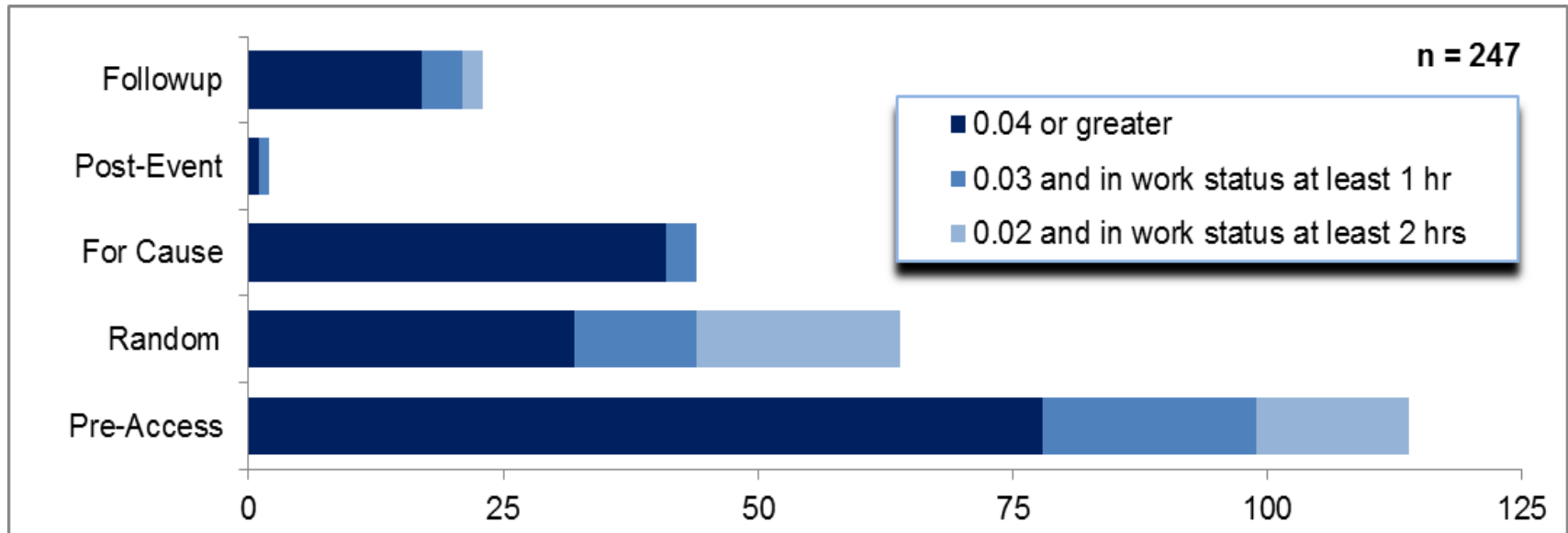
187 individuals were identified as subverting the testing process.

- 120 refused to provide a 1<sup>st</sup> or 2<sup>nd</sup> specimen for testing (64%)
- 4 were identified by validity testing (1 adulterated & 3 substituted)
- 118 had an out-of-temperature condition (63%)
- 63 tested positive for a drug (i.e., observed 2<sup>nd</sup> specimen collection, 34%)

	Pre-Access	Random	For Cause	Followup	Grand Total
Amphetamines	2				2
Amphetamines; Marijuana	1				1
Amphetamines; Methamphetamines	1				1
Cocaine	4	4	1		9
Marijuana	38	6	1	1	46
Marijuana; Other: Methadone; Other: Benzodiazepines	1				1
Marijuana; Other: Propoxyphene	1				1
Methamphetamines		1			1
Opiate: Morphine	1				1
<b>Grand Total</b>	<b>49</b>	<b>11</b>	<b>2</b>	<b>1</b>	<b>63</b>



# Effectiveness of Lower Cutoff Levels for Alcohol Testing, 2014



	Pre-Access	Random	For Cause	Post-Event	Followup	Grand Total
0.04 or greater	78	32	41	1	17	169
0.03 and in work status at least 1 hr	21	12	3	1	4	41
0.02 and in work status at least 2 hrs	15	20			2	37
<b>Grand Total</b>	<b>114</b>	<b>64</b>	<b>44</b>	<b>2</b>	<b>23</b>	<b>247</b>

## Where testing was conducted and where positivity was identified, 2014

### Where is most testing conducted (>90% of tests)?

Licensee Employees		Contractor/Vendors	
Pre-access	18.7%	Pre-access	71.6%
Random	73.7%	Random	23.5%
Followup	6.6%	Followup	3.9%
99.1%		99.0%	

### Where are drug and alcohol testing violations identified (>90% of positives)?

Licensee Employees		Contractor/Vendors	
Pre Access	22.9%	Pre-access	72.5%
Random	44.9%	Random	16.5%
For Cause	19.5%	ForCause	6.0%
Followup	11.9%	95.0%	
99.2%			

# NRC Fitness for Duty Program Staff



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