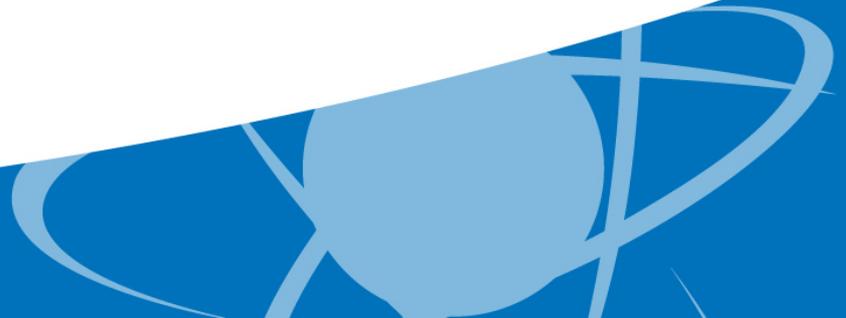


Presentation to the Drug Testing Advisory Board (HHS/SAMHSA)

Drug Testing at Commercial Nuclear Power Plants and Fuel Facilities

10 CFR Part 26, “Fitness-for-Duty Programs”
“A Direct Contribution to Safety and Security”

December 4, 2018



Disclaimer

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Discussion Topics

- Fitness-for-Duty (FFD) Program Objective
- Individuals covered by the FFD Program
- FFD Program Elements
- Assuring Safety and Security through a Defense-in-Depth Strategy
- FFD Performance
- Industry Activities/Initiatives



FFD Program Objective

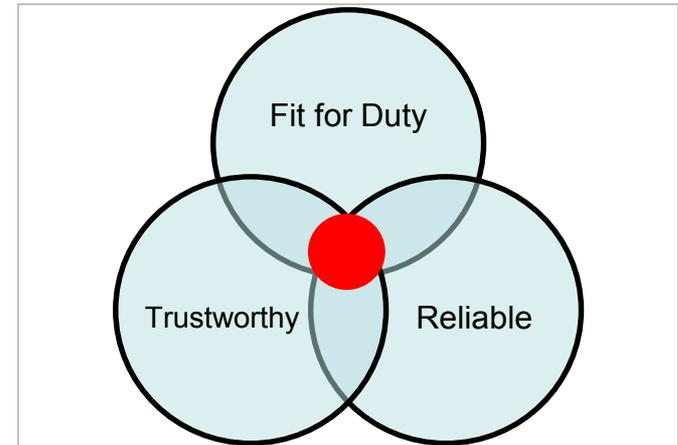
Provide reasonable assurance that nuclear power plant personnel are trustworthy, reliable, and not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform assigned duties or be afforded unescorted access to the protected areas of nuclear power plants, sensitive information, or strategic special nuclear material (SSNM).

An FFD program developed under Part 26 is intended to create an environment which is free of drugs and alcohol, and the effects of such substances.



Individuals Covered by the FFD Program

- Security
- Control Room Operators
- Maintenance & Surveillance (craft & supervisors)
- Health Physics, Chemistry, & Emergency Response
- Construct or Direct the Construction of Reactor Plants
- All other persons who have unescorted access
- FFD Program Personnel*



* FFD Program Personnel include the managers, technicians, collectors, Medical Review Officers, and Substance Abuse Experts who implement the program

Assuring Safety and Security through a Defense-in-Depth Strategy

- People
 - Education, experience, training, qualification, etc.
 - Drug and Alcohol Testing (pre-access, random, for-cause, followup, and post-event)
 - Behavioral Observation
 - Fatigue Management
- Access Requirements (e.g., background checks, fingerprinting, psychological testing)
- Physical Protection (e.g., vehicle barriers, blast walls, blast resistant enclosures, etc.)
- Detection (e.g., cameras, infra-red, motion, explosive vapors, x-ray, etc.)
- Programs for Insider Mitigation, Cyber Protection, and Information Controls



Overall Industry Performance, 2017

[Draft]

148,357 **Individuals drug & alcohol tested**

1,143 **Individuals tested positive for a drug, alcohol, or refused a test**

2/3 identified prior to entering the facility – pre-access testing

1/3 identified inside the facility – primarily by random testing

0.44% **Random positive rate**

0.77% **Overall positive rate**

Observations

- Contractor/vendors still testing 3-4x higher than licensee employees
- Subversion attempts continue to be identified
- FFD program personnel remain the *Silent Heroes* of our program

- FFD Program Personnel include the managers, technicians, collectors, Medical Review Officers, and Substance Abuse Experts who implement the program
- All results in this presentation are Medical Review Officer verified

Results by Test and Employment Categories, 2017

[DRAFT]



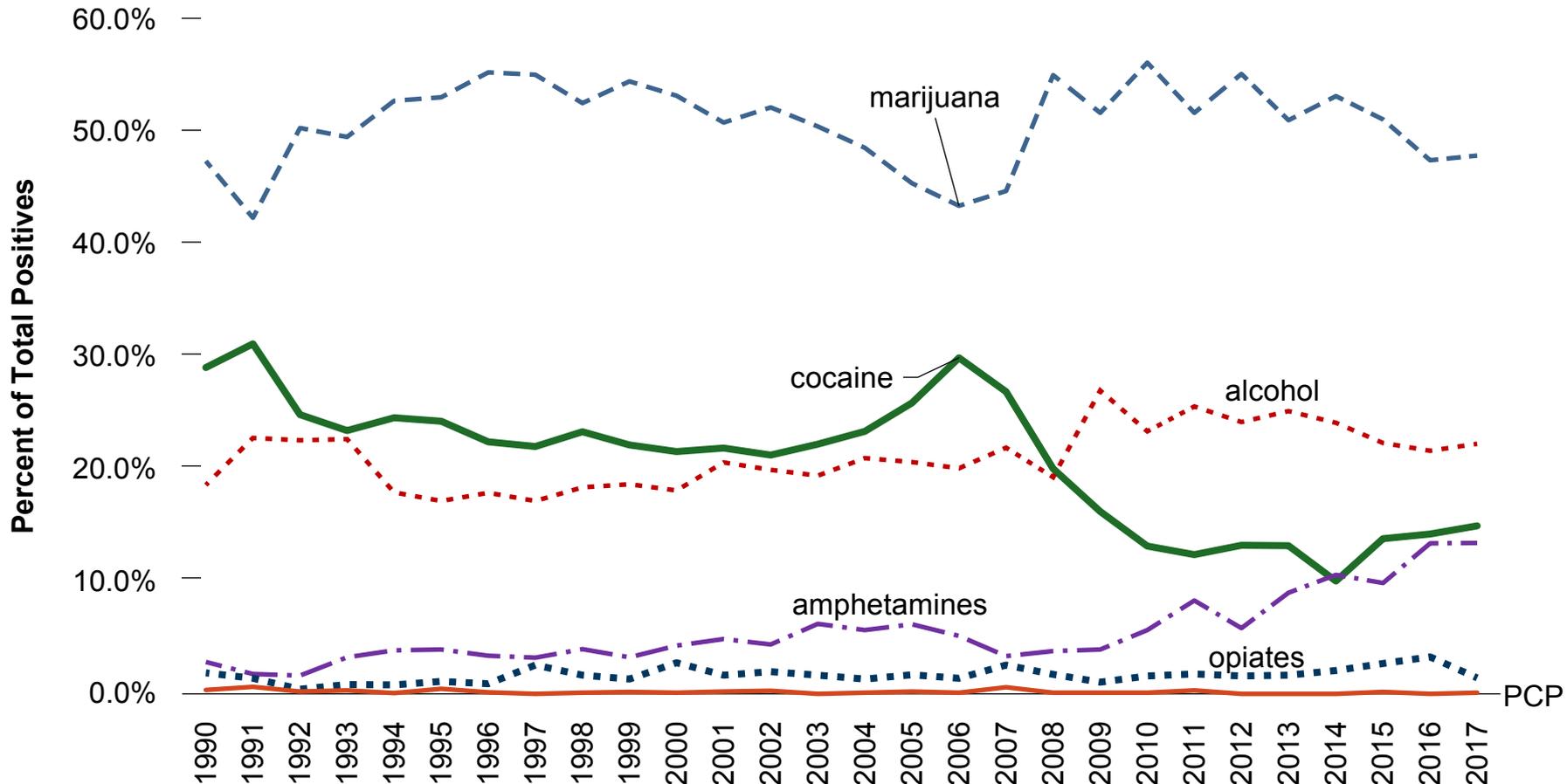
Test Category	Licensee Employees			Contractor/Vendors (CVs)			Total			% of Total Positives
	Tested	Positive	Percent Positive	Tested	Positive	Percent Positive	Tested	Positive	Percent Positive	
Pre-Access	8,513	36	0.42%	71,586	695	0.97%	80,099	731	0.91%	64.0%
Random	34,624	48	0.14%	25,100	212	0.84%	59,724	260	0.44%	22.7%
For Cause	111	14	12.61%	757	64	8.45%	868	78	8.99%	6.8%
Post-Event	136	-	0.00%	492	11	2.24%	628	11	1.75%	1.0%
Followup	3,044	13	0.43%	3,994	50	1.25%	7,038	63	0.90%	5.5%
Total	46,428	111	0.24%	101,929	1,032	1.01%	148,357	1,143	0.77%	100.0%

Where were the most tests conducted in 2017 (>90% of tests)?			
<u>Licensee Employees</u>		<u>Contractor/Vendors</u>	
Pre-access	18.3%	Pre-access	70.2%
Random	74.6%	Random	24.6%
Followup	6.6%	Followup	3.9%
<hr/>		<hr/>	
99.5%		98.8%	
Where were most drug and alcohol testing violations identified in 2017 (>90% of positives)?			
<u>Licensee Employees</u>		<u>Contractor/Vendors</u>	
Pre Access	32.4%	Pre-access	67.3%
Random	43.2%	Random	20.5%
For Cause	12.6%	For Cause	6.2%
Followup	11.7%	<hr/>	
<hr/>		94.1%	
100.0%			

Detection Trends – NRC Testing Panel

Percentage of Total Positives by Substance Tested

[Draft]



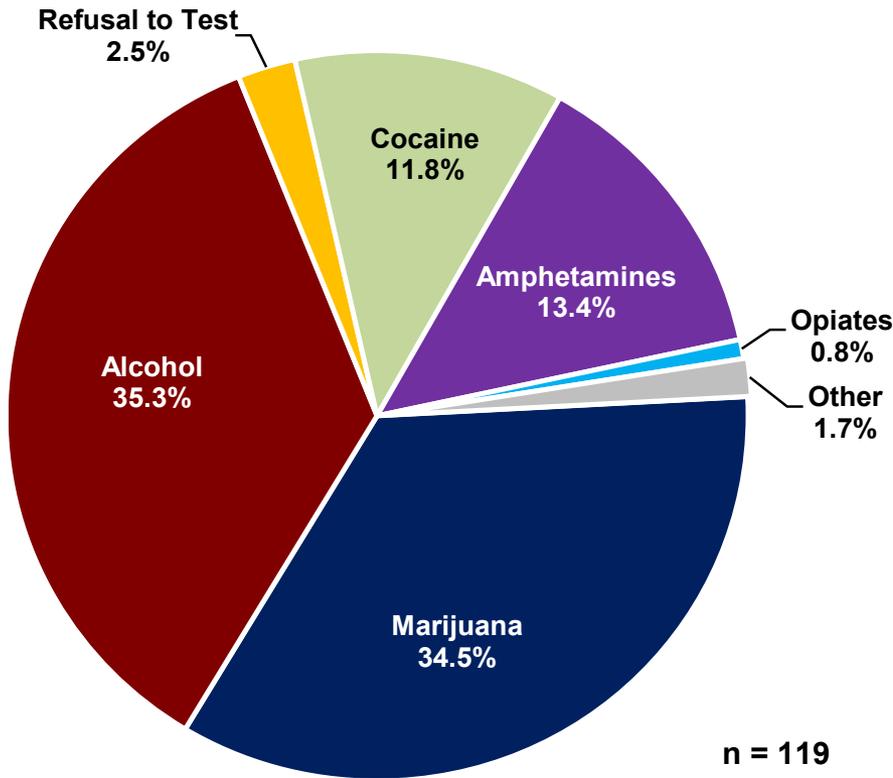
Since at least 2014, this chart under reports the substances used by individuals with a drug testing violation. This is because of the high number of subversion attempts each year, and because in at least 60% of these subversion attempts, no specimens were tested.

Results by Employment Category, 2017

[DRAFT]

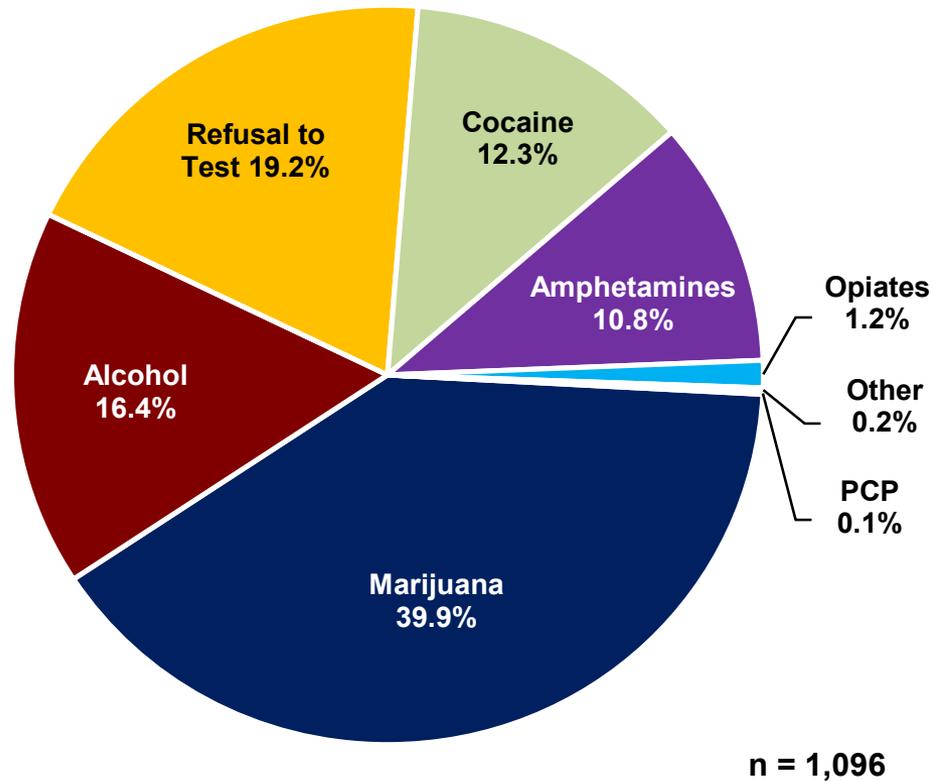
Licensee Employees

(46,428 tested; 111 individuals positive)



Contractors/Vendors

(101,929 tested; 1,032 individuals positive)



Additional Substance Test Results, 2011-2017

[Draft]

Substances	2011	2012	2013	2014	2015	2016	2017	Total
Benzodiazepines	1	2	1	1	1	1		7
Buprenorphine		1			1		1	3
Fentanyl					1			1
Hydrocodone				1	1		1	3
Hydromorphone				1			1	2
Methadone	1	1	1	1				4
Norbuprenorphine							1	1
Oxycodone		1	1	1	1			4
Oxymorphone		1	1	1	1			4
Propoxyphene				1				1
Tramadol					1			1
Total	2	6	4	7	7	1	4	31

The 31 test results in this table reflect positive results for 24 individuals. That is, some individuals tested positive for more than one of the substances in the same testing event

Additional Substance Results by Test Category (2011-2017) [Draft]

Substances	Pre-Access	Random	For Cause	Followup	Total
Amphetamine; Marijuana; Hydrocodone; Hydromorphone	1				1
Amphetamine; Methamphetamine; Marijuana; Benzodiazepines			1		1
Amphetamine; Methamphetamine; Benzodiazepines			2		2
Amphetamine; Methamphetamine; Hydrocodone; Hydromorphone			1		1
Benzodiazepines		1	1	2	4
Buprenorphine	1				1
Buprenorphine; Norbuprenorphine			1		1
Cocaine; Benzodiazepines			1		1
Fentanyl; Oxycodone; Oxymorphone			1		1
Hydrocodone			1		1
Hydrocodone; Oxycodone; Oxymorphone			1		1
Marijuana; Benzodiazepines			1		1
Marijuana; Benzodiazepines; Methadone	1				1
Marijuana; Propoxyphene	1				1
Methadone		1	1		2
Oxycodone; Oxymorphone			2		2
Tramadol			2		2
Total	4	2	16	2	24

- 66% of individuals (16 of 24) tested positive on for-cause testing
- 25% of individuals (6 of 24) tested positive for one or more of the semi-synthetic opiates in the updated HHS Guidelines (i.e., hydrocodone, hydromorphone, oxycodone, oxymorphone)
- 57% of individuals that tested positive for an additional substance, also tested positive for a substance in the NRC-required testing panel (i.e., amphetamine, methamphetamine, cocaine, marijuana)

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 (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 – 232 of 1,200 violations (19.3% subversions)
2016 – 304 of 1,164 violations (26.1% subversions)
2017 – 298 of 1,143 violations (26.1% subversions)

Subversion Attempts in 2017

- 45 facilities with at least 1 subversion attempt
- 67% identified at Pre-Access testing (200 of 298)
- 98% by contractor/vendors



Industry Activities/Initiatives

- Oral fluid testing
- Expanded panel testing
- Auditing of HHS-certified laboratories
- Background checks and true identity determinations

NRC Fitness for Duty Program Staff



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