

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

NRC Update: Operating Experience in 2018 and Policy Considerations

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

December 3, 2019



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Discussion Topics

- Fitness-for-Duty (FFD) Program Objective
- Individuals covered by the FFD Program
- Assuring Safety and Security through a Defense-in-Depth Strategy
- Operating Experience – 2018
- Items of Interest



FFD Program Objective

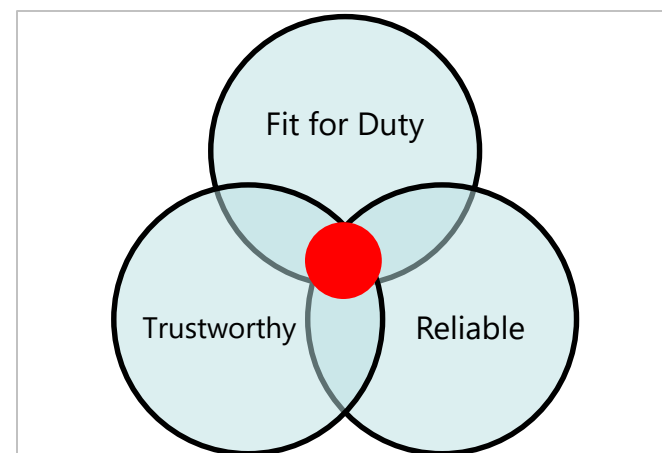
Provide reasonable assurance that nuclear power plant personnel are trustworthy, reliable, and not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform assigned duties 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 10 CFR 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 Officers
- 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, follow-up, 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



Operating Experience in 2018

Overall Industry Performance, 2018 [Draft]

145,798 **Individuals drug & alcohol tested** *(down ~2% from 2017)*

1,185 **Individuals positive for drug(s), alcohol, or refused a test**
69.8% identified at pre-access testing (64.3% in 2017)
17.7% identified at random testing (22.5% in 2017)

0.81% **Industry overall positive rate** *(0.78% in 2017)*
0.28% LE positive rate *(0.24% in 2017)*
1.06% C/V positive rate *(1.04% in 2017)*

0.37% **Industry random positive rate** *(0.44% in 2017)*
0.17% LE positive rate *(0.14% in 2017)*
0.68% C/V positive rate *(0.89% in 2017)*

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

Results by Test and Employment Categories, 2018

[DRAFT]

Test Category	Licensee Employees			Contractor/Vendors (C/Vs)			Total			% of Total Positives
	Tested	Positive	Percent Positive	Tested	Positive	Percent Positive	Tested	Positive	Percent Positive	
Pre-Access	8,291	36	0.43%	72,934	791	1.08%	81,225	827	1.02%	69.8%
Random	34,676	59	0.17%	22,221	151	0.68%	56,897	210	0.37%	17.7%
For Cause	132	11	8.33%	302	65	21.52%	434	76	17.51%	6.4%
Post-Event	148	-	0.00%	348	2	0.57%	496	2	0.40%	0.2%
Follow-up	2,859	21	0.73%	3,887	49	1.26%	6,746	70	1.04%	5.9%
Total	46,106	127	0.28%	99,692	1,058	1.06%	145,798	1,185	0.81%	100.0%

Where were the most tests conducted in 2018 (>90% of tests)?

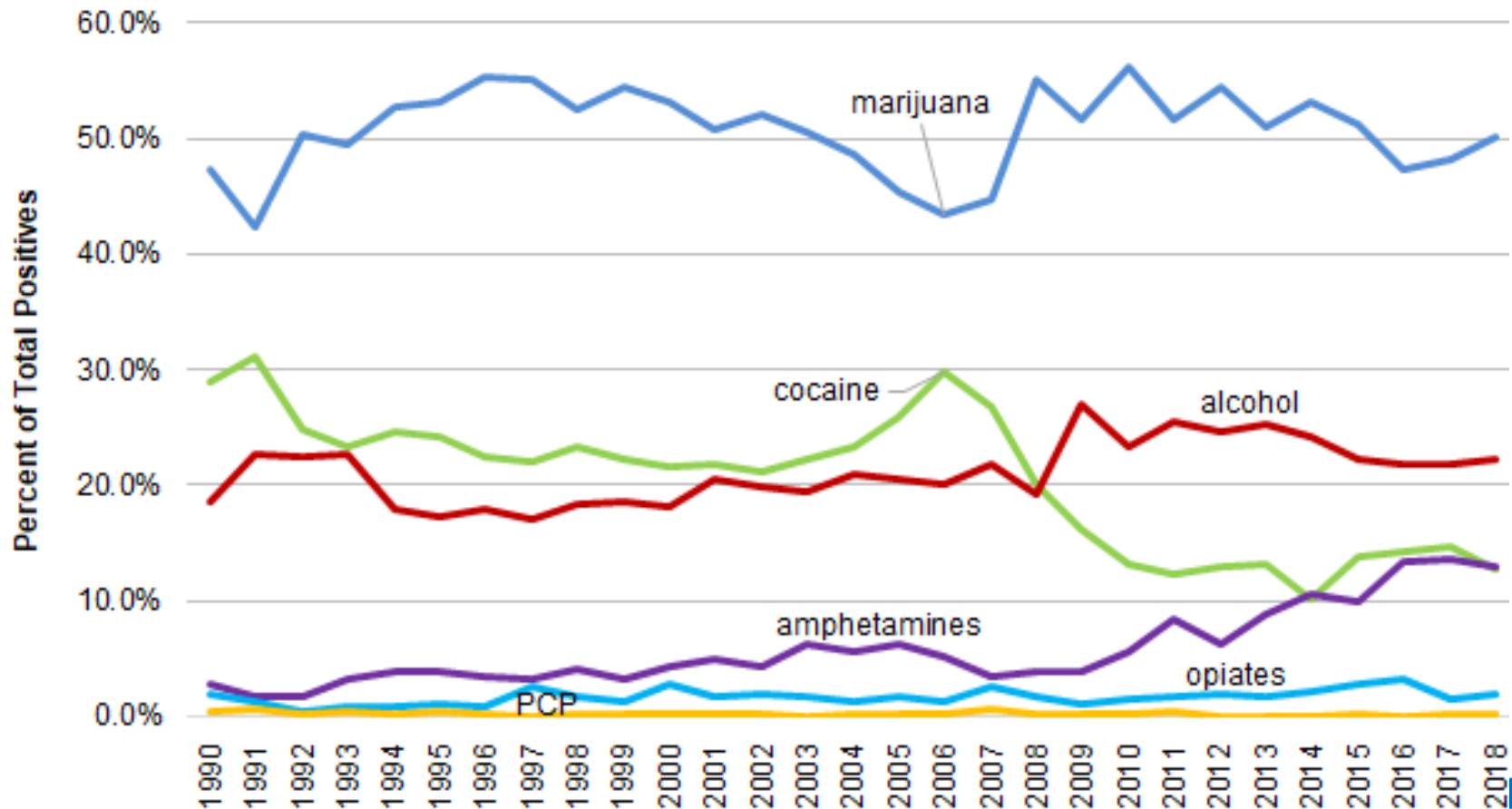
Licensee Employees		Contractor/Vendors	
Pre-access	18.0%	Pre-access	73.2%
Random	75.2%	Random	22.3%
Follow-up	6.2%	Follow-up	3.9%
	99.4%		99.3%

Where were most drug and alcohol testing violations identified in 2018 (>90% of positives)?

Licensee Employees		Contractor/Vendors	
Pre Access	28.3%	Pre-access	74.8%
Random	46.5%	Random	14.3%
For Cause	8.7%	For Cause	6.1%
Follow-up	16.5%		95.2%
	100.0%		

Detection Trends 1990-2018, NRC Testing Panel Percentage of Total Positives by Substance Tested

[Draft]



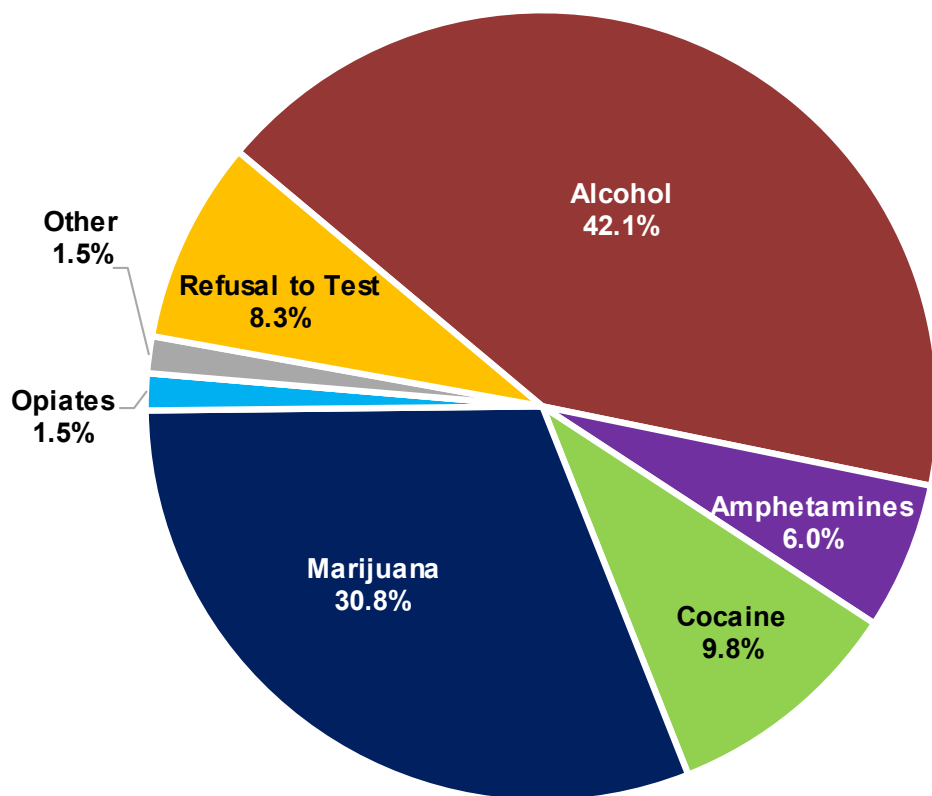
Since at least 2014, this chart under reports the substances used by individuals with a drug testing violation. This is because of the high number of subversion attempts each year, and because in at least 60% of these subversion attempts, no specimens were tested.

Results by Employment Category, 2018

[DRAFT]

Licensee Employees

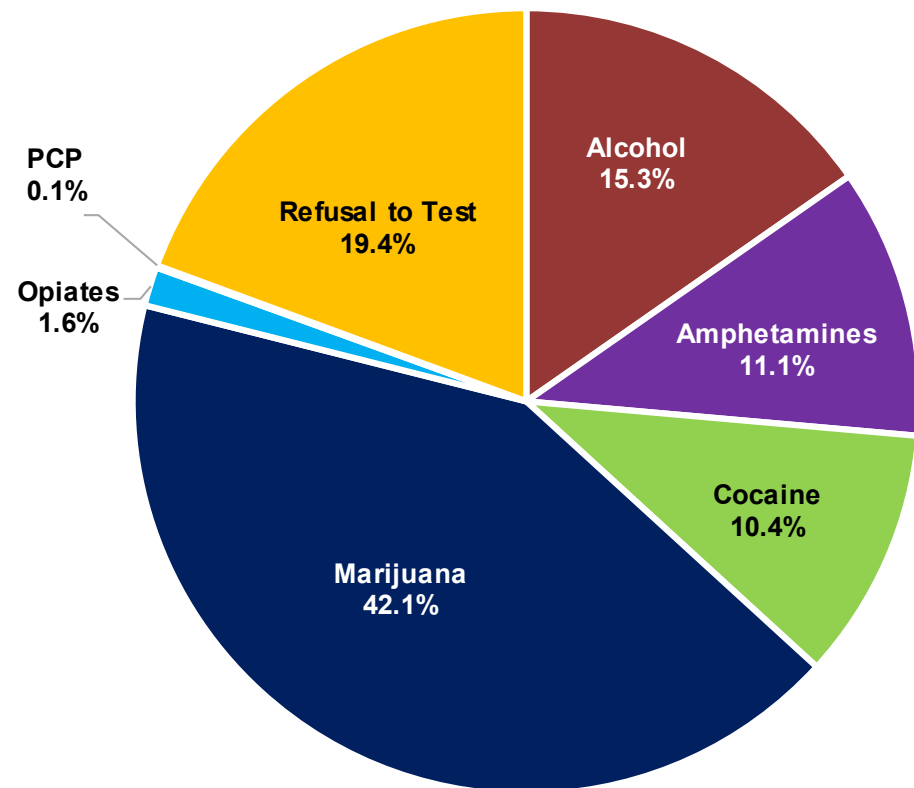
(46,106 tested; 127 individuals positive)



n = 133

Contractors/Vendors

(99,692 tested; 1,058 individuals positive)



n = 1,125

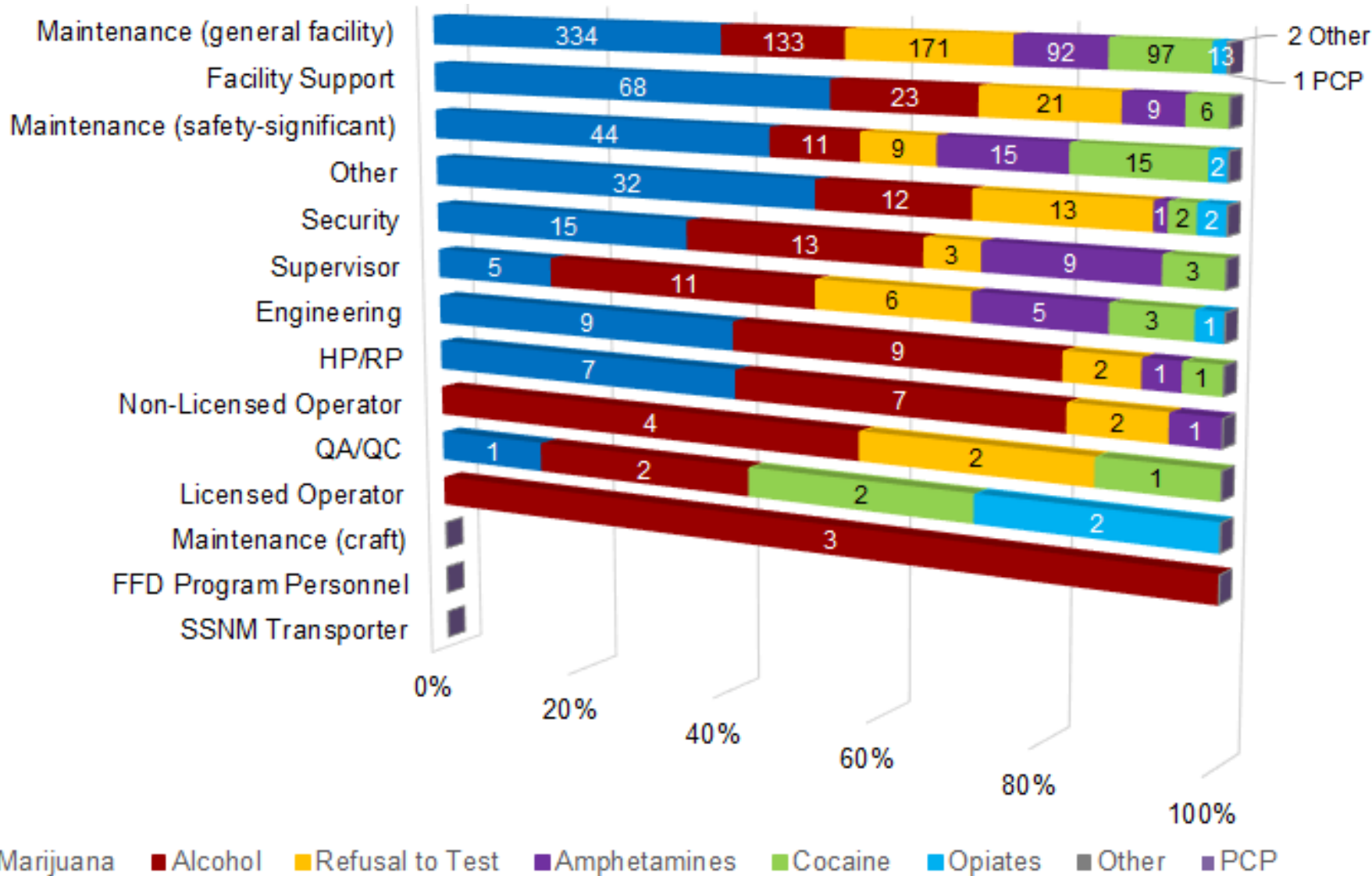
Substances Detected by Labor Category, 2018

[DRAFT]

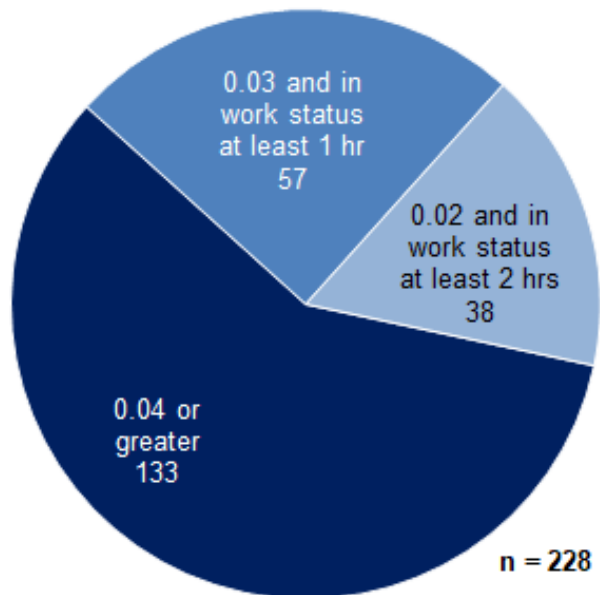
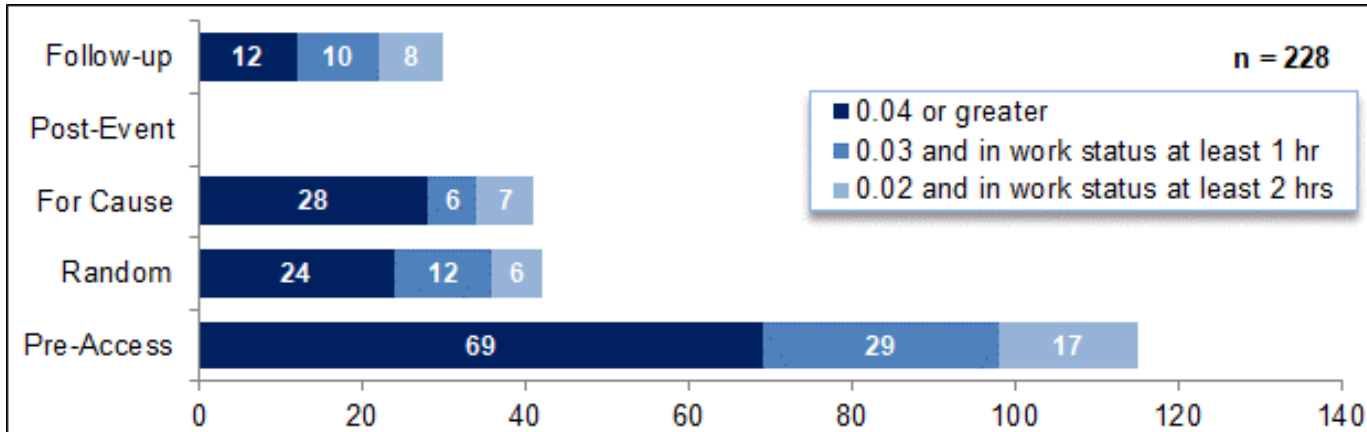


United States Nuclear Regulatory Commission

Protecting People and the Environment



Measuring Effectiveness of Lower Cutoff Levels for Alcohol, 2018 **[DRAFT]**



- 42% of alcohol positives (BAC < 0.04) are the result of time-dependent cutoff levels, which have been required since 2008
- 32-60% of positive alcohol results per test category were BAC < 0.04

Subversion Attempt Trends [Draft]

Subversion attempt is 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 is a permanent denial of unescorted access (10 CFR 26.75)

Subversion Attempt Trends (last 5 years)

2014 – 187 subversions (21.2% of drug testing violations)

2015 – 232 subversions (21.2% of drug testing violations)

2016 – 305 subversions (32.4% of drug testing violations)

2017 – 301 subversions (33.5% of drug testing violations)

2018 – 298 subversions (31.0% of drug testing violations)

Subversion Attempts in 2018:

- 70.0% facilities with at least 1 subversion attempt (50 of 71)
- 77.5% identified at Pre-Access testing (231 of 298)
- 95.6% by contractor/vendors (285 of 298)



Items of Interest

- Oral fluid testing
- Expanded panel testing – Prevalence testing
- Marijuana and Hemp
- 10 CFR Part 26, “Fitness for Duty Programs,” staff-proposed rulemaking

Oral Fluid Testing

The commercial nuclear industry continues its support of this HHS-led testing technique

- Two operating reactor licensees have taken formal steps to implement a program, but subsequently deferred to wait for implementation of the HHS oral fluid guidelines
 - Now that the guidelines have been issued, the licensee for the Vogtle Units 3 & 4 construction site has implemented a limited program on November 1, 2019
- Part 26 all the use oral fluid testing in medical situations where the donor cannot provide a sufficient urine specimen

Expanded Panel – Prevalence Testing

Regulatory Problem

- Are we testing for the right drugs and drug metabolites in the commercial nuclear industry?
- If the Part 26 panel deviates from the HHS panel, this could be a cost on the commercial nuclear industry

Considerations

- NRC licensees are allowed to expand their drug testing panels, but few are doing so
- If the NRC-required a change to expand the drug panel: there must be a substantial increase in the overall protection of the public health and safety or the common defense and security and the direct and indirect costs of implementation are justified in view of this increased protection

Expanded Panel – Prevalence Testing

Possible Solutions

- Implement a “prevalence testing program” similar to that done by the U.S. Department of Defense to see what drugs are being used by individuals in the commercial nuclear workforce that are not currently being detected, but may be impairing
- Conduct a review of the nuclear industry’s self-implemented prescription announcement program to inform NRC decisions on what drugs are being used by members of the commercial nuclear workforce
- Strengthen our evaluation of licensee behavioral observation programs, fitness determinations, and for-cause and post-event testing

Marijuana and Hemp

The commercial nuclear industry desires additional guidance be issued regarding an individual's use, sale, and possession of "hemp products" that may contain tetrahydrocannabinol (THC) and/or cannabidiol (CBD) (e.g., topical creams and oils, food products)

Controlled Substances Act

Sec. 1308.15, Schedule V, paragraph (f)

Sec. 13008.35, Exemption of certain cannabis plant material, and products made therefrom, that contain tetrahydrocannabinol (THC)

NRC-Staff Proposed Rulemaking



"Fitness for Duty Testing Requirements," NRC-2009-0225; RIN 3150-AI67

Published in the **Federal Register** on September 16, 2019 (84 FR 48750)

Can be viewed at *Regulations.gov*

Public comment period closed December 2, 2019

This rulemaking propose six major provisions (next slide)

NRC-Staff Proposed Rulemaking

Major provisions

1. Testing for methylenedioxymethamphetamine (MDMA) and methylenedioxyamphetamine (MDA)
2. Add initial drug testing for 6-acetylmorphine (6-AM) and update its confirmatory drug testing method
3. Lower the drug testing cutoff levels for amphetamine, cocaine metabolite, and methamphetamine
4. Improve the detection of subversion attempts by enhanced evaluation of dilute validity test results & specimens collected under direct observation
5. Require Medical Review Officers to use elapsed time and/or temperature to evaluate invalid test results due to high pH
6. Issuance of regulatory guidance

NRC Fitness for Duty Program Staff



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