

# Presentation to the Drug Testing Advisory Board (HHS/SAMHSA)

**Operating Experience in 2015**  
Fitness for Duty Programs –10 CFR  
Part 26

*“A Direct Contribution to Safety and  
Security”*

**May 20, 2016**



# Discussion Topics

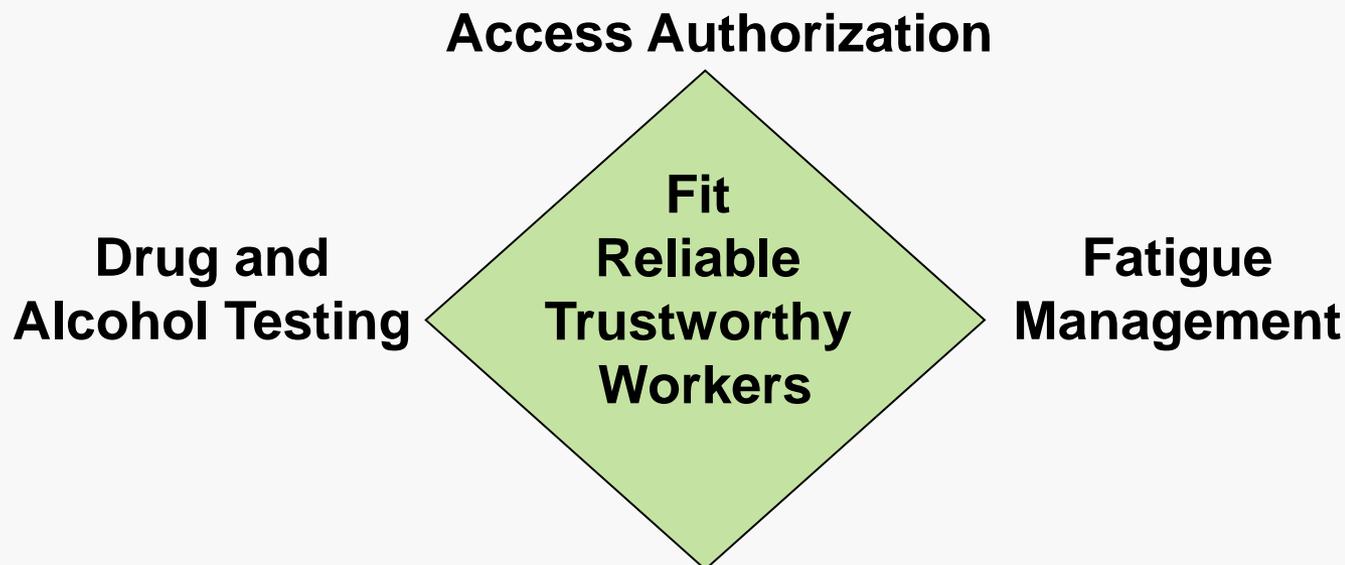
- NRC FFD program mission
- Summary of industry performance in 2015
- Historical trending on substances detected 1990-2015
- Subversion trends 2012-2015
- FFD e-reporting system



# NRC Fitness for Duty Program Mission (10 CFR Part 26)

- To provide a direct contribution to safety and security through effective regulatory oversight (policy development in support of licensing, rulemaking, and inspection) of licensees and other affected entities that implement the drug and alcohol provisions in 10 CFR Part 26.
- Objectives listed in 10 CFR 26.23 require a licensee to implement an FFD program to provide reasonable assurance that persons are:
  - Trustworthy and reliable
  - Not under the influence of any legal or illegal substance or physically impaired from any cause
  - Not fatigued or in a state of diminished mental or physical capacity.

# Fitness for Duty Strategy Defense in Depth



**Behavioral  
Observation**



# Overall Industry Performance, 2015

(draft)

- 73 FFD programs (reactors: operating & under construction; category I fuel cycle facilities, FFD corporate offices; C/V program)
- 163,398 individuals drug & alcohol tested (*down 2% from 2014*)
  - 1,199 individuals tested positive for a drug, alcohol, or refused a test
  - 66.1% identified at pre-access testing
  - 18.7% identified at random testing
- 0.73% industry overall positive rate *up from 0.68% in 2014*
  - 0.26% LE positive rate *up from 0.23% in 2014*
  - 0.95% C/V positive rate *up from 0.88% in 2014*
- 0.35% Industry random positive rate *up from 0.34% in 2014*
  - 0.14% LE positive rate *same in 2013 and 2014*
  - 0.62% C/V positive rate *same in 2014*
- LE = Licensee Employees; C/V = Contractor/Vendors

# Results by Test Type & Employment Category 2015 (draft)

Test Category	Licensee Employees (LEs)			Contractor/Vendors (CVs)			Total		
	Number Tested	Number Positive	Percent Positive	Number Tested	Number Positive	Percent Positive	Number Tested	Number Tested Positive	Percent Positive
Pre-Access	9,709	38	0.39%	78,884	753	0.95%	88,593	791	0.89%
Random	37,504	54	0.14%	27,251	171	0.63%	64,755	225	0.35%
For Cause	181	22	12.15%	473	84	17.76%	654	106	16.21%
Post-Event	236	3	1.27%	780	14	1.79%	1,016	17	1.67%
Followup	3,481	14	0.40%	4,899	46	0.94%	8,380	60	0.72%
<b>Total</b>	<b>51,111</b>	<b>131</b>	<b>0.26%</b>	<b>112,287</b>	<b>1,068</b>	<b>0.95%</b>	<b>163,398</b>	<b>1,199</b>	<b>0.73%</b>

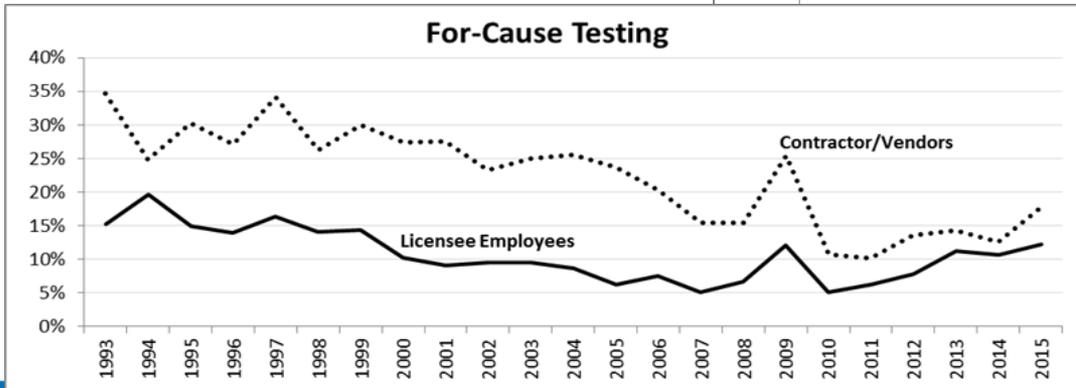
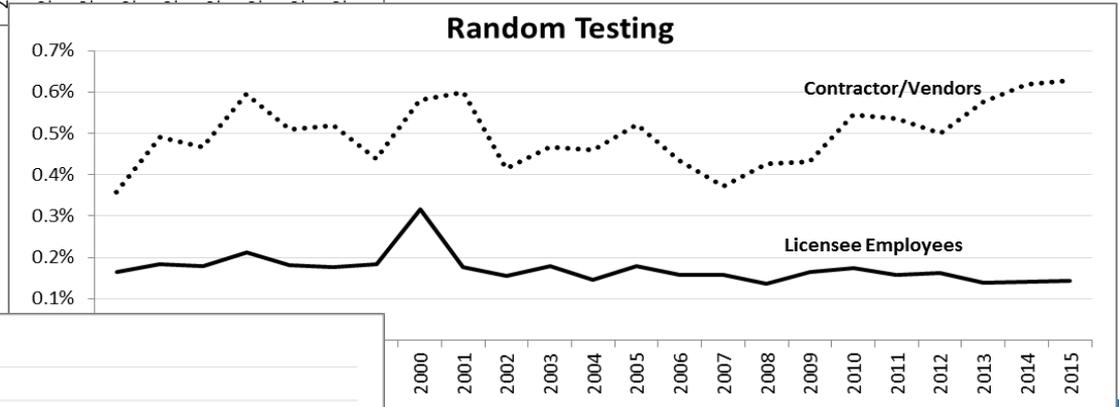
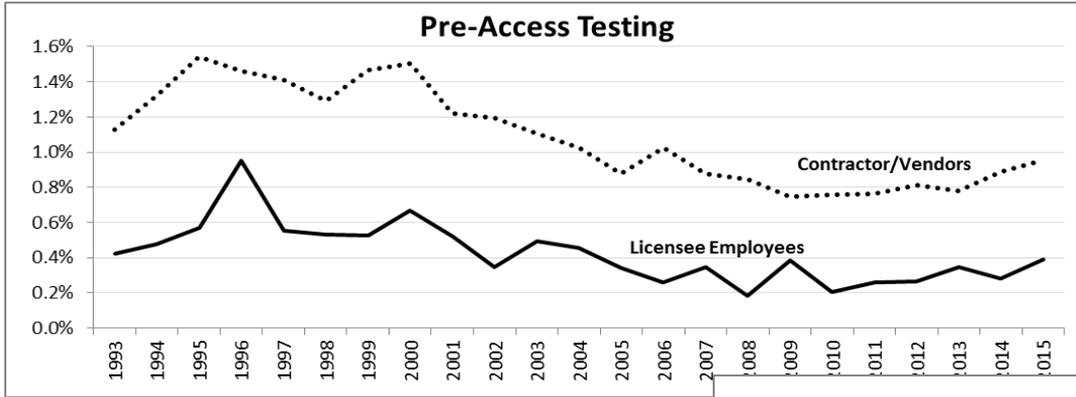
Where is most testing conducted in 2015 (>90% of tests)?

Licensee Employees		Contractor/Vendors	
Pre-access	19.0%	Pre-access	70.3%
Random	73.4%	Random	24.3%
Followup	6.8%	Followup	4.4%
	99.2%		98.9%

Where were most drug and alcohol testing violations identified in 2015 (>90% of positives)?

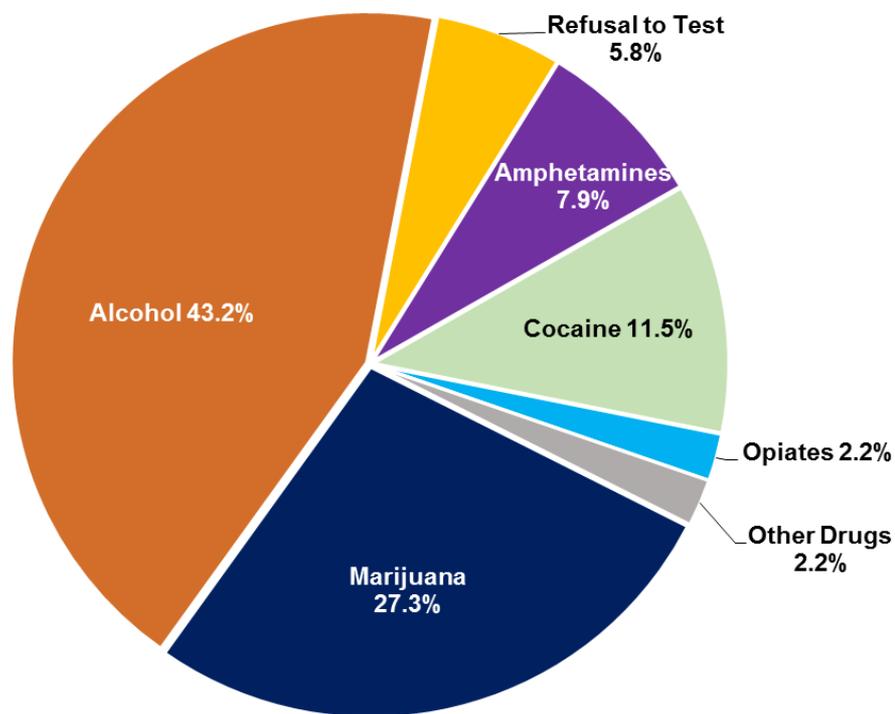
Licensee Employees		Contractor/Vendors	
Pre Access	29.0%	Pre-access	70.5%
Random	41.2%	Random	16.0%
For Cause	16.8%	ForCause	7.9%
Followup	10.7%		94.4%
	97.7%		

# Positive Rates by Employment Category (Pre-Access, Random, and For Cause Testing)

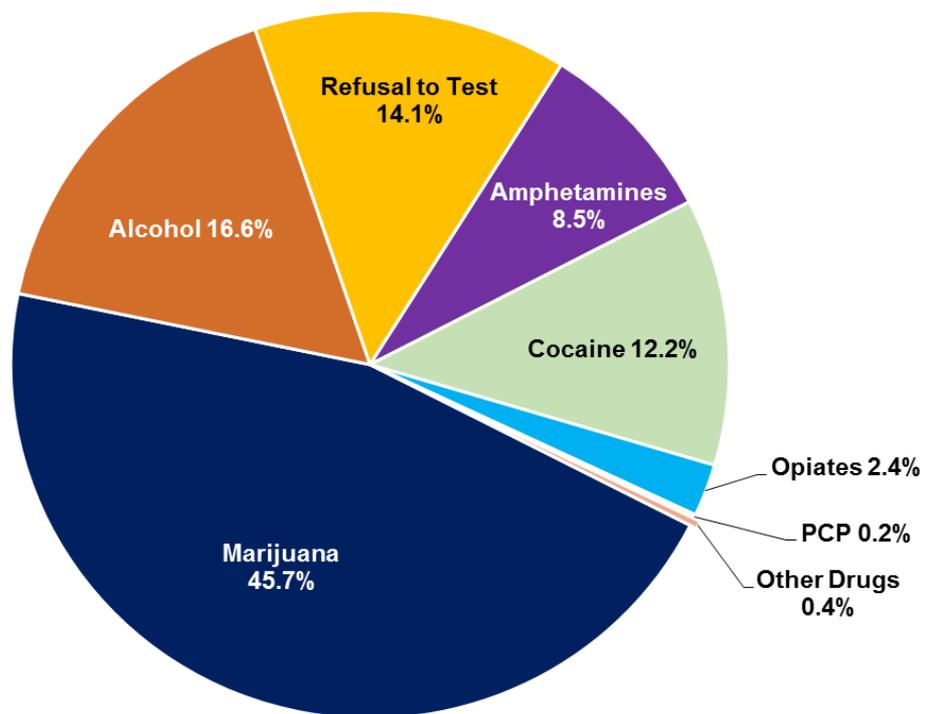


# Results by Employment Type, 2015 (draft)

**Licensee Employees**  
(51,111 tested, 131 individuals positive)

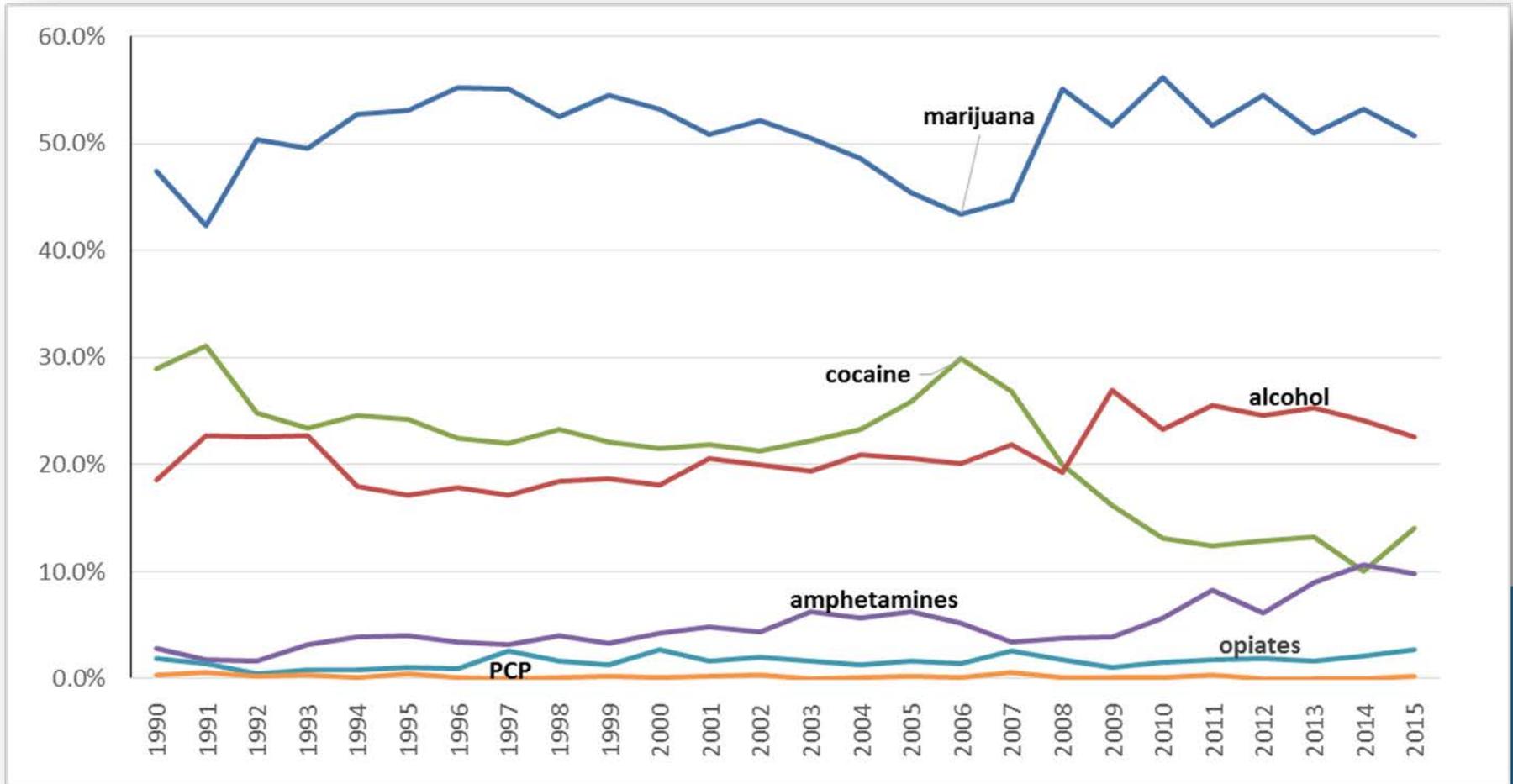


**Contractor/Vendors**  
(112,287 tested, 1,068 individuals positive)



# Detection Trends – NRC Testing Panel, 1990-2015

## Percentage of Total Positives by Substance Tested



# FFD Performance Trends, 2012-

## 2015

- Multi-year trends:
  - Amphetamine and methamphetamine (increased detection)
  - Subversion attempts (high prevalence)
- Multi-substance positives (2012–2015)
  - 34-61 individuals per year tested positive for more than one substance
  - 83-93% of these individuals each year tested positive for amphetamines, methamphetamines, and/or cocaine
  - 24-hour reportable events (10 CFR 26.719) for critical group (reactor operators, supervisors), 2012 to 2015
  - 6-14 Licensed Operators and 16-27 Supervisors per year

Year	Amphetamines & Methamphetamines Percentage of Total Positives	Subversion Attempts Percentage of Violations
2012	6.2%	15.8%
2013	8.9%	14.7%
2014	10.6%	16.5%
2015 (draft)	9.8%	19.3%

# Subversion Attempts

- Subversion attempt is any act or attempted act to subvert the testing process (e.g., refuse to provide a specimen, provide or attempt to provide a substituted or adulterated specimen)
- Sanction for a subversion attempt is a permanent denial of authorization  
(10 CFR 26.75)

- | <u>Year</u> | <u>Subversion Attempts</u>                  |
|-------------|---|
| 2012:       | 177 of 1,114 violations = 15.8% subversions |
| 2013        | 148 of 1,007 violations = 14.7% subversions |
| 2014        | 187 of 1,133 violations = 16.5% subversions |
| 2015        | 231 of 1,199 violations = 19.3% subversions |



- **[draft data]**
- In 2015
  - 46 sites reported at least 1 subversion attempt
  - 76% of subversion attempts occur at Pre-Access testing (176 of 231)
  - 95% of subversion attempts by contractor/vendors

# Positive Results for Subversion Attempts where a Donor Provided a Specimen under Direct Observation, 2015 (draft)

Test Result	Pre-Access	Random	For Cause	Post-Event	Followup	Total
Marijuana	40	10	2			52
Cocaine	4	1			1	6
Amphetamines; Methamphetamines	2	1		1		4
Cocaine; Marijuana	3					3
Alcohol; Marijuana	1					1
Amphetamines; Marijuana	1					1
Amphetamines; Methamphetamines; Cocaine; Marijuana	1					1
Amphetamines; Methamphetamines; Marijuana			1			1
Cocaine; Opiate: Morphine	1					1
Opiate: Morphine		1				1
Opiate: Morphine; Marijuana	1					1
Other: Buprenorphine	1					1
<b>Total</b>	<b>55</b>	<b>13</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>73</b>

- Of the 231 individuals identified as subverting a test in 2015, 73 provided specimens under direct observation ( $73/231 = 31.6\%$ )

# Limit of Detection (LOD) Testing of Dilute Specimens – 10 CFR 26.163(a)(2)

- 26.163(a)(2) permits a licensee to require the HHS-certified laboratory to conduct confirmatory drug testing to LOD for a substance if:
  - 1. Validity Test = Dilute, and
  - 2. Immunoassay response is equal to or greater than 50% cutoff
- 68 of 73 licensee sites instituted the optional LOD testing policy in 2015
- 32 of 75 licensees conducted LOD testing on 755 dilute specimens in 2015

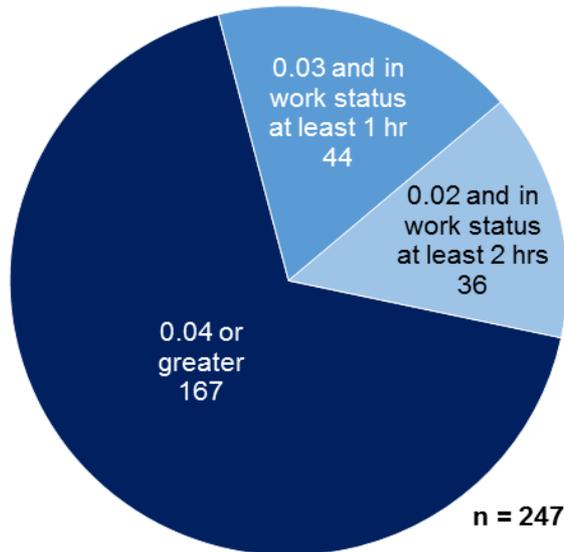
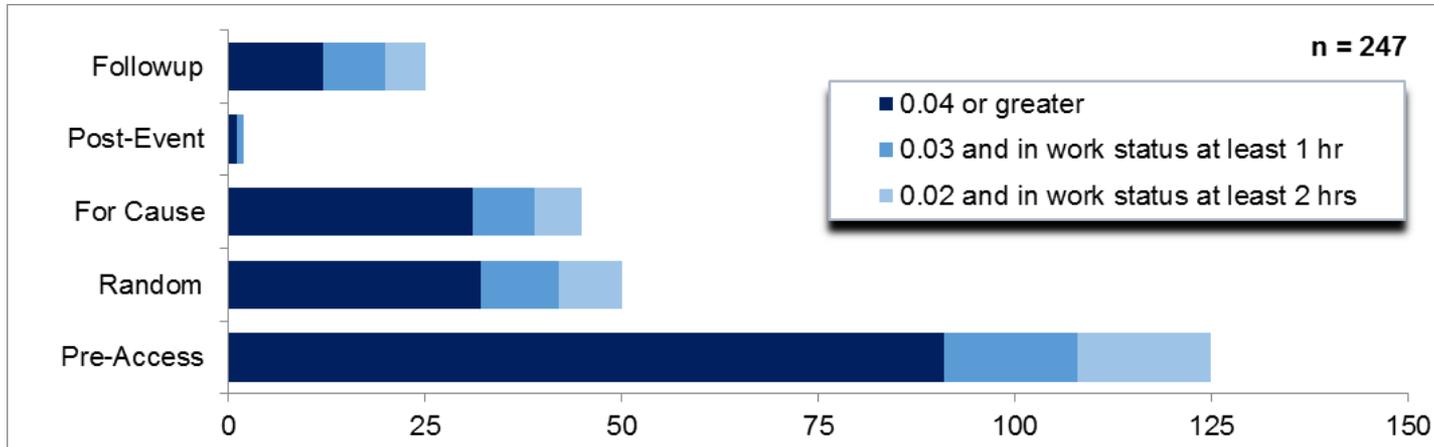
<b>Dilute Specimens with Positive Drug Test Results</b>						
	2010	2011	2012	2013	2014	2015
<b>LOD Testing Conducted = Yes</b>	<b>19</b>	<b>2</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>3</b>
Pre-Access	16		6	8	8	2
Cocaine	2					
Marijuana	14		6	8	6	2
Amphetamines; Marijuana					1	
Amphetamines; Methamphetamines					1	
Random	2	1	1		1	1
Cocaine		1			1	1
Marijuana	2		1			
For Cause						1
Marijuana						1
Post-Event		1				
Marijuana		1				
Followup	1					
Cocaine	1					
<b>LOD Testing Conducted = No</b>	<b>7</b>	<b>10</b>	<b>12</b>	<b>8</b>	<b>5</b>	<b>14</b>
Pre-Access	4	7	10	3	3	8
Cocaine	1		1		1	1
Marijuana	3	7	9	3	2	6
Methamphetamines						1
Random	3	3	2	5	2	3
Cocaine	2	2		1		1
Marijuana	1	1	2	3	2	1
Amphetamines				1		1
For Cause						1
Marijuana						1
<b>Total</b>	<b>26</b>	<b>12</b>	<b>19</b>	<b>16</b>	<b>15</b>	<b>17</b>

# Multi-Substance Positive Results 2015 (draft)

	Pre-Access	Random	For Cause	Post-Event	Followup	Grand Total
Amphetamines; Marijuana	4	1				5
Amphetamines; Methamphetamines	10	6	4	2		22
Amphetamines; Methamphetamines; Cocaine; Marijuana	1					1
Amphetamines; Methamphetamines; Marijuana	1		2			3
Amphetamines; Methamphetamines; Other: Benzodiazepines			1			1
Cocaine; Alcohol			1			1
Cocaine; Marijuana	8	2	1		1	12
Cocaine; Methamphetamines; Marijuana			1			1
Cocaine; Methamphetamines; Opiate: Morphine		1				1
Cocaine; Opiate: Morphine	1				1	2
Methamphetamines; Marijuana; Opiate: Codeine	1					1
Opiate: 6-AM; Opiate: Codeine; Opiate: Morphine	1	1				2
Opiate: 6-AM; Opiate: Morphine	1					1
Opiate: 6-AM; Opiate: Morphine; Cocaine		1				1
<hr style="border-top: 1px dashed black;"/>						
Alcohol; Marijuana	1	1				2
Opiate: Codeine; Opiate: Morphine	1					1
Opiate: Morphine; Marijuana	1					1
Opiate: Morphine; Opiate: Codeine	1		1			2
Other: Fentanyl; Other: Oxycodone; Other: Oxymorphone			1			1
<b>Grand Total</b>	<b>32</b>	<b>13</b>	<b>12</b>	<b>2</b>	<b>2</b>	<b>61</b>

- 61 of 1,199 individuals with a drug and/or alcohol testing violation in 2015 tested positive for more than one substance (55 of these 61 individuals were contractor/vendors)
- 23 of 73 sites reported at least one multi-substance positive result in 2015
- 23 of 61 individuals with a multi-substance positive applied to work/worked at a reactor construction site

# Measuring Effectiveness of Lower Cutoff Levels for Alcohol Testing,



- 32% of alcohol positives (BAC < 0.04) are result of time dependent cutoff levels implemented in the 2008
- This effectiveness trend has remained steady from 2013-2015 (31-32% of positives at BAC <0.04 levels)

# Electronic Reporting FFD Program Performance Information



- Annual information reporting (10 CFR 26.717)
- 100% of licensees use the voluntary e-reporting system (system in use since 2009; with 85% of sites using it by 2011)
- Information is uniform, robust, and event specific. Permits additional trending and analysis (see NRC Summary Reports on FFD Program Performance).
- E-forms (PDF forms) available at:  
<http://www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/submit-ffd-reports.html>

## Annual Reporting Form

**FFD Program Performance Data Reporting System**  
NRC Form 891, Annual Reporting Form for Drug and Alcohol Tests  
(EIE General Submission Portal)

APPROVED BY OMB: CLEARANCE NO. 3160-0148 EXPIRES: 11/02/2017  
Estimated burden per response to comply with this collection request is 144 hours. This form is a voluntary means of reporting the information required under 10 CFR 26.717. The information is required by NRC to obtain on an annual basis the specific three-for-duty (FFD) program performance data on drug and alcohol programs from licensees and other entities. Send comments regarding burden estimate to the FICM, Privacy and Information Collection Branch (75-F53), U.S. Nuclear Regulatory Commission, Washington DC 20545-0001, or by e-mail to [privacy@nrc.gov](mailto:privacy@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NIOSH-1020, (3165-0146), Office of Management and Budget, Washington DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1) All fields required unless marked 'optional'  
2) Use of Adobe Reader 8 or later is required  
3) Mouse over fields for additional information  
4) Use of Adobe Reader 8 or later is required

Submission Update  
Details Submission

Unique Reference ID (Licensee Supplied)

Select Facility  
Please Select

Period of Report  
Please Select

Reason For Testing	Total Number of Tests Conducted		Total Number of Positive, Adulterated, Substituted, and Refusal to Test Results
	Licensee Employees	Contractors/Vendors	
Pre-Access			
Random			
For Cause			
Post-Event			
Followup			
Total (Calculated)			

FFD Program Random Testing Population and Rate

Average number of licensee employees	Average number of contractors/vendors	Total size of the random testing pool throughout the period (Calculated)	Annual random testing percentage achieved for the testing pool

Laboratory Testing

Does your program use a Licensee Testing Facility? (Yes / No) Please Select

Identify your HHS-Certified Laboratory(ies)

Identify your Blind Performance Test Sample supplier(s)

## Single Positive Test Form

**FFD Program Performance Data Reporting System**  
NRC Form 890, Single Positive Test Form  
(EIE General Submission Portal)

APPROVED BY OMB: CLEARANCE NO. 3160-0148 EXPIRES: 11/02/2017  
Estimated burden per response to comply with this collection request is 30 minutes. This form is a voluntary means of reporting the information required under 10 CFR 26.717. The information is required by NRC to obtain on an annual basis site specific three-for-duty (FFD) program performance data on drug and alcohol programs from licensees and other entities. Send comments regarding burden estimate to the FICM, Privacy and Information Collection Branch (75-F53), U.S. Nuclear Regulatory Commission, Washington DC 20545-0001, or by e-mail to [privacy@nrc.gov](mailto:privacy@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NIOSH-1020, (3165-0146), Office of Management and Budget, Washington DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1) All fields required except those marked 'optional'  
2) Entries in some fields auto-populate information in other fields  
3) Mouse over form fields to view additional information  
4) Use of Adobe Reader 8 or later is required

Submission Update  
Details Submission

Unique Reference ID (Licensee Supplied)

Select Facility  
Please Select

Date of Collection (mm/dd/yyyy)

Reason for Testing - 26.717(b)(3)  
Please Select

Employment Type - 26.717(b)(3)  
Please Select

Outage Worker (optional)?  
Please Select

Labor Category - 26.717(b)(3)  
Please Select

Is this a 24-Hour Reporting Event (Yes/No)? - 26.719(b) No

Refusal - 26.717(b)(7) & 26.75  
Was this collection refused (Yes / No)? No

Test Results - 26.717(b)(4)  
Test Validity  
Please Select

Test Type(s) for Result(s) Reported - 26.717(b)(2)  
Please Select

Was this collection observed (Yes / No)? - 26.717(b)(7) & 26.75 No

Substance - 26.717(b)(2) & (b)(6)  
Please Select

Additional Substance (as applicable)  
Please Select

Additional Substance (as applicable)  
Please Select

- U.S. Nuclear Regulatory Commission
  - Office of Nuclear Security and Incident Response
    - Paul Harris, Senior Program Manager
      - [Paul.Harris@nrc.gov](mailto:Paul.Harris@nrc.gov) (301-287-9294)
    - Will Smith, Security Specialist
      - [Will.Smith@nrc.gov](mailto:Will.Smith@nrc.gov) (301-287-3541)
    - Brian Zaleski, FFD Program Specialist
      - [Brian.Zaleski@nrc.gov](mailto:Brian.Zaleski@nrc.gov) (301-287-0638)