

Presentation to the Nuclear Energy Institute's Access Authorization and Fitness for Duty Workshop

Fitness for Duty (FFD) Programs – 10 CFR Part 26 FFD Performance and Trends

July 13, 2023



FFD Program Performance and Trends

Note: All 2022 FFD Program Performance results are **DRAFT**

FFD Program Performance Results, 2018-2022

	2018	2019	2020	2021	2022
Number of Facilities Reporting	71	70	70	69	64
Individuals Tested	145,797	131,417	124,678	114,150	111,854
Individuals Testing Positive*	1,187	1,085	1,048	1,112	1,082
Identified at Pre-access Testing	69.6%	67.3%	67.4%	66.5%	70.3%
Identified at Random Testing	17.8%	21.8%	22.7%	24.8%	20.4%
Pre-Access Testing Positive Rates	1.02%	1.03%	1.01%	1.17%	1.20%
Licensee Employee	0.43%	0.44%	0.38%	0.64%	0.85%
Contractors/Vendors	1.08%	1.10%	1.08%	1.17%	1.26%
Random Testing Positive Rates	0.37%	0.45%	0.49%	0.61%	0.52%
Licensee Employees	0.17%	0.19%	0.23%	0.28%	0.31%
Contractors/Vendors	0.68%	0.86%	0.92%	1.15%	0.87%
Average Worker Population	99,569	91,954	89,205	82,512	77,306
Licensee Employees	59,913	56,152	54,190	50,094	46,957
Contractors/Vendors	39,656	35,802	35,015	31,608	30,349

* Positive = Positive drug and alcohol tests, adulterated and substituted validity test results, and refusals to test

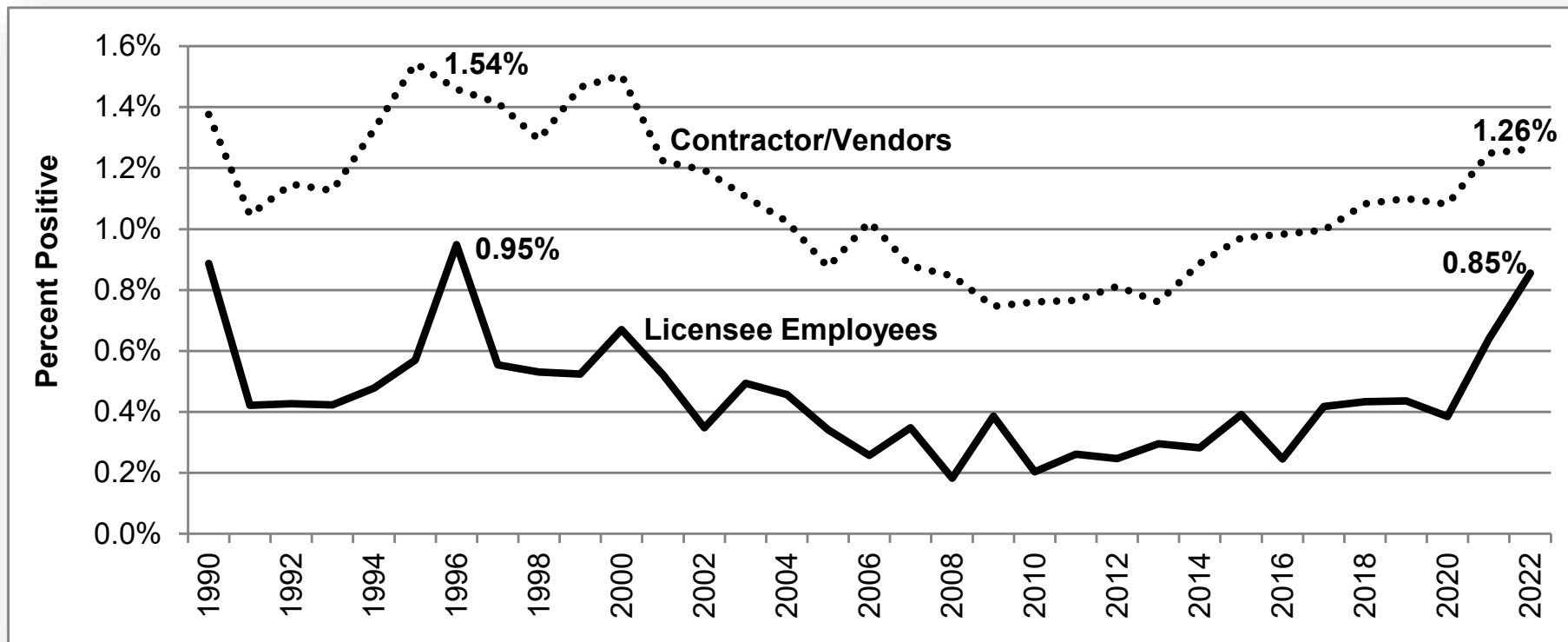
All results in presentation are MRO verified

FFD Program Performance Results by Test and Employment Categories, 2022

Test Category	Tested	Positive	Percent Positive
Pre-Access	63,331	761	1.20%
Random	42,540	221	0.52%
For Cause	216	40	18.52%
Post-Event	241	1	0.41%
Followup	5,526	59	1.07%
Total	111,854	1,082	0.97%

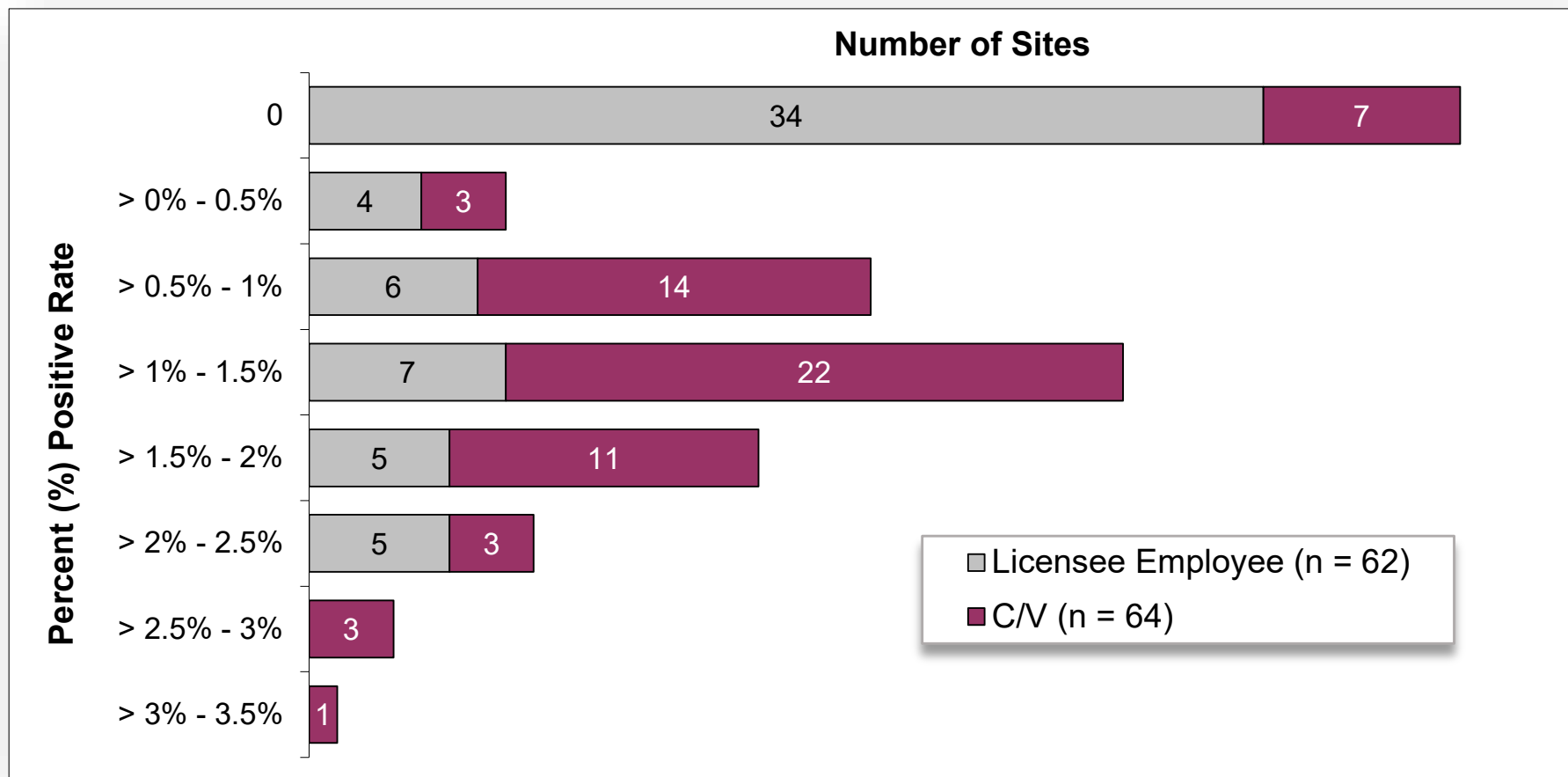
Test Category	Licensee Employees			Contractor/Vendors (C/Vs)			Total			% of Total Positives
	Tested	Positive	Percent Positive	Tested	Positive	Percent Positive	Tested	Positive	Percent Positive	
Pre-Access	9,476	81	0.85%	53,855	680	1.26%	63,331	761	1.20%	70.3%
Random	26,632	82	0.31%	15,908	139	0.87%	42,540	221	0.52%	20.4%
For Cause	66	11	16.67%	150	29	19.33%	216	40	18.52%	3.7%
Post-Event	70	-	0.00%	171	1	0.58%	241	1	0.41%	0.1%
Followup	2,694	21	0.78%	2,832	38	1.34%	5,526	59	1.07%	5.5%
Total	38,938	195	0.50%	72,916	887	1.22%	111,854	1,082	0.97%	100.0%

Pre-Access Testing (1990-2022) Positive Rates by Employment Category

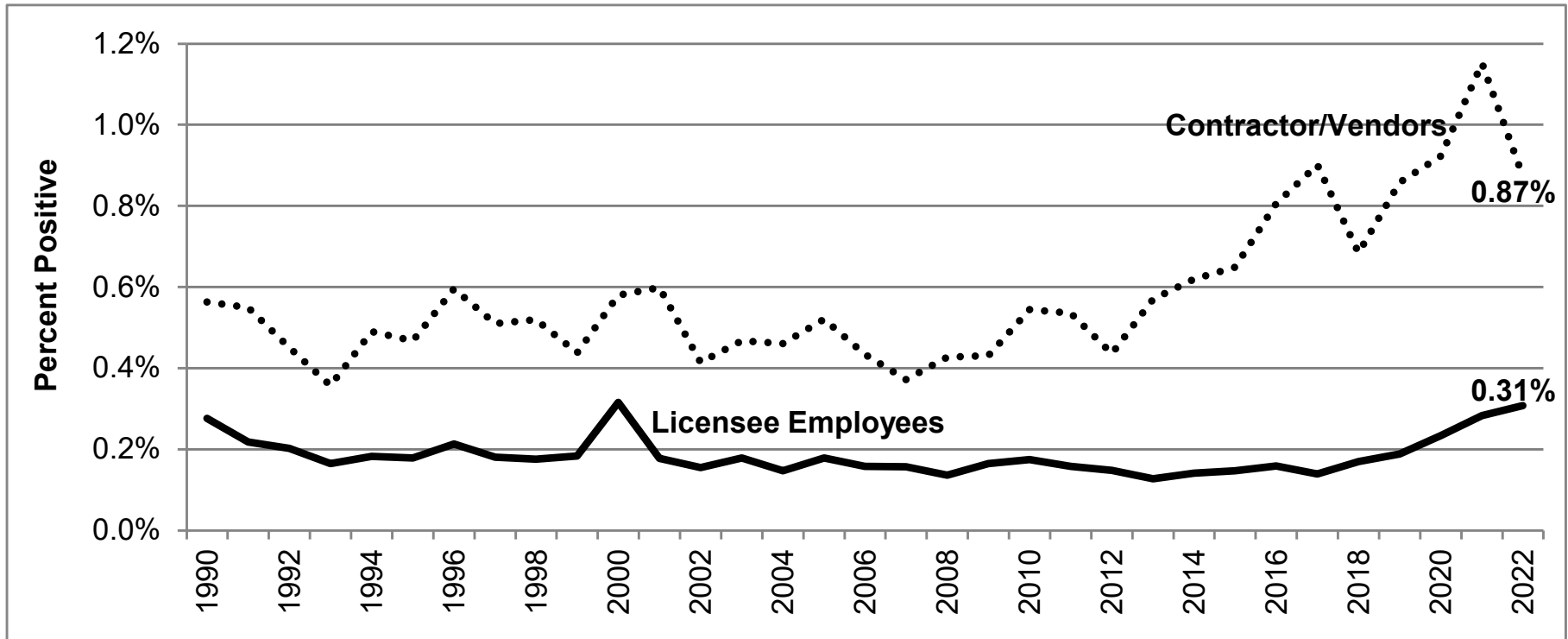


Pre-Access Testing, 2022

Distribution of Site-Specific Positive Rates by Employment Category



Random Testing (1990-2022) Positive Rates by Employment Category



Beginning in 1994, the NRC reduced the minimum annual random testing rate from 100 percent to 50 percent of the subject population

Random Testing (2018-2022)

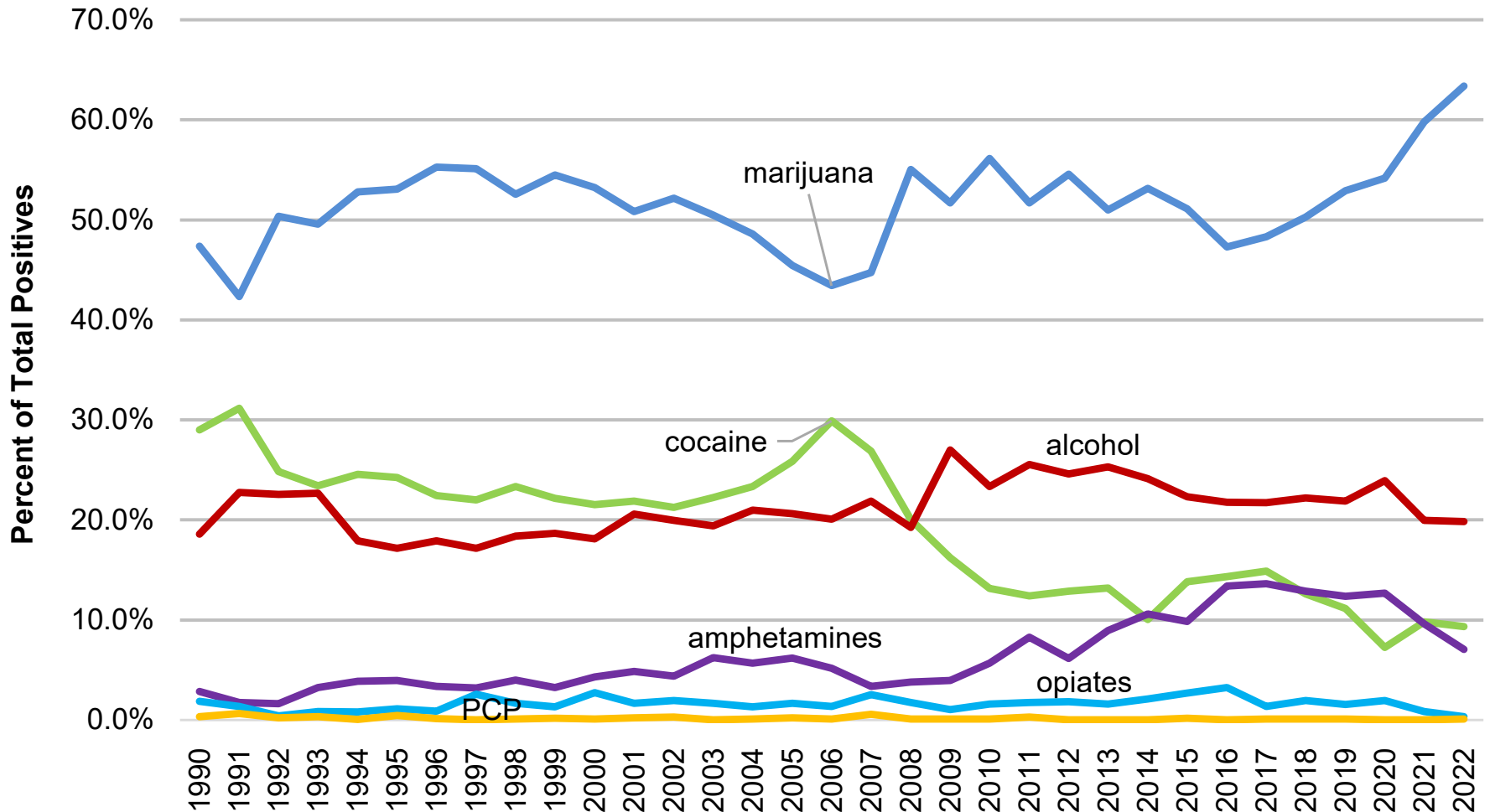
Distribution of Site-Specific Positive Rates by Employment Category



Positive Rate Range (%)	Licensee Employee					C/V				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
0	29	34	30	25	19	28	35	26	26	25
> 0% - 0.25%	22	17	17	10	13	4			1	
> 0.25% - 0.5%	16	15	10	19	16	14	6	6	5	5
> 0.5% - 0.75%	4	3	8	12	12	6	6	8	6	10
> 0.75% - 1%		1	4	1	2	10	6	5	6	6
> 1% - 1.25%			1			5	5	10	7	8
> 1.25% - 1.5%						1	7	3	3	2
> 1.5% - 1.75%				1		1	3	4	5	1
> 1.75% - 2%							1	4	2	2
> 2% - 2.25%								1		2
> 2.25% - 2.5%						1		1	4	1
> 2.5% - 2.75%								1		
> 2.75% - 3%										
> 3% - 3.25%					1					1
> 3.25% - 3.5%										1
> 3.5% - 3.75%						1			2	
> 3.75% - 4%							1			
> 4%								1	1	

Detection Trends – NRC Testing Panel

Percentage of Total Positives by Substance Tested

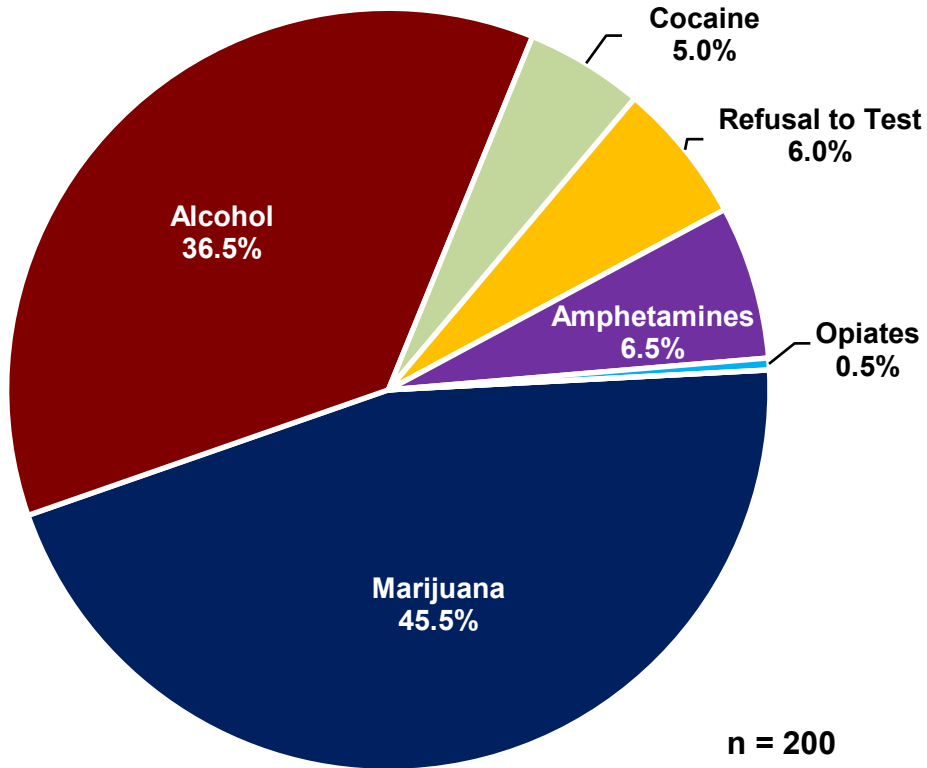


Since at least 2014, this chart under reports the substances used by individuals with a drug testing violation. This is because of the high number of subversion attempts where no specimen is tested (at least 60% of subversion attempts each year)

Results by Employment Category, 2022

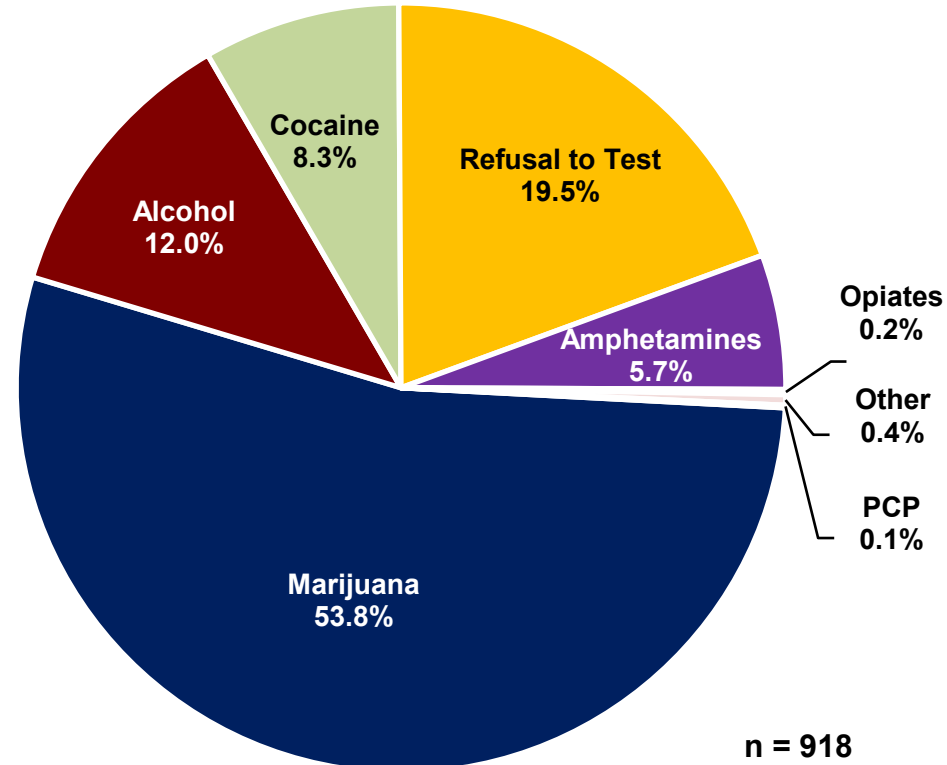
Licensee Employees

(38,938 tested, 195 individuals positive)

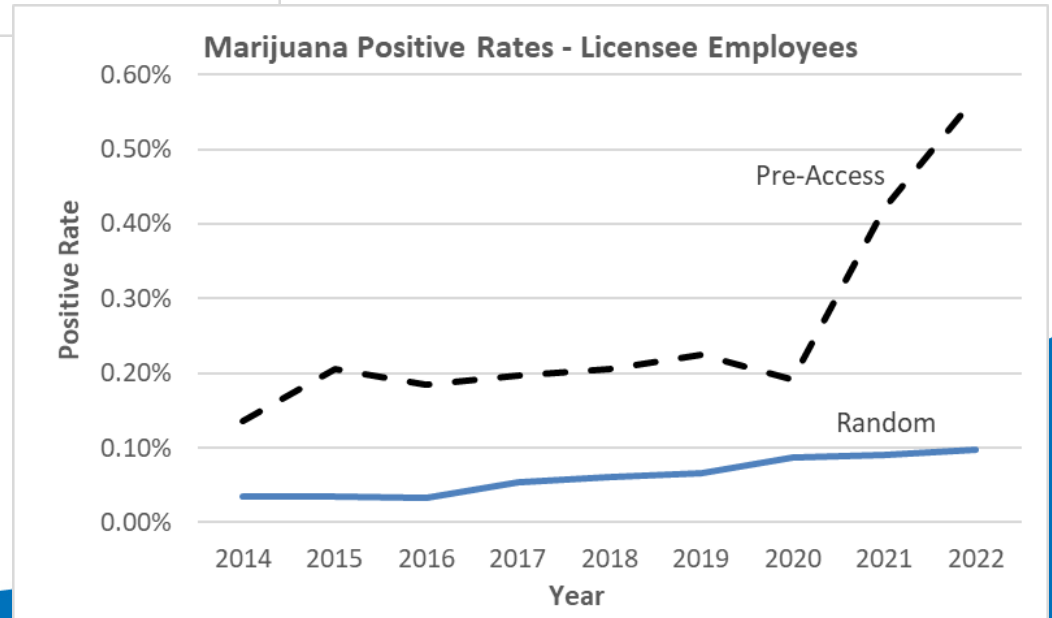
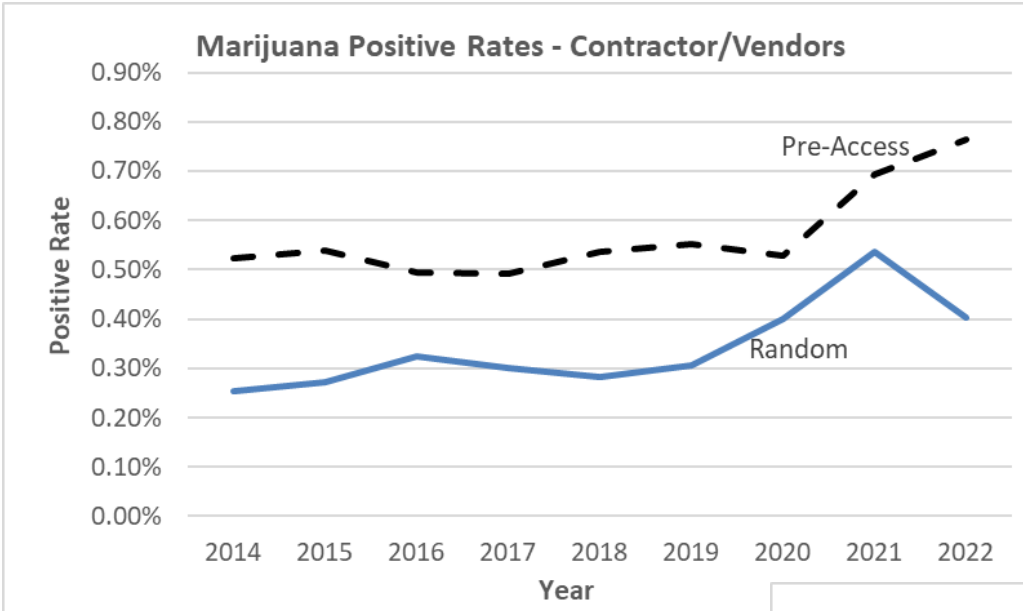


Contractor/Vendors

(72,916 tested, 887 individuals positive)

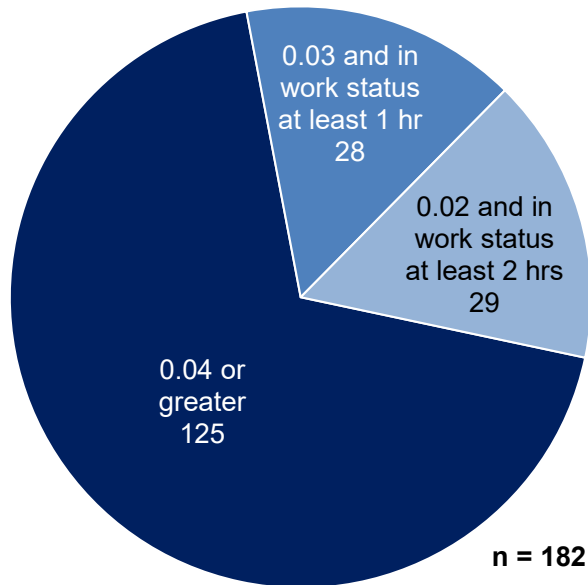
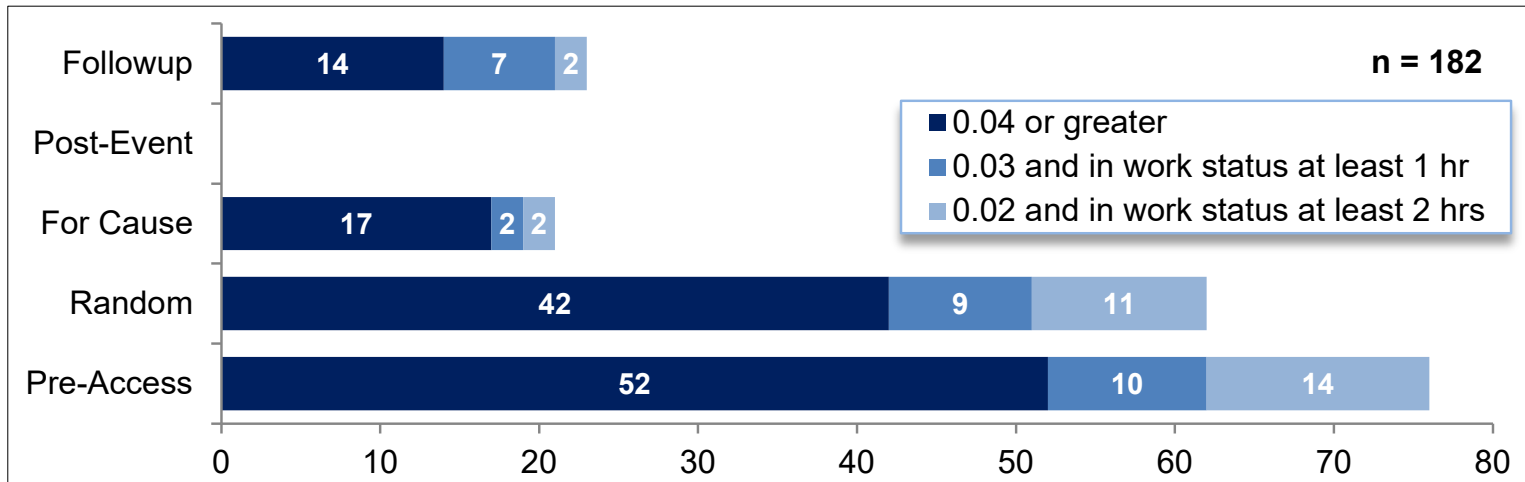


Pre-Access and Random Positive Rates - Marijuana



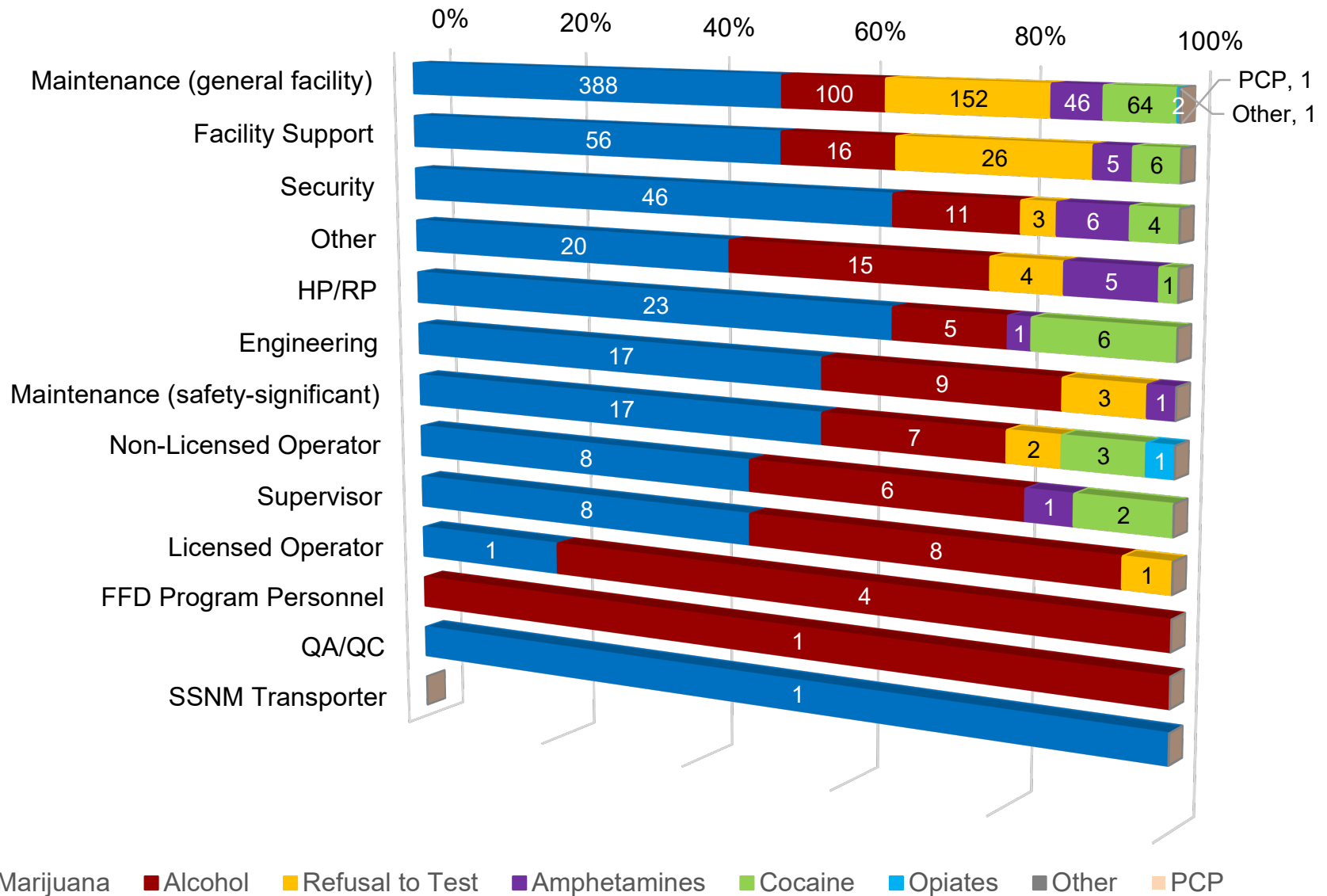
Alcohol Positive Results, 2022

Effectiveness of Lower Cutoff Levels

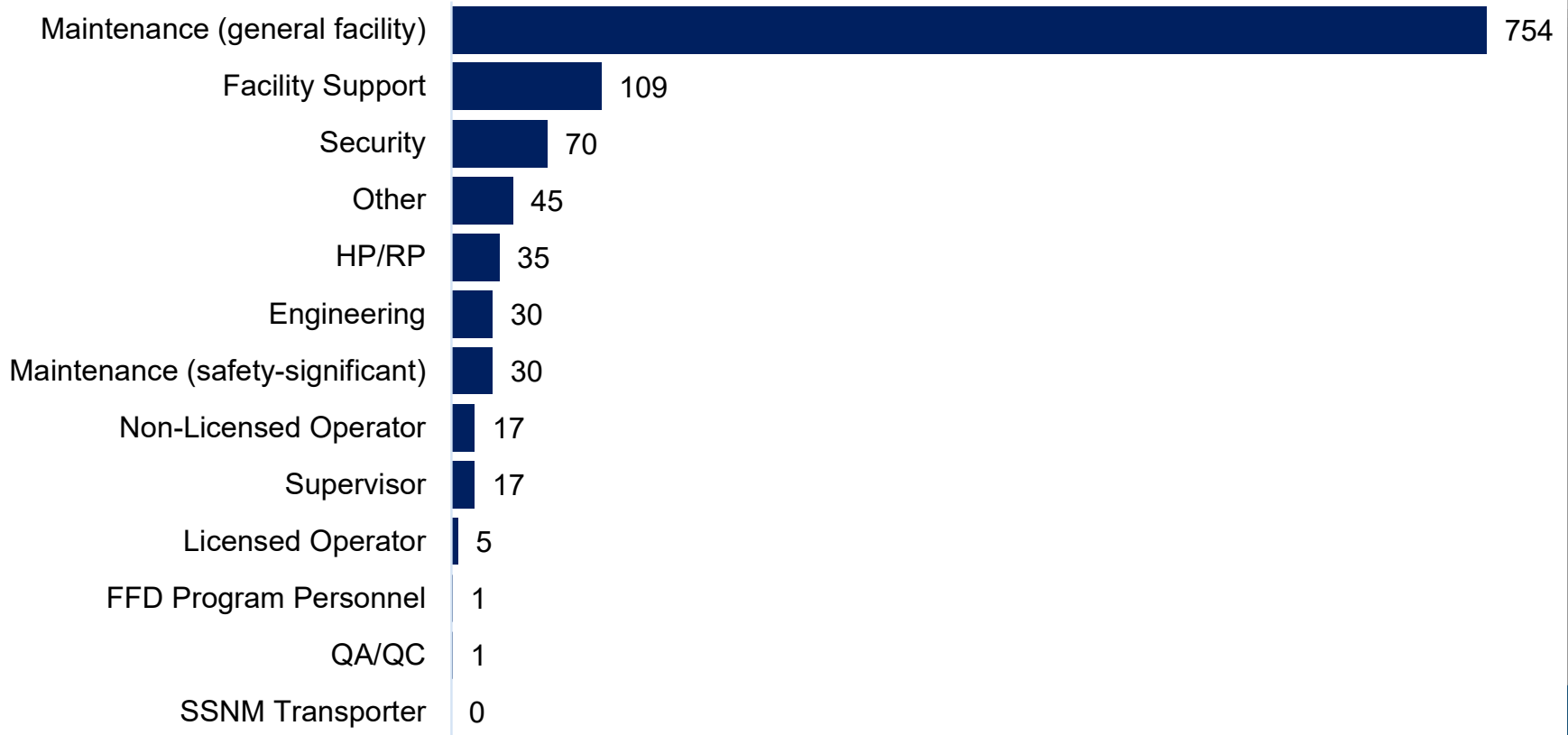


- 31% of alcohol positives due to time-dependent cutoff levels (BAC < 0.04)
- Must abstain from alcohol use at least 5 hours prior to arrival for work

Results by Labor Category, 2022



Total Substances by Labor Category, 2022



Subversion Attempt Trends (2017-2022)

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)

	2017	2018	2019	2020	2021	2022
Number of Subversion Attempts	305	298	307	288	272	268
Percentage of Drug Testing Violations	31.9%	31.0%	34.5%	34.3%	29.3%	29.8%
Identified at Pre-access Testing	67.5%	77.5%	73.3%	74.7%	72.4%	79.1%
Committed by Contractor/Vendors	97.7%	95.6%	97.4%	96.2%	94.5%	93.3%
Percentage of Sites Reporting At Least One Subversion	64%	70%	61%	70%	70%	75%

Subversion attempt sanction:

Permanent denial unescorted access, 10 CFR 26.75(b)

Subversion Attempt Trends by Labor Category (2017-2022)

Labor Category	2017	2018	2019	2020	2021	2022	Total
Maintenance (general facility)	193	226	255	245	217	211	1,347
Facility Support	17	25	18	17	26	30	133
HP/RP	2	2	2	1	6	6	19
Maintenance (safety-significant)	9	14	10	10	2	5	50
Security	4	4	6	4	9	5	32
Other	77	16	7	6	6	5	117
Engineering	1	2	3	4		3	13
Supervisor	1	7	4	1	3	3	19
Non-Licensed Operator	1	2			3		6
QA/QC			2				2
Grand Total	305	298	307	288	272	268	1,738

Special Analyses Testing of Dilute Specimens

10 CFR 26.163(a)(2)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Pre-Access	9	5	11	5	15	12	10	7	9	83
Marijuana	7	5	7	3	12	9	8	7	8	65
Cocaine			2	2		3	2		1	10
Amphetamine; Methamphetamine	1		1		1					3
Amphetamine; Marijuana	1									1
Amphetamine; Methamphetamine; Marijuana					1					1
Cocaine; Marijuana			1							1
Methamphetamine					1					1
Random	2	2		1	6	3	4	7	3	28
Marijuana	1			1	3	2	3	5	3	18
Cocaine	1	1			2		1	2		7
Amphetamine		1								1
Methamphetamine					1	1				2
For Cause	1									1
Marijuana	1									1
Followup		1				1		3	3	8
Marijuana						1		2	1	4
Cocaine		1							1	2
Amphetamine								1		1
Methamphetamine									1	1
Total	12	8	11	6	21	16	14	17	15	120

HHS-Certified Laboratory Performance, 2022

10 CFR 26.719 – 30-day event reports

- 1) Concentration of marijuana metabolite in a blind performance test sample (BPTS) was not within 30% of the target concentration** (February 2022). Deterioration of the calibrator material resulted in a higher drug concentration. The specimen was reanalyzed with a new calibrator and the result was within the target concentration.
- 2) Concentration of marijuana metabolite in a BPTS was not within 30% of the target concentration** (July 2022). The discrepant result was isolated random variability in the assay.
- 3) Laboratory did not report test results within 5-business days of receipt**, as required by 10 CFR 26.169(a) (February 2022). Delays due to quality control and batch failures that resulted in specimen testing on multiple confirmation batches.
- 4) False-negative test result for a BPTS formulated to test positive for an expanded panel opioid** (April 2022). An incorrect testing code (i.e., for the standard panel) was entered by the laboratory data entry operator.

HHS-Certified Laboratory Performance, 2022

10 CFR 26.719 – 30-day event reports

- 5) **An HHS-certified laboratory incorrectly sent 15 donor specimens to another one of its HHS-certified laboratories for testing** (January 2022). Fourteen specimens were forwarded to the correct laboratory for testing. One specimen had already been tested and was discarded. The laboratory provided incorrect express mail shipping labels for the specimens.

- 6) **An HHS-certified laboratory incorrectly tested two donor specimens at another one of its HHS-certified laboratories** (January 2022). Donor retest requests were made for both specimens, neither was shipped to another HHS-certified laboratory within 1-business day as required by 10 CFR 26.165(b)(5). For one retest request, the specimen also was sent to the wrong HHS-certified laboratory. No information was provided on why the incorrect laboratory performed initial testing. The same laboratory technician processed the retest requests. High work volume and a data entry error resulted in the processing issues.

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