

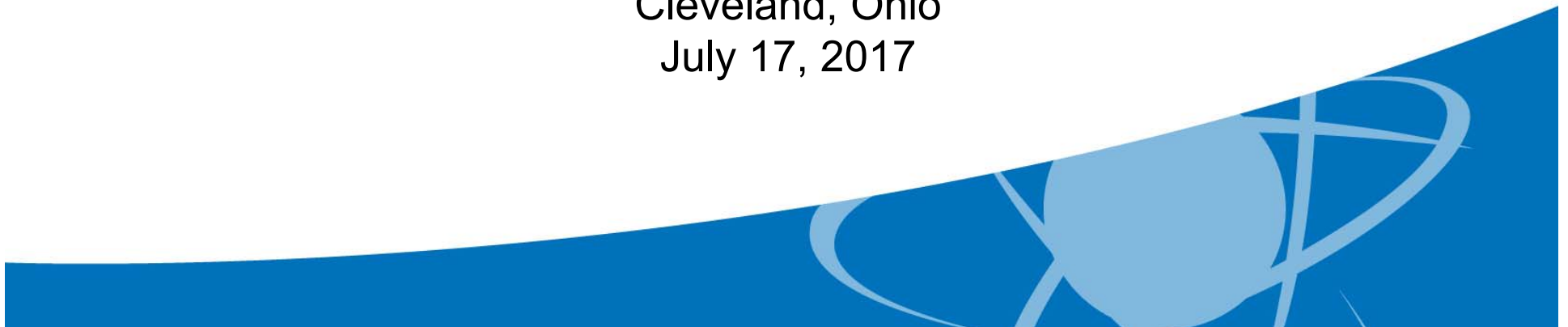


# Presentation at the Nuclear Energy Institute Access Authorization/ Fitness-For-Duty (FFD) Workshop

**Operating Experience in 2016  
FFD Programs - 10 CFR Part 26**

*“A Direct Contribution to Safety and Security”*

Cleveland, Ohio  
July 17, 2017



## Discussion Topics

- Performance reporting system updates
- Generic industry performance
- Site-specific positive result trends (pre-access, random, for-cause)
- Outage worker results
- Substance detection trends
- Results by Employment Type and Labor Category
- Subversion attempt trends
- 26.719 – 30 day reportable events



# FFD Program Performance Information – Electronic Reporting



- E-reporting meets the annual FFD program performance reporting requirements in 10 CFR 26.417(b)(2) and 26.717
- 100% of licensees e-reporting since 2014 (system in use since 2009)
- E-reporting data used in:
  - NRC Summary Reports on FFD Program Performance
  - OMB Burden Statements (recordkeeping and reporting requirements)
  - Regulatory analyses, backfit analyses, and technical basis documents
- New e-forms released in December 2016 (version 1.7.0)  
[www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/submit-ffd-reports.html](http://www.nrc.gov/reactors/operating/ops-experience/fitness-for-duty-programs/submit-ffd-reports.html)
- E-Reporting Best Practices Webinar (December 15, 2016)  
(ADAMS Accession No. ML16349A565)

# Overall Industry Performance, 2016 [Draft]



## 73 FFD programs

**153,950** Individuals drug & alcohol tested (*down 5.8% from 2014*)

**1,163** Individuals tested positive for a drug, alcohol, or refused a test  
65.1% identified at pre-access testing (*down by 1.9% from 2015*)  
22.3% identified at random testing (*up by 3.0% from 2015*)

**0.76%** Industry overall positive rate *up from 0.73% in 2015*  
0.22% LE positive rate *down from 0.25% in 2015*  
1.00% C/V positive rate *up from 0.95% in 2015*

**0.42%** Industry random positive rate *up from 0.36% in 2015*  
0.16% LE positive rate *up from 0.14% (2013 – 2015)*  
0.80% C/V positive rate *up from 0.65% in 2015*

LE = licensee employee; C/V = contractor/vendor  
All results in presentation MRO verified

# Results by Test and Employment Categories, 2016

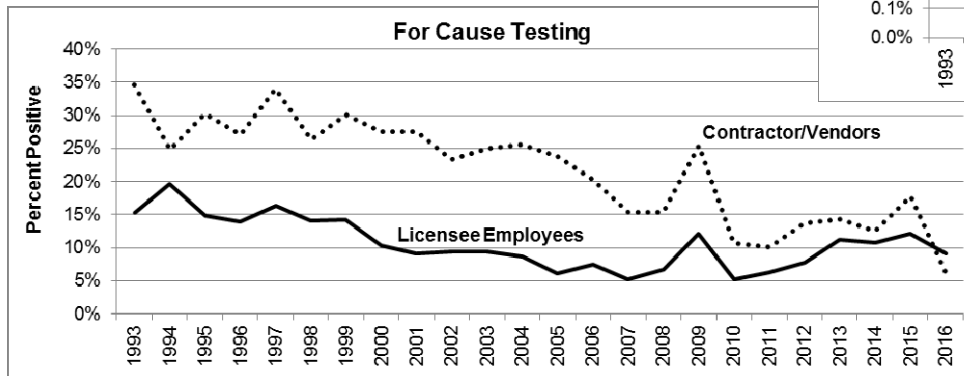
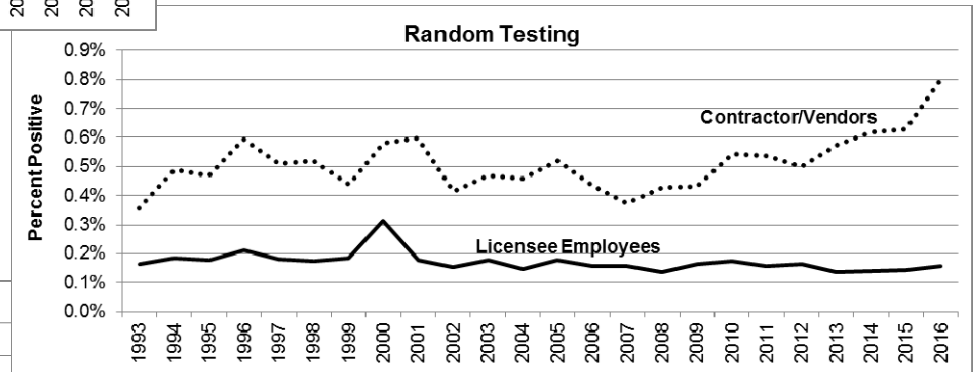
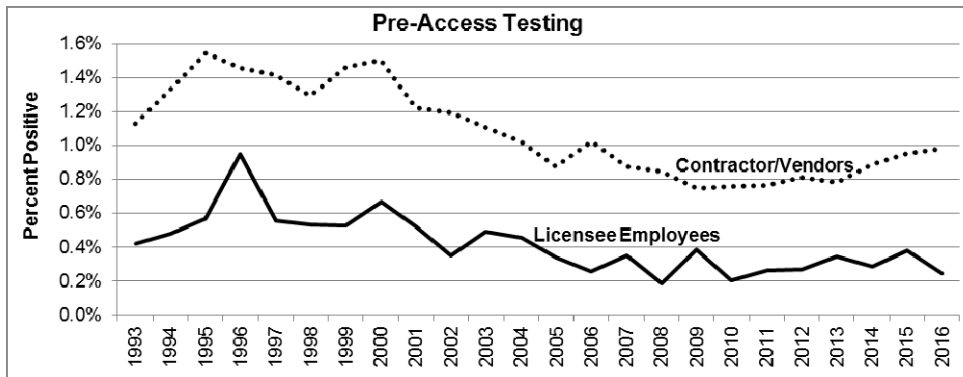
## [DRAFT]



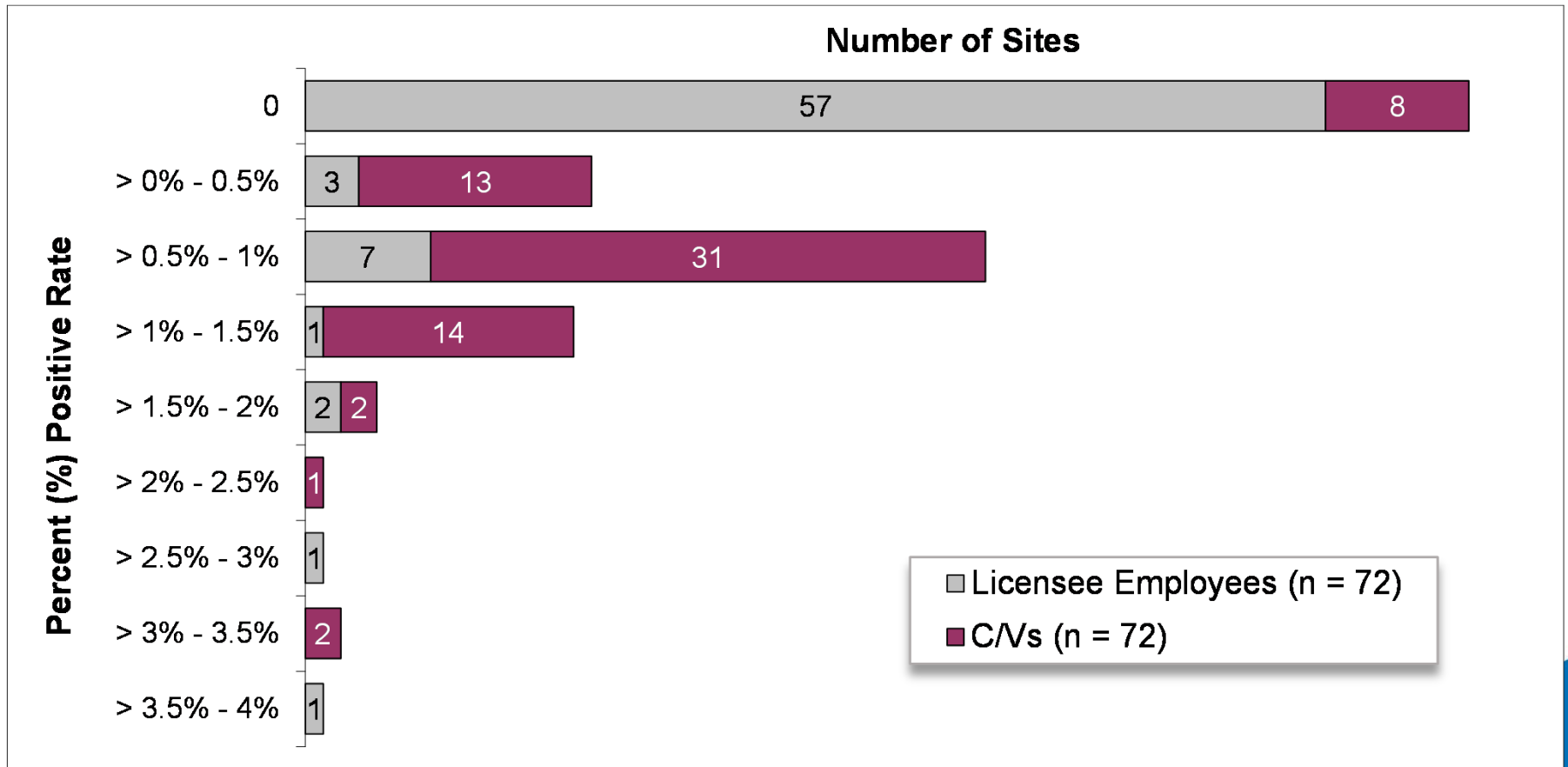
Test Category	Licensee Employees			Contractor/Vendors			Total			% of Total Positives
	Tested	Positive	% Positive	Tested	Positive	% Positive	Tested	Positive	% Positive	
Pre-Access	8,136	20	0.25%	74,854	737	0.98%	82,990	757	0.91%	65.1%
Random	35,970	57	0.16%	25,208	202	0.80%	61,178	259	0.42%	22.3%
For Cause	132	12	9.09%	969	62	6.40%	1,101	74	6.72%	6.4%
Post-Event	191	-	0.00%	1,064	13	1.22%	1,255	13	1.04%	1.1%
Followup	3,310	17	0.51%	4,116	43	1.04%	7,426	60	0.81%	5.2%
<b>Total</b>	<b>47,739</b>	<b>106</b>	<b>0.22%</b>	<b>106,211</b>	<b>1,057</b>	<b>1.00%</b>	<b>153,950</b>	<b>1,163</b>	<b>0.76%</b>	<b>100.0%</b>

Where were the most tests conducted in 2016 (>90% of tests)?			
Licensee Employees		Contractor/Vendors	
Pre-access	17.0%	Pre-access	70.5%
Random	75.3%	Random	23.7%
Followup	6.9%	Followup	3.9%
	99.3%		98.1%
Where were most drug and alcohol testing violations identified in 2016 (>90% of positives)?			
Licensee Employees		Contractor/Vendors	
Pre Access	18.9%	Pre-access	69.7%
Random	53.8%	Random	19.1%
For Cause	11.3%	ForCause	5.9%
Followup	16.0%		94.7%
	100.0%		

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



# Pre-Access Testing [DRAFT] Distribution of Site-Specific Positive Rates by Employment Category, 2016



1 additional C/V site not on chart, positive of 16.67% (corporate office)

# Pre-Access Testing Distribution of Site-Specific Positive Rates 2011-2014

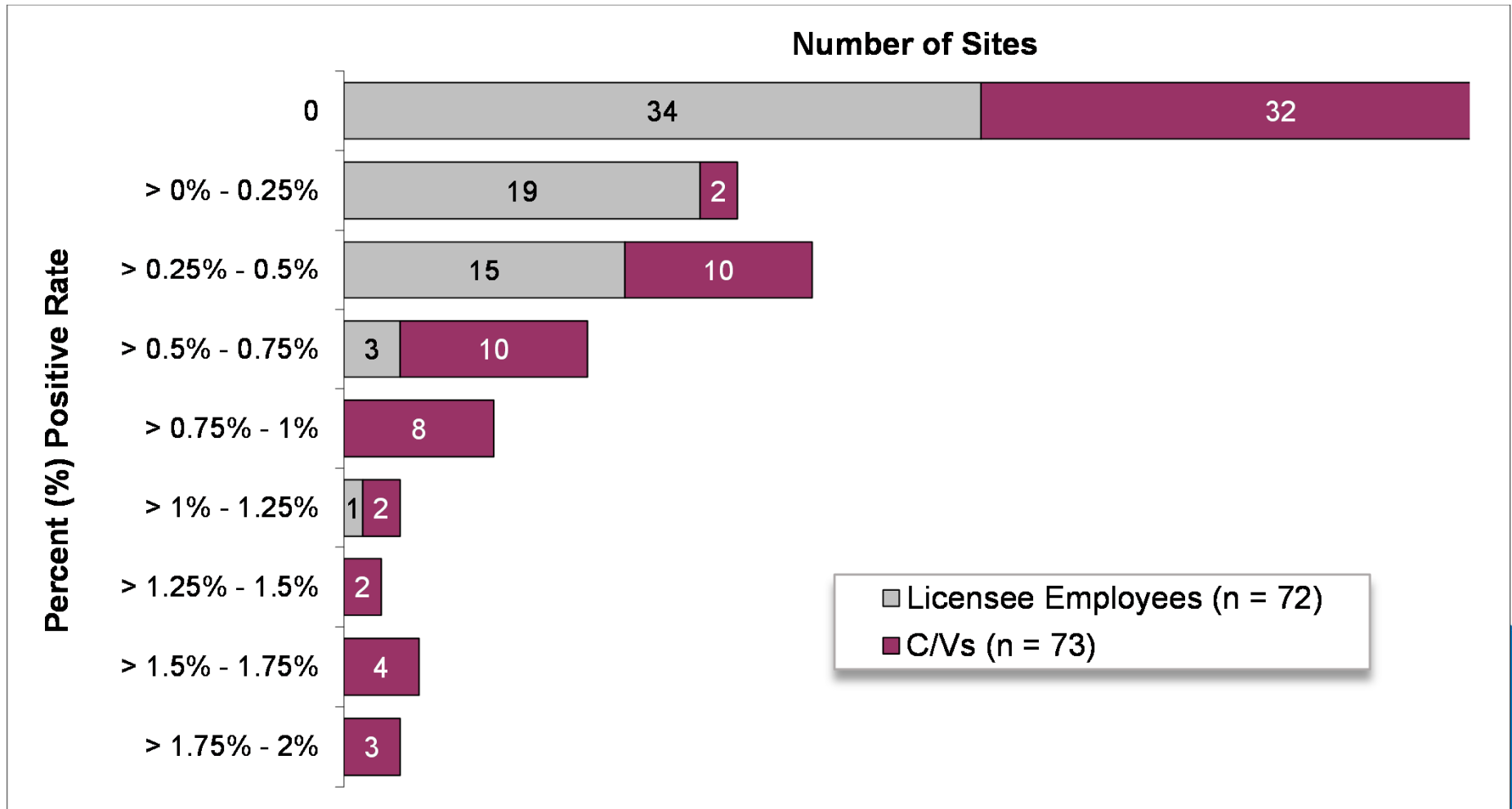


Positive Rate Range (%)	Number of Sites by Year							
	Licensee Employees				Contractors/Vendors			
	2011	2012	2013	2014	2011	2012	2013	2014
0	56	57	50	53	7	9	13	12
>0 - 0.5	5	4	3	4	17	16	13	19
>0.5 - 1.0	10	8	15	11	33	34	33	26
>1.0 - 1.5	2	3	5	2	8	9	11	7
>1.5 - 2.0	2	1	1	2	6	2	3	8
>2.0 - 2.5				2	2	3	3	2
>2.5 - 3.0					1	1		1
>3.0 - 3.5								
>3.5 - 4.0		1	1			1		
<u>Total Sites</u> (with at least 1 test)	75	75	75	74	74	75	76	75



# Random Testing [DRAFT]

## Distribution of Site-Specific Positive Rates by Employment Category, 2016

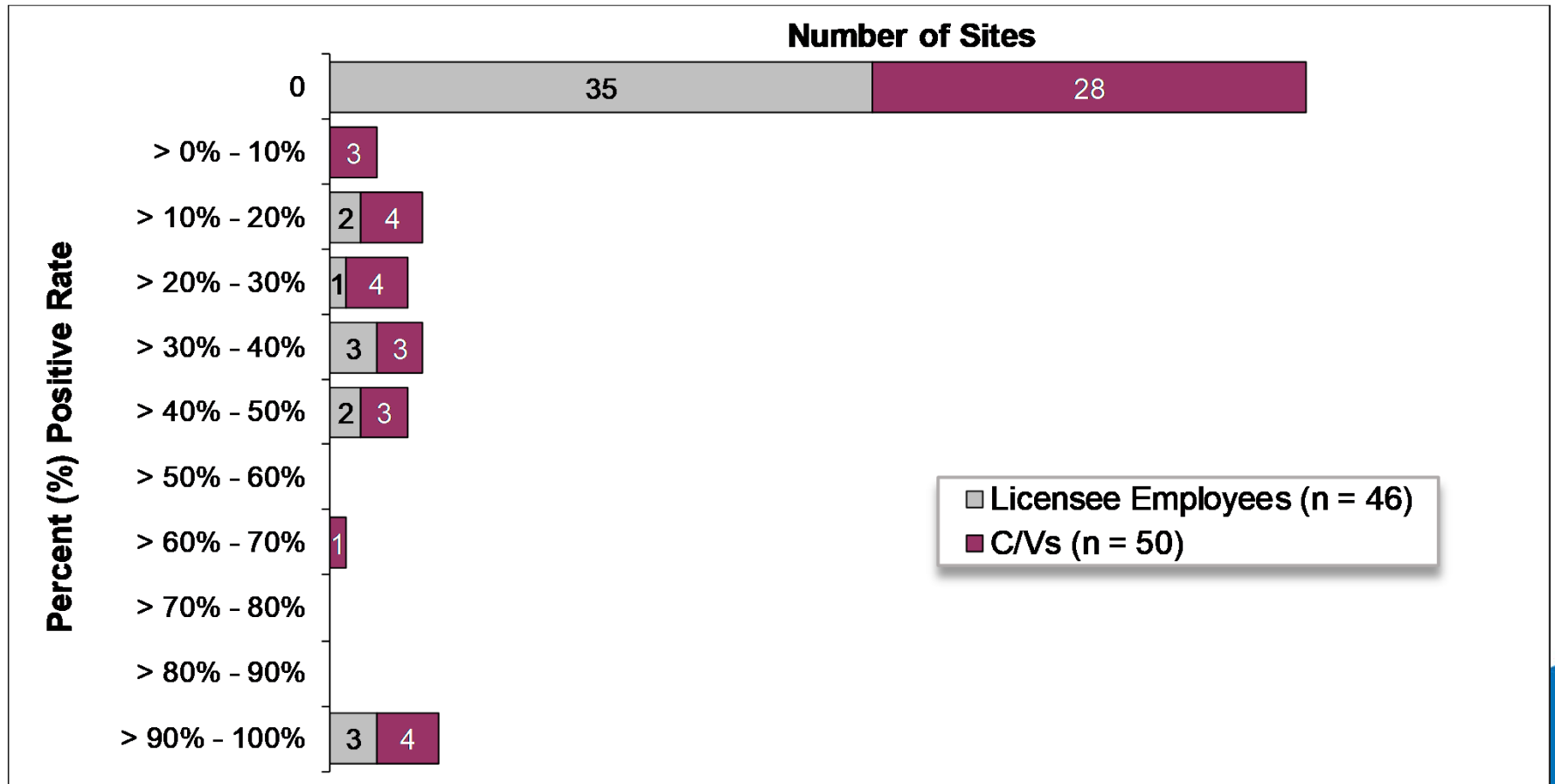


# Random Testing Distribution of Site-Specific Positive Rates 2011-2014



Positive Rate Range (%)	Number of Sites by Year							
	Licensee Employees				Contractors/Vendors			
	2011	2012	2013	2014	2011	2012	2013	2014
0	34	33	40	39	24	25	32	23
> 0 - 0.25	21	20	20	20	5	7	1	2
> 0.25 - 0.50	17	19	11	11	19	19	9	17
> 0.50 - 0.75	2	2	3	3	5	7	15	18
> 0.75 - 1.00	1	1	1		9	4	7	4
> 1.00 - 1.25				1	4	6	3	3
> 1.25 - 1.50					4	3	8	4
> 1.50 - 1.75					3	3		3
> 1.75 - 2.00					1			1
>2.00 - 2.25					1		1	
Total Sites (with at least 1 test)	75	75	75	74	75	74	76	75

# For-Cause Testing [DRAFT] Distribution of Site-Specific Positive Rates by Employment Category, 2016

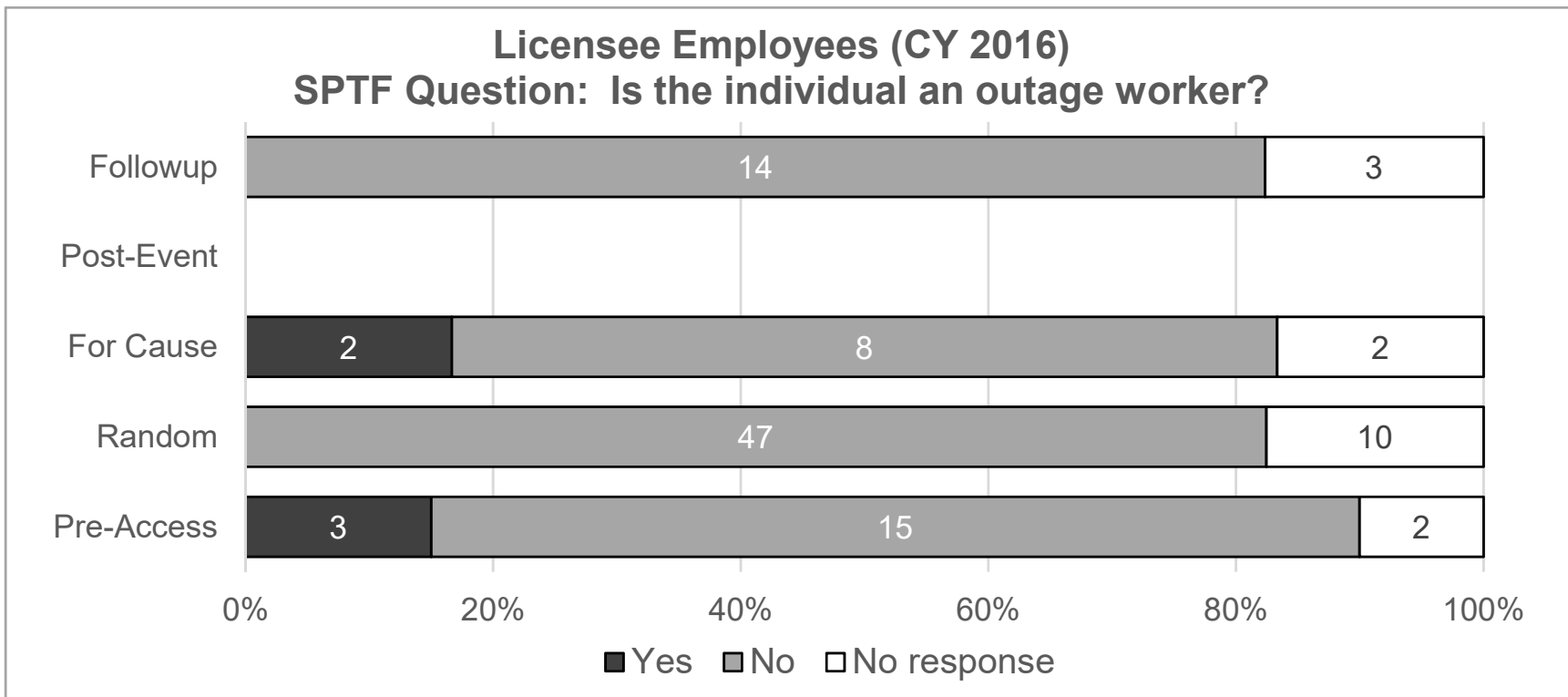


# For-Cause Testing Distribution of Site-Specific Positive Rates 2011-2014

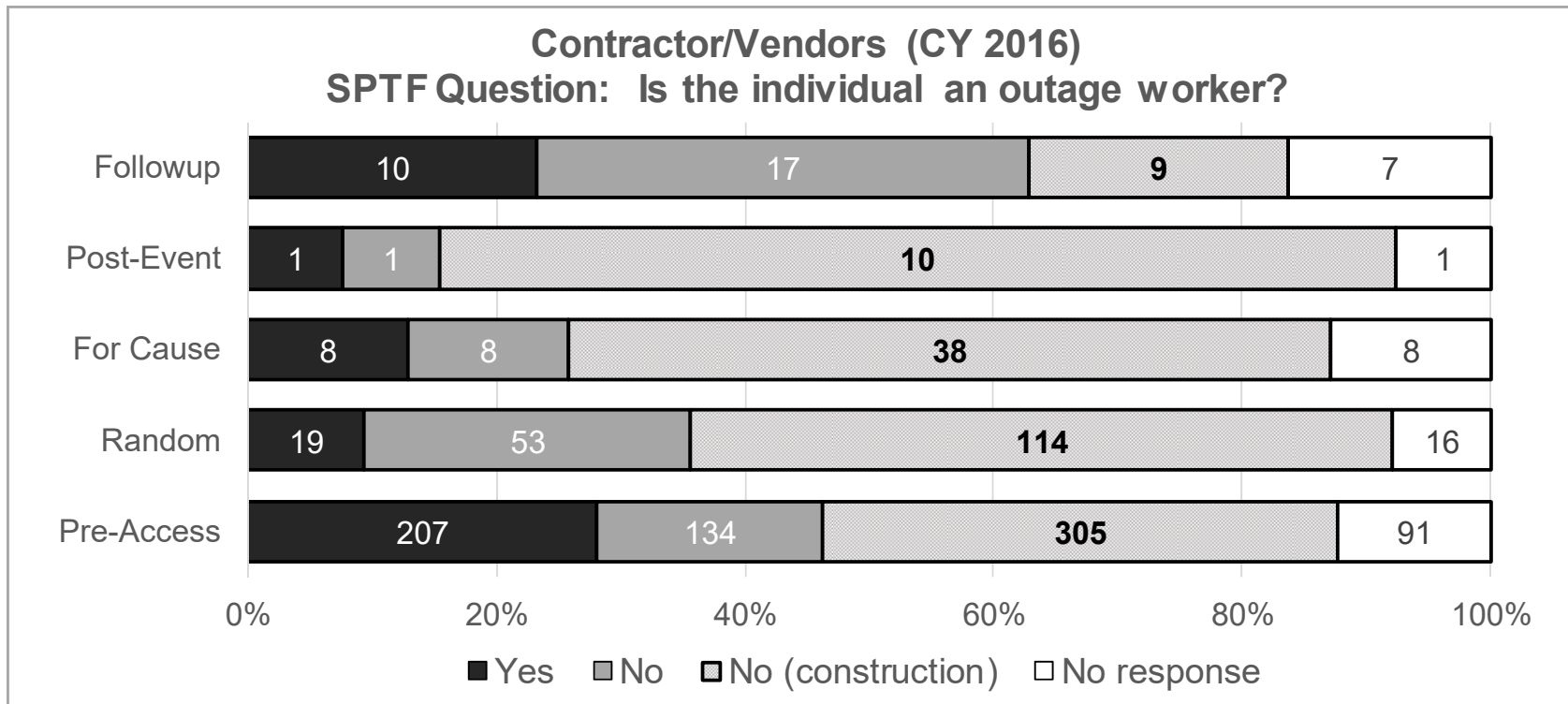


Positive Rate Range (%)	Number of Sites by Year							
	Licensee Employees				Contractors/Vendors			
	2011	2012	2013	2014	2011	2012	2013	2014
0	38	43	41	40	29	29	29	36
> 0% - 10%	1		1		7	3	1	3
> 10% - 20%	1	1	4	3	6	8	7	4
> 20% - 30%	4	2	2	2	6	2	4	3
> 30% - 40%	5	5	3	1	1	4	7	5
> 40% - 50%	5		3	10	6	7	6	1
> 50% - 60%						3		
> 60% - 70%				1		1	1	
> 70% - 80%			1					
> 80% - 90%								
> 90% - 100%	1	4	3	3	4	5	3	3
<b>Total Sites (with at least 1 test)</b>	<b>55</b>	<b>55</b>	<b>58</b>	<b>60</b>	<b>59</b>	<b>62</b>	<b>58</b>	<b>55</b>

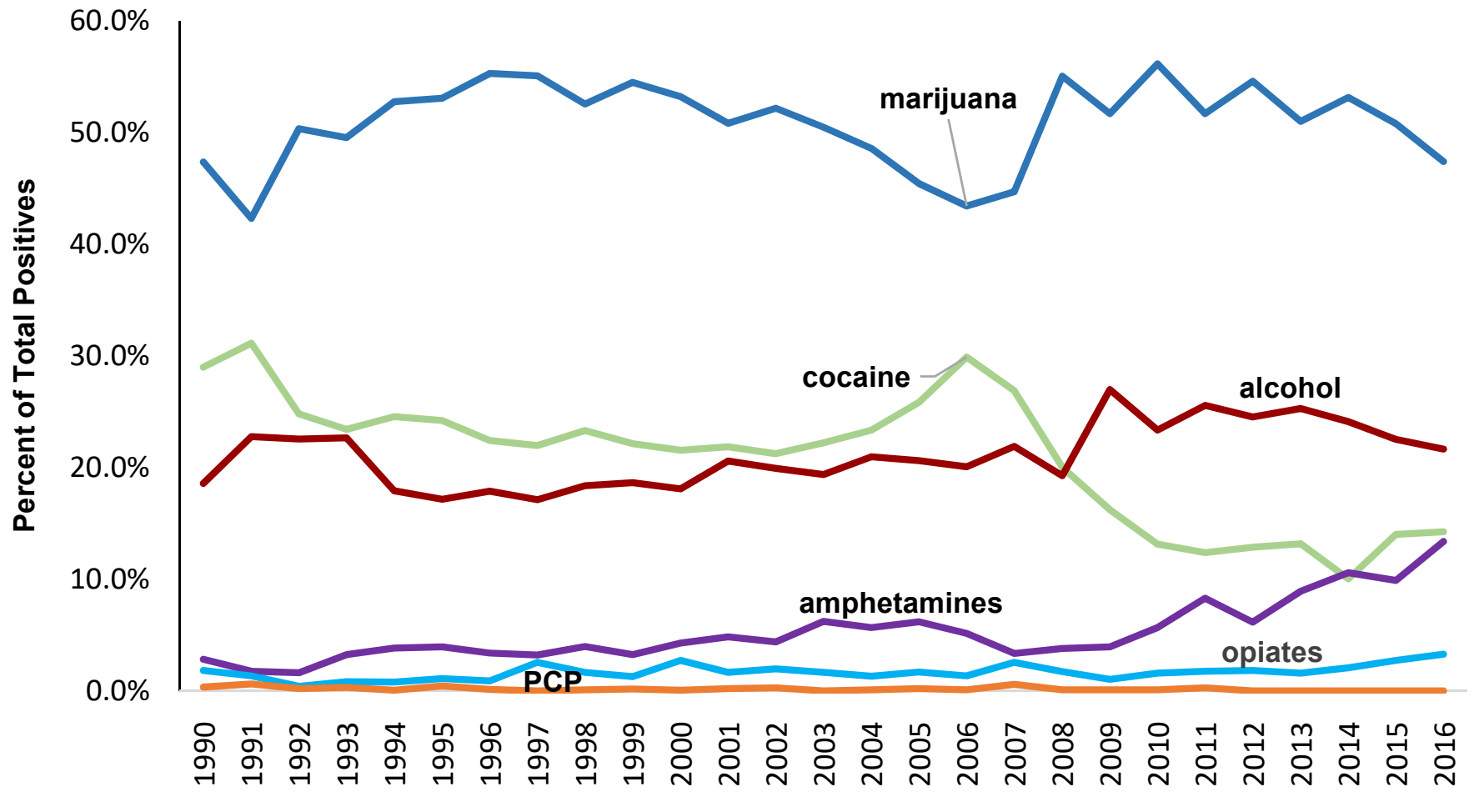
# Impact of Outage Workers on D&A Testing Violations [DRAFT]



# Impact of Outage Workers on D&A Testing Violations 2016 **[DRAFT]**



# Trends In Detection (NRC Testing Panel) Percentage of Total Positives by Substance Tested [DRAFT]

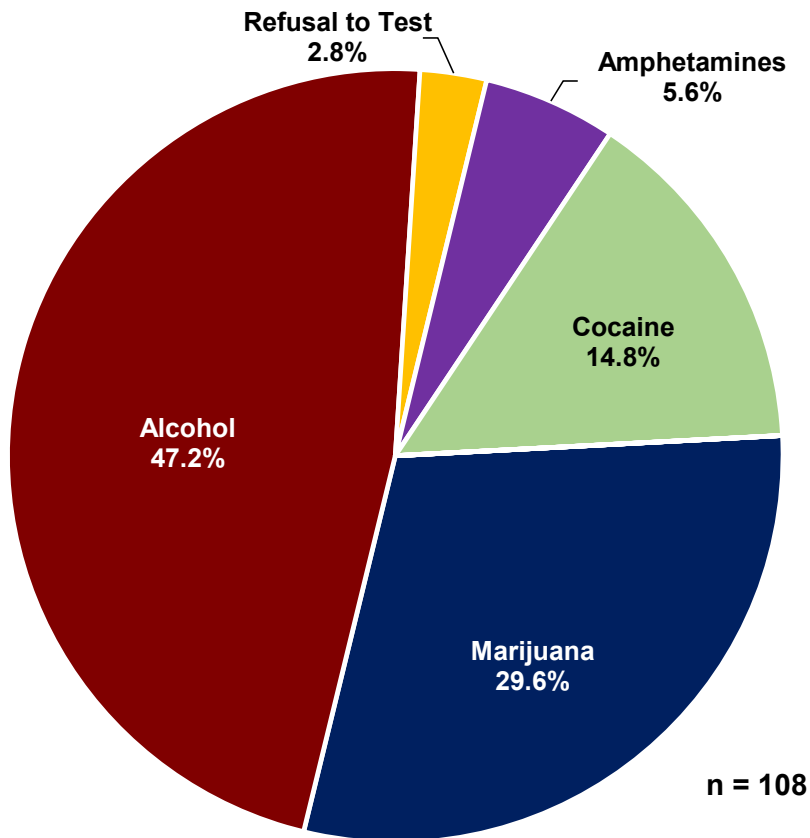


# Results by Employment Category, 2016 [DRAFT]



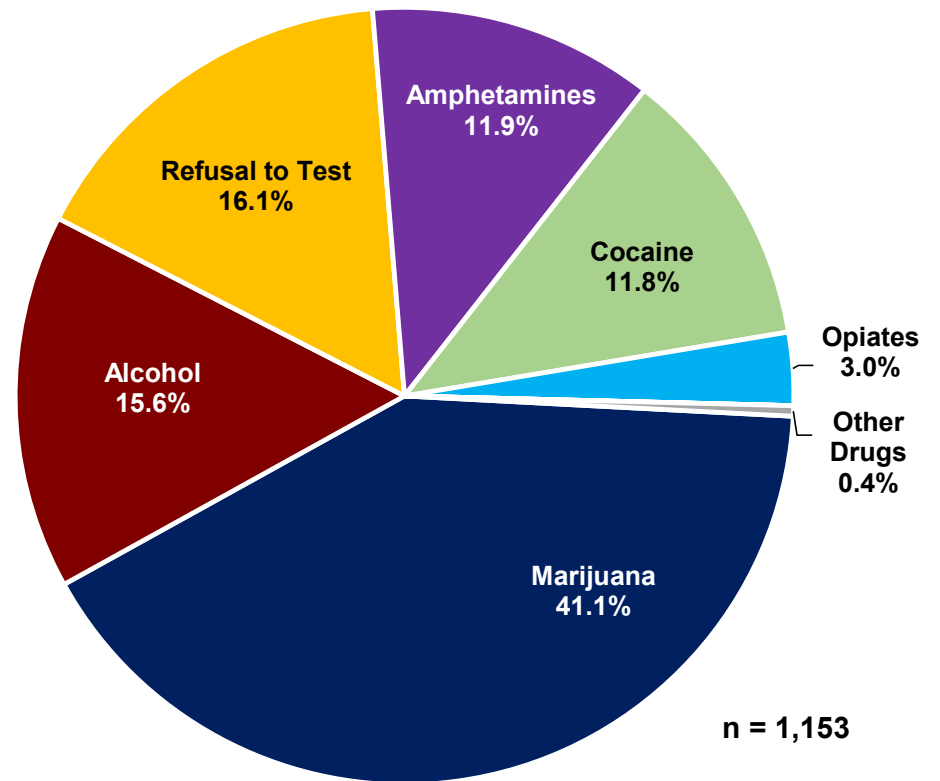
### Licensee Employees

(47,739 tested; 106 individuals positive)



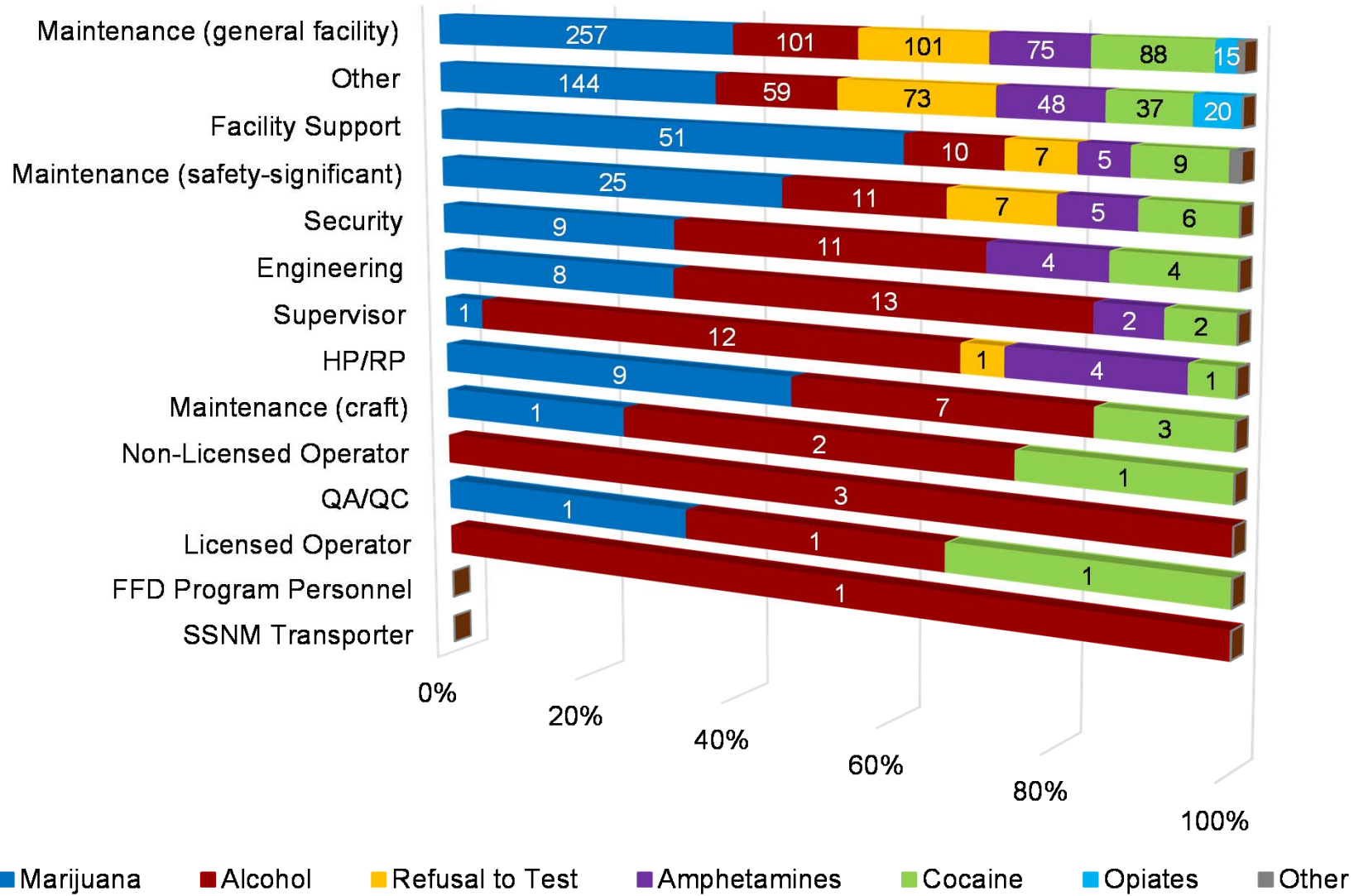
### Contractors/Vendors

(106,211 tested; 1,057 individuals positive)





# Results by Labor Category, 2016 [DRAFT]



## Subversion Attempt Trends [Draft]

**Subversion attempt** – any willful act or attempted act to cheat on a required test (e.g., refuse to provide a specimen, alter a specimen with an adulterant, provide a specimen that is not from the donor’s body)

**Sanction for a subversion attempt** – Permanent denial of unescorted access under 10 CFR 26.75

### Subversion Attempt Trends

- 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 – 233 of 1,198 violations (19.2% subversions)
- 2016 – 302 of 1,163 violations (26.0% subversions)



### Subversion Attempts in 2016:

- 53% of sites with at least 1 subversion attempt (39 of 73)
- 73% identified at Pre-Access testing (221 of 302)
- 98% by contractor/vendors

## Characteristics of Subversion Attempts (2016)

[Draft]



- 38 percent of subversion attempts (114 of 302) based on specimen testing (specimen collected under direct observation)

Substance(s) Identified	Pre-Access	Random	For Cause	Followup	Total
Marijuana	54	13			67
Cocaine	12	4		2	18
Cocaine; Marijuana	8	2			10
Amphetamine; Methamphetamine	4	2	1		7
Methamphetamine; Marijuana	2	1			3
Methamphetamine	1	1			2
Amphetamine		1			1
Amphetamine; Methamphetamine; Marijuana	1				1
Opiate: Morphine	2				2
Opiate: Codeine	1	1			2
Alcohol; Marijuana	1				1
<b>Total</b>	<b>86</b>	<b>25</b>	<b>1</b>	<b>2</b>	<b>114</b>

- 62 percent of subversion attempts were testing refusals (186 of 302) (did not provide a specimen, collector stopped process)
- Only 2 subversions identified by validity testing (substituted results)

## HHS-Certified Laboratory Testing Errors (2016) 10 CFR 26.719 (30-day event reports)



- A blind performance test sample (BPTS) formulated as “dilute and negative” was reported by the laboratory as “negative.” Manual aliquotting of the specimen resulted in the inaccurate test result, typically the laboratory uses an automated process for specimen aliquotting.
- A BPTS formulated as “adulterated” (with nitrite) was reported as “invalid” by the laboratory. The specimen was mistakenly left at room temperature over night and not tested until the next day. A deterioration study performed by the laboratory determined that if a specimen was stored at room temperature the nitrites concentration could degrade by up to 25 percent within 24 hours.
- A false positive for morphine was reported on a donor specimen. Based on information from the donor, the MRO requested testing at a second laboratory, which returned a negative result. The false positive was caused by the analyst pipetting one sample twice instead of pipetting the two different specimens in the confirmation batch.

# NRC Fitness for Duty Program Staff



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