

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, DC 20555-0001

July 15, 2005

NRC INFORMATION NOTICE 2005-18: SUMMARY OF FITNESS-FOR-DUTY PROGRAM  
PERFORMANCE REPORTS FOR CALENDAR  
YEARS 2001, 2002 AND 2003

### **ADDRESSEES**

All holders of 10 CFR Part 50 operating licenses for nuclear power reactors, except those who have permanently ceased operation and have certified that the fuel has been permanently removed from the reactor vessel.

### **PURPOSE**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice (IN) to report on lessons learned by licensees from their fitness-for-duty (FFD) program performance reports for calendar years 2001, 2002 and 2003. It is expected that recipients of this IN will review the information for applicability to their reactor facilities and consider, as appropriate, the corrective actions taken to improve the future performance of their FFD programs. However, this IN should not be construed as representing NRC requirements, and therefore no specific actions or written responses are required.

### **DESCRIPTION OF CIRCUMSTANCES**

As required by 10 CFR 26.71(d), NRC licensees have submitted their FFD program performance reports to the NRC within 60 days of the end of each 6-month reporting period (January - June and July - December). In the past, the NRC summarized and analyzed this performance data and published an annual volume, NUREG/CR-5758, "Fitness for Duty in the Nuclear Power Industry—Annual Summary of Program Performance Reports." The IN in Attachment 1, provides similar FFD program performance data information for the years 2001, 2002 and 2003.

### **DISCUSSION**

Lessons learned, management initiatives and problems, and the associated corrective actions taken reported by licensees for the years 2001, 2002, and 2003 are summarized below.

(1) Certified Laboratories

Some licensees continue to experience problems with laboratory performance of equipment malfunctioning and have also identified potential weaknesses in human error.

**ML051640539**

For example:

For the year 2001:

- One laboratory, determined that blind performance specimens caused test discrepancies.
- In accordance with 10 CFR 26 Appendix A, paragraph 2.8, one licensee submitted a letter to the NRC detailing the unsatisfactory performance of a certified testing laboratory.

For the year 2002:

- One licensee reported that on February 16, 2002, a certified testing laboratory reported an unsatisfactory positive blind performance urine test sample containing amphetamine and methamphetamine. This event was investigated by the laboratory and corrective action was taken. The event was reported to the NRC as required by 10 CFR Part 26, Appendix A, Subpart 2.8(e)(4).
- One licensee reported an inaccurate laboratory result for a blind specimen that was reported as negative. The cause of the inaccuracy was due to the sample being inadvertently diluted. The licensee entered the inconsistency into the corrective action program for evaluation and statistical trending.

For the year 2003:

- Two licensees reported a discrepancy in recording blind sample test results because of a laboratory technician's human error in not following procedures. The problem was corrected by revising the procedures.
- One licensee reported that a laboratory's courier van carrying samples of specimen to the lab was stolen and the FFD specimen was lost. All samples of specimen were recollected within 12 hours of the notification and all samples tested negative.
- One licensee reported a discrepancy with the blind sample specimens processed because the laboratory equipment was not within quality control standards. Corrective action was taken immediately.
- One licensee reported that a blind sample specimen for amphetamines that was spiked was submitted to a certified laboratory, and the results reported were negative. It was discovered that the age of the blind sample specimen caused the level of the amphetamines to degrade below the required positive cutoff level.

(2) Random Testing

Several licensees reported minor problems related to the random drug and alcohol selection process.

For the year 2001:

- One licensee performed an audit and reported problems with the random drug screening software in which several individuals were omitted from the drug testing pool for three days. A root cause analysis revealed that the individuals missing were not included in the file exported from the Security Database to the random drug screening software from which individuals are selected for random drug screening.
- One licensee reported that a contract employee tested positive for opiates because that individual used a prescription drug prescribed to another person. The employee was referred to the Employee Assistance Program (EAP) and was denied access to the facility for 14 days. After reassessment, the case was completed and it was determined the individual did not have a dependency issue. The employee returned to work and was placed into the follow-up program.
- One licensee discovered deficiencies in the reporting software used to compile the FFD report. The number of random tests reported for the period was found to be in error.
- One licensee reported one false negative result for the blind performance specimens. Notification was sent to the NRC of this unsatisfactory performance.
- One licensee reported that several workers had been improperly excluded from the random drug testing pool for extended periods, because of software upgrade interface problems.

For the year 2002:

- One licensee increased the random drug testing rate in order to enhance the random drug sampling program. This was based on a study that was conducted by a certified laboratory.
- One licensee identified a program weakness in its laboratory screening because of an error concerning a low rate of "For Cause" tests. Corrective action was taken to ensure that verification of the test results was properly completed prior to a specimen being destroyed.

For the year 2003:

- One licensee reported that a software change affected the FFD tracking program and caused several individuals to be excluded from the random drug test pool.

(3) Policies and Procedures

Several licensees reported initiatives to improve their FFD program policies and procedures.

For the year 2001:

- During a routine audit, one licensee found weaknesses in their FFD supervisor training program. It was discovered that three supervisors did not requalify in Supervisor FFD and Behavior Observation Programs as required within the nominal 12 month period.
- One licensee implemented state-of-the-art equipment to enhance its FFD process for measurement of specimen specific gravity. The results provided a digital display versus a collector's visual determination of the specific gravity reading.
- One licensee updated its FFD procedures to reflect revised wording in the chain-of-custody form.
- One licensee reported an event to the NRC in which there was a positive alcohol test in the followup program due to refusal by a contractor supervisor to complete the testing.
- One licensee reported that an employee, who tested positive for illegal drugs during pre-employment testing was denied access to the protected area.
- One licensee reported that three confirmed positive results and two incidents of adulterated samples were identified during pre-employment testing for the short-term contractor population. The licensee also reported in the "For-Cause" FFD testing program for the long-term contractor population, one confirmed positive sample was detected for two substances.
- One licensee tested three individuals "For-Cause," after they reported a substance abuse related arrest. Subsequently, they were referred to EAP for an assessment.
- One licensee reported an adulterated sample for a contractor employee during random testing, resulting in denial of unescorted access to the facility.
- One licensee eliminated its policy of administering a second breath alcohol test when the first test is negative.
- One licensee reported two positive chemical test results.

For the year 2002:

- One licensee reported that during a routine search for contraband via an x-ray machine, Security personnel discovered a small-unopened bottle of alcohol in an individual's computer case. Investigation revealed no intent to bring the alcohol into the protected area. Security confiscated the item. The issue was placed into the Corrective Action System.
- One licensee reported that a positive test result was not coded properly in the database, causing the test result not to appear on the report of positives used to compile statistics for the six-month performance summary report. The licensee identified the error during the self-assessment period of the FFD program. Corrective action was taken to revise the code in the database.
- One licensee reported that the contract FFD collector instructed a donor to provide a smaller urine specimen than the 60 ml called for in 10 CFR Part 26. However, the smaller specimen did not compromise the accuracy of the test results.
- One licensee found a weakness in the FFD program, which gave an individual unescorted access to the protected area without a drug and alcohol test being completed. The licensee found that the access authorization staff did not conduct a thorough review of the individual's access authorization file prior to approval for unescorted access. Appropriate FFD personnel were given written instruction as a reminder to thoroughly review all access files before granting approval.

For the year 2003:

- One licensee reported the granting of unescorted access prior to receiving a negative drug test screen result. This was the result of data entry human error. The procedure was revised and corrective action was taken.
- One licensee reported a weakness in the notification process to employees reporting for a FFD test. The procedures were revised and corrective action was taken.
- One licensee reported that the blind specimens were not submitted in accordance with 10 CFR Part 26 for two additional drugs. Corrective action was taken to track the submission of blind samples to ensure that no drug is excluded.
- One licensee reported nine incidents whereby contractors attempted to subvert the random drug testing process through adulteration with a synthetic urine product called "Minuteman." These contractor personnel were denied unescorted access to the protected area for "failure to cooperate," falsification of their chain-of-custody form, and in some cases falsification of their self-disclosure questionnaire.

- One licensee reported a deficiency in the FFD program meeting the reporting requirements in 10 CFR 26.73 (a)(1) within 24 hours. The licensee revised and added more detail to their procedures.
- One licensee reported that an individual was randomly tested for FFD and their blood alcohol content was found to be above the limit. The Medical Review Officer (MRO) suggested that the individual be relieved of work duty and referred to the EAP. The substance abuse professional in EAP did not find this individual's alcohol consumption to be problematic. The individual returned to work after the pre-access test was completed, and the results were negative.

(4) Program and System Management

In general, most licensees continue to report improvements in their overall FFD program management.

For the year 2001:

- One licensee planned FFD supervisory training for incoming contractor personnel during refueling and outage, and development of a common FFD program for its nuclear sites.
- One licensee's canine program continues to remind plant personnel of the licensee's commitment to maintain a drug-free work environment. The canine unit provides anti-drug presentations to local schools and other community organizations. The canine unit is also made available upon request to local law enforcement agencies.
- One licensee re-emphasized during general employee training, the significance of the sanctions associated with ingestion of hemp products and the requirements. The instructor accentuates importance of FFD prior to entering the workplace and not just in the protected area.
- One licensee planned to create an electronic link between the Access Authorization, FFD, and Emergency Response Organization to improve coordination and eliminate the potential communication errors.
- One licensee planned FFD supervisory training due to several supervisors exceeding the site requalification requirement. Corrective actions were taken (1) to develop a common FFD program for its nuclear sites, (2) increasing efficiencies in the data gathering process and (3) provide clearer delineation of short-term, long-term and licensee employees were made.
- One licensee reported administration of "For-Cause" testing resulting from a security officer discovering an open container of alcohol in an employee's vehicle. The test results were negative.

- To enhance the overall FFD program at the site, one licensee met with the laboratory, collection site, MROs, EAP staff and psychological assessment personnel to assure consistent and effective implementation of the FFD program. The licensee's canine program continues to remind plant personnel of the licensee's commitment to maintain a drug-free work environment.

For the year 2002:

- One licensee planned to merge two FFD programs and implement new programmatic changes at their site.
- One licensee discovered during a self-assessment of the FFD program that the blind submittal rate did not meet the 10 CFR Part 26 requirements. Corrective actions were taken to evaluate the appropriate number of blind samples to be submitted.
- One licensee reported that it initiated communications to re-emphasize the FFD program requirements for overtime, in order to ensure fitness for duty suitability prior to authorizing overtime hours.
- Two licensees made FFD program modifications to their procedures in order to eliminate procedural inefficiencies and to maximize the efficiency of the FFD program.
- One licensee updated its internal website to enhance the FFD program with user-friendly forms and guidance for supervisors.
- One licensee sent written notification regarding an operating experience of there being gift baskets containing prohibited substance delivered to site. The licensee provided FFD awareness information prohibiting alcohol on company property for all site personnel.
- One licensee found that its employees were not familiar with the "For-Cause" testing protocol and requirements. The licensee implemented corrective actions by supplying additional information to the employees.

For the year 2003:

- Two licensees presented at a FFD workshop to industry peers and FFD staff concerning the use of adulteration products such as synthetic urine.
- One licensee received notification from a pharmacy concerning a medication called "Protonix," that can cause a false positive urine screen test for marijuana on a FFD test. All medical personnel reviewed the notification from the pharmacy for future reference.

## CONTACT

This information notice requires no specific action or written response. Please direct any questions about this matter to the technical contact listed below.

***/Mary Jane Ross-Lee for/***  
Patrick L. Hiland, Chief  
Reactor Operations Branch  
Division of Inspection Program Management  
Office of Nuclear Reactor Regulation

Technical Contact: Timothy McCune, NSIR  
301-415-6474  
E-mail: [fitnessforduty@nrc.gov](mailto:fitnessforduty@nrc.gov)

Attachment: Fitness-for-Duty Statistics

Note: NRC generic communications may be found on the NRC public Web site, <http://www.nrc.gov>, under Electronic Reading Room/Document Collections.



**Table 1A  
2001 Test Results For Each Test Category**

TEST CATEGORY	NUMBER OF TESTS	2001 POSITIVE TESTS	PERCENT POSITIVE
Pre-Access	63,744	720	1.13%
Random	50,080	148	0.30%
For-Cause	730	101	13.84%
Followup	2,649	35	1.32%
Other	1,527	32	2.10%
TOTAL *	118,730	1,036	0.87%
TOTAL without OTHER Category	117,203	1,004	0.86%

**Table 1B  
2002 Test Results For Each Test Category**

TEST CATEGORY	NUMBER OF TESTS	2002 POSITIVE TESTS	PERCENT POSITIVE
Pre-Access	73,188	805	1.10%
Random	49,848	114	0.23%
For-Cause	1,072	112	10.45%
Followup	2,892	21	0.73%
Other	1,462	39	2.67%
TOTAL *	128,462	1,091	0.85%
TOTAL without OTHER Category	127,000	1,052	0.83%

\* These totals were calculated using the "Other" test category. This category includes results from the periodic testing done by some reporting units during annual physicals or similar periodic activities. Although some reporting units specified the nature of the "Other" tests (e.g., return to work), most reporting units did not give this information.

**Table 1C**  
**2003 Test Results For Each Test Category**

TEST CATEGORY	NUMBER OF TESTS	2003 POSITIVE TESTS	PERCENT POSITIVE
Pre-Access	72,988	757	1.04%
Random	49,402	132	0.27%
For-Cause	1,052	126	11.98%
Followup	3,142	42	1.34%
Other	1,201	37	3.08%
TOTAL *	127,785	1,094	0.86%
TOTAL without OTHER Category	126,584	1,057	0.84%

\* These totals were calculated using the "Other" test category. This category includes results from the periodic testing done by some reporting units during annual physicals or similar periodic activities. Although some reporting units specified the nature of the "Other" tests (e.g., return to work), most reporting units did not give this information.

**Table 2A**  
**2001 Test Results For Each Test Category And Work Category**

Test Category	Licensee Employees	Long-Term Contractors	Short-Term Contractors	Total
Pre-Access				
Number Tested	8,442	1,641	53,661	63,744
Number Positive	44	16	660	720
Percent Positive	0.52%	0.98%	1.23%	1.13%
Random				
Number Tested	36,048	1,697	12,335	50,080
Number Positive	64	4	80	148
Percent Positive	0.18%	0.24%	0.65%	0.30%
For-Cause				
Number Tested	326	33	371	730
Number Positive	20	2	79	101
Percent Positive	6.13%	6.06%	21.29%	13.84%
Followup				
Number Tested	1,650	70	931	2,649
Number Positive	19	0	16	35
Percent Positive	1.15%	0.00%	1.72%	1.32%
Other				
Number Tested	586	305	636	1,527
Number Positive	4	1	27	32
Percent Positive	0.68%	0.33%	4.25%	2.10%
TOTAL				
Number Tested	47,052	3,744	67,298	118,730
Number Positive	151	23	835	1,036
Percent Positive	0.32%	0.61%	1.27%	0.87%
TOTAL without OTHER Category				
Number Tested	46,466	3,439	67,298	117,203
Number Positive	147	22	835	1,004
Percent Positive	0.32%	0.64%	1.24%	0.86%

**Table 2B**  
**2002 Test Results For Each Test Category And Work Category**

Test Category	Licensee Employees	Long-Term Contractors	Short-Term Contractors	Total
Pre-Access				
Number Tested	8,050	1,257	63,881	73,188
Number Positive	28	10	767	805
Percent Positive	0.35%	0.80%	1.20%	1.10%
Random				
Number Tested	35,608	1,298	12,942	49,848
Number Positive	55	1	58	114
Percent Positive	0.15%	0.08%	0.45%	0.23%
For-Cause				
Number Tested	458	22	592	1,072
Number Positive	23	1	88	112
Percent Positive	5.02%	4.55%	14.86%	10.45%
Followup				
Number Tested	1,789	33	1,070	2,892
Number Positive	11	0	10	21
Percent Positive	0.61%	0.00%	0.93%	0.73%
Other				
Number Tested	618	137	706	1,462
Number Positive	6	0	33	39
Percent Positive	0.97%	0.00%	4.67%	2.67%
TOTAL				
Number Tested	46,524	2,747	79,191	128,462
Number Positive	123	12	956	1,091
Percent Positive	0.26%	0.44%	1.21%	0.85%
TOTAL without OTHER Category				
Number Tested	45,905	2,610	78,485	127,000
Number Positive	117	12	923	1,052
Percent Positive	0.26%	0.46%	1.18%	0.83%

**Table 2C**  
**2003 Test Results For Each Test Category And Work Category**

Test Category	Licensee Employees	Long-Term Contractors	Short-Term Contractors	Total
Pre-Access				
Number Tested	8,309	779	63,900	72,988
Number Positive	41	8	708	757
Percent Positive	0.49%	1.03%	1.11%	1.04%
Random				
Number Tested	34,202	1,133	14,067	49,402
Number Positive	61	3	68	132
Percent Positive	0.18%	0.26%	0.48%	0.27%
For-Cause				
Number Tested	439	29	584	1,052
Number Positive	23	0	103	126
Percent Positive	5.24%	0.00%	17.64%	11.98%
Followup				
Number Tested	1,942	26	1,174	3,142
Number Positive	21	1	20	42
Percent Positive	1.08%	3.85%	1.70%	1.34%
Other				
Number Tested	545	59	597	1,201
Number Positive	1	0	36	37
Percent Positive	0.18%	0.00%	6.03%	3.08%
TOTAL				
Number Tested	45,437	2,026	80,322	127,785
Number Positive	147	12	935	1,094
Percent Positive	0.32%	0.59%	1.16%	0.86%
TOTAL without OTHER Category				
Number Tested	44,892	1,967	79,725	126,584
Number Positive	146	12	899	1,057
Percent Positive	0.33%	0.61%	1.13%	0.84%

**Table 3A  
2001 Test Results By Test Category**

TEST CATEGORY	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR
Pre-Access			
Number Tested	33,857	29,887	63,744
Number Positive	407	313	720
Percent Positive	1.20%	1.05%	1.13%
Random			
Number Tested	25,703	24,377	50,080
Number Positive	80	68	148
Percent Positive	0.31%	0.28%	0.30%
For-Cause			
Observed Behavior			
Number Tested	226	280	506
Number Positive	53	46	99
Percent Positive	23.45%	16.43%	19.57%
Post-Accident			
Number Tested	116	108	224
Number Positive	2	0	2
Percent Positive	1.72%	0.00%	0.89%
Follow-Up			
Number Tested	1,381	1,268	2,649
Number Positive	22	13	35
Percent Positive	1.59%	1.03%	1.32%
Other			
Number Tested	823	705	1,527
Number Positive	22	10	32
Percent Positive	2.67%	1.42%	2.10%
TOTAL			
Number Tested	62,106	56,624	118,730
Number Positive	586	450	1,036
Percent Positive	0.94%	0.79%	0.87%
TOTAL without OTHER Category			
Number Tested	61,283	55,920	117,203
Number Positive	564	440	1,004
Percent Positive	0.92%	0.79%	0.86%

**Table 3B**  
**2002 Test Results By Test Category**

TEST CATEGORY	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR
Pre-Access			
Number Tested	39,277	33,911	73,188
Number Positive	484	321	805
Percent Positive	1.23%	0.95%	1.10%
Random			
Number Tested	25,407	24,441	49,848
Number Positive	66	48	114
Percent Positive	0.26%	0.20%	0.23%
For-Cause			
Observed Behavior			
Number Tested	336	281	617
Number Positive	68	42	110
Percent Positive	20.24%	14.95%	17.83%
Post-Accident			
Number Tested	191	264	455
Number Positive	2	0	2
Percent Positive	1.05%	0.00%	0.44%
Follow-Up			
Number Tested	1,485	1,407	2,892
Number Positive	12	9	21
Percent Positive	0.81%	0.64%	0.73%
Other			
Number Tested	835	627	1,462
Number Positive	23	16	39
Percent Positive	2.75%	2.55%	2.67%
TOTAL			
Number Tested	67,531	60,931	128,462
Number Positive	655	436	1,091
Percent Positive	0.97%	0.72%	0.85%
TOTAL without OTHER Category			
Number Tested	66,696	60,304	127,000
Number Positive	632	420	1,052
Percent Positive	0.95%	0.70%	0.83%

**Table 3C**  
**2003 Test Results By Test Category**

TEST CATEGORY	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR
Pre-Access			
Number Tested	37,996	34,992	72,988
Number Positive	433	324	757
Percent Positive	1.14%	0.93%	1.04%
Random			
Number Tested	25,060	24,342	49,402
Number Positive	75	57	132
Percent Positive	0.03%	0.23%	0.27%
For-Cause			
Observed Behavior			
Number Tested	359	278	637
Number Positive	68	55	123
Percent Positive	18.94%	19.78%	19.31%
Post-Accident			
Number Tested	227	188	415
Number Positive	3	0	3
Percent Positive	1.32%	0.00%	0.72%
Follow-Up			
Number Tested	1,577	1,565	3,142
Number Positive	24	18	42
Percent Positive	1.32%	1.15%	1.34%
Other			
Number Tested	680	521	1,201
Number Positive	18	19	37
Percent Positive	2.65%	3.65%	3.08%
TOTAL			
Number Tested	65,899	61,886	127,785
Number Positive	621	473	1,094
Percent Positive	0.94%	0.76%	0.86%
TOTAL without OTHER Category			
Number Tested	65,219	61,365	126,584
Number Positive	603	454	1,057
Percent Positive	0.92%	0.74%	0.84%



**Table 4A  
2001 Test Results For Licensee Employees And Contractor Personnel**

TEST CATEGORY	LICENSEE EMPLOYEES			LONG-TERM CONTRACTORS			SHORT-TERM CONTRACTORS		
	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR
Pre-Access									
Number Tested	4,453	3,989	8,422	941	700	1,641	28,463	25,198	53,661
Number Positive	24	20	44	13	3	16	370	290	660
Percent Positive	0.54%	0.50%	0.52%	1.08%	0.43%	0.98%	1.30%	1.15%	1.23%
Random									
Number Tested	18,441	17,607	36,048	991	706	1,697	6,271	6,064	12,335
Number Positive	38	26	64	3	1	4	39	41	80
Percent Positive	0.21%	0.15%	0.18%	0.30%	0.14%	0.24%	0.62%	0.68%	0.65%
For-Cause									
Observed Behavior									
Number Tested	96	123	219	9	11	20	121	146	267
Number Positive	11	9	20	1	1	2	41	36	77
Percent Positive	11.46%	7.32%	9.13%	11.11%	9.09%	10.00%	33.88%	24.66%	28.84%
Post-Accident									
Number Tested	59	48	107	7	6	13	50	54	104
Number Positive	0	0	0	0	0	0	2	0	2
Percent Positive	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	1.92%
Followup									
Number Tested	790	860	1,650	34	34	68	557	374	931
Number Positive	10	9	19	0	0	0	12	4	16
Percent Positive	1.27%	1.05%	1.15%	0.00%	0.00%	0.00%	2.15%	1.07%	1.72%
Other									
Number Tested	296	290	586	171	134	305	356	280	636
Number Positive	3	1	4	1	0	1	18	9	27
Percent Positive	1.01%	0.34%	0.68%	0.58%	0.00%	0.33%	5.06%	3.21%	4.25%
TOTAL									
Number Tested	24,135	22,917	47,052	2,153	1,591	3,744	35,818	32,116	67,934
Number Positive	86	65	151	18	5	23	482	380	862
Percent Positive	0.36%	0.28%	0.32%	0.84%	0.31%	0.61%	1.35%	1.18%	1.27%
TOTAL without OTHER Category									
Number Tested	23,839	22,627	46,466	1,982	1,457	3,439	35,462	31,836	67,298
Number Positive	83	64	147	17	5	22	464	371	835
Percent Positive	0.35%	0.28%	0.32%	0.86%	0.34%	0.83%	1.31%	1.17%	1.24%

**Table 4B**  
**2002 Test Results For Licensee Employees And Contractor Personnel**

TEST	LICENSEE EMPLOYEES			LONG-TERM CONTRACTORS			SHORT-TERM CONTRACTORS		
	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR
Pre-Access									
Number Tested	4,633	3,417	8,050	774	483	1,257	33,870	30,011	63,881
Number Positive	19	9	28	6	4	10	459	308	767
Percent Positive	0.41%	0.26%	0.35%	0.78%	0.83%	0.80%	1.36%	1.03%	1.20%
Random									
Number Tested	18,106	17,502	35,608	681	617	1,298	6,620	6,322	12,942
Number Positive	28	27	55	1	0	1	37	21	58
Percent Positive	0.15%	0.15%	0.15%	0.15%	0.00%	0.08%	0.56%	0.33%	0.45%
For-Cause									
Observed Behavior									
Number Tested	138	105	243	6	2	8	192	174	366
Number Positive	12	11	23	1	0	1	55	31	86
Percent Positive	8.70%	10.48%	9.47%	16.67%	0.00%	12.56%	28.65%	17.82%	23.50%
Post-Accident									
Number Tested	79	136	215	7	7	14	105	121	226
Number Positive	0	0	0	0	0	0	2	0	2
Percent Positive	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	0.00%	0.88%
Followup									
Number Tested	869	920	1,789	10	23	33	606	464	1,070
Number Positive	6	5	11	0	0	0	6	4	10
Percent Positive	0.69%	0.54%	0.61%	0.00%	0.00%	0.00%	0.99%	0.86%	0.93%
Other									
Number Tested	328	291	619	110	27	137	397	309	706
Number Positive	3	3	6	0	0	0	20	13	33
Percent Positive	0.91%	1.03%	0.97%	0.00%	0.00%	0.00%	5.04%	4.021%	4.67%
TOTAL									
Number Tested	24,153	22,371	46,524	1,588	1,159	2,747	41,790	37,401	79,191
Number Positive	68	55	123	8	4	12	579	377	956
Percent Positive	0.28%	0.25%	0.26%	0.50%	0.35%	0.44%	1.39%	1.01%	1.21%
TOTAL without OTHER Category									
Number Tested	23,825	22,080	45,905	1,478	1,132	2,610	41,393	37,092	78,485
Number Positive	65	52	117	8	4	12	559	364	923
Percent Positive	0.27%	0.24%	0.25%	0.54%	0.35%	0.46%	1.35%	0.98%	1.18%

**Table 4C  
2003 Test Results For Licensee Employees And Contractor Personnel**

TEST	LICENSEE EMPLOYEES			LONG-TERM CONTRACTORS			SHORT-TERM CONTRACTORS		
	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR	FIRST SIX MONTHS	SECOND SIX MONTHS	YEAR
Pre-Access									
Number Tested	4,477	3,832	8,309	410	369	779	33,109	30,791	63,900
Number Positive	27	14	41	6	2	8	400	308	708
Percent Positive	0.60%	0.37%	0.49%	1.46%	0.54%	1.03%	1.21%	1.00%	1.11%
Random									
Number Tested	17,236	16,966	34,202	592	541	1,133	7,232	6,835	14,067
Number Positive	35	26	61	1	2	3	39	29	68
Percent Positive	0.20%	0.15%	0.18%	0.17%	0.37%	0.26%	0.54%	0.42%	0.48%
For-Cause									
Observed Behavior									
Number Tested	124	108	232	6	6	12	229	164	393
Number Positive	13	9	22	0	0	0	55	46	101
Percent Positive	10.48%	8.33%	9.48%	0.00%	0.00%	0.00%	24.02%	28.05%	25.70%
Post-Accident									
Number Tested	111	96	207	9	8	17	107	84	191
Number Positive	1	0	1	0	0	0	2	0	2
Percent Positive	0.90%	0.00%	0.48%	0.00%	0.00%	0.00%	1.87%	0.00%	1.05%
Followup									
Number Tested	948	994	1,942	8	18	26	621	553	1,174
Number Positive	9	12	21	1	0	1	14	6	20
Percent Positive	0.95%	1.21%	1.08%	12.50%	0.00%	3.85%	2.25%	1.08%	1.70%
Other									
Number Tested	273	272	545	30	29	59	377	220	597
Number Positive	0	1	1	0	0	0	18	18	36
Percent Positive	0.00%	0.37%	0.18%	0.00%	0.00%	0.00%	4.77%	8.18%	6.03%
TOTAL									
Number Tested	23,169	22,268	45,437	1,055	971	2,026	41,675	38,647	80,322
Number Positive	85	62	147	8	4	12	528	407	935
Percent Positive	0.37%	0.28%	0.32%	0.76%	0.41%	0.59%	1.27%	1.05%	1.16%
TOTAL without OTHER Category									
Number Tested	22,896	21,996	44,892	1,025	942	1,967	41,298	38,427	79,725
Number Positive	85	61	146	8	4	12	510	389	899
Percent Positive	0.37%	0.28%	0.33%	0.78%	0.42%	0.61%	1.23%	1.01%	1.13%

**Table 5A**  
**2001 Number Of Confirmed Positives By Substance**

	FIRST SIX MONTHS		SECOND SIX MONTHS		TOTAL	
TYPE OF SUBSTANCE	Number	Percent	Number	Percent	Number	Percent
Marijuana	300	50.85%	219	50.85%	519	50.73%
Cocaine	121	20.51%	102	23.56%	223	21.80%
Opiates	7	1.19%	10	2.31%	17	1.66%
Amphetamines	35	5.93%	15	3.46%	50	4.89%
Phencyclidine	1	0.17%	1	0.23%	2	0.20%
Alcohol	126	21.36%	86	19.86%	212	20.72%
TOTAL	590		433		1,023	

**Table 5B**  
**2002 Number Of Confirmed Positives By Substance**

	FIRST SIX MONTHS		SECOND SIX MONTHS		TOTAL	
TYPE OF SUBSTANCE	Number	Percent	Number	Percent	Number	Percent
Marijuana	334	53.27%	228	51.01%	562	52.33%
Cocaine	126	20.10%	102	22.82%	228	21.23%
Opiates	14	2.23%	7	1.57%	21	1.96%
Amphetamines	29	4.63%	17	3.80%	46	4.28%
Phencyclidine	3	0.48%	0	0.00%	3	0.28%
Alcohol	121	19.30%	93	20.81%	214	19.93%
TOTAL	627		447		1,074	

**Table 5C**  
**2003 Number Of Confirmed Positives By Substance**

	FIRST SIX MONTHS		SECOND SIX MONTHS		TOTAL	
TYPE OF SUBSTANCE	Number	Percent	Number	Percent	Number	Percent
Marijuana	291	50.35%	231	50.22%	522	50.29%
Cocaine	130	22.49%	103	22.39%	233	22.45%
Opiates	10	1.73%	7	1.52%	17	1.64%
Amphetamines	32	5.54%	32	6.96%	64	6.17%
Phencyclidine	0	0.00%	0	0.00%	0	0.00%
Alcohol	115	19.90%	87	18.91%	202	19.46%
TOTAL	578		460		1,038	

**Table 6A**  
**2001 Confirmed Positive Test Results By Substance And Work Category**

	LICENSEE EMPLOYEES		CONTRACTORS (Long-Term/Short-Term)	
TYPE OF SUBSTANCE	Number	Percent	Number	Percent
Marijuana	56	38.10%	463	52.85%
Cocaine	24	16.33%	199	22.72%
Opiates	0	0.00%	17	1.94%
Amphetamines	12	8.16%	38	4.34%
Phencyclidine	0	0.00%	2	0.23%
Alcohol	55	37.41%	157	17.92%
TOTAL	147		876	

**Table 6B**  
**2002 Confirmed Positive Test Results By Substance And Work Category**

TYPE OF SUBSTANCE	LICENSEE EMPLOYEES		CONTRACTORS (Long-Term/Short-Term)	
	Number	Percent	Number	Percent
Marijuana	47	38.52%	515	54.10%
Cocaine	16	13.11%	212	22.27%
Opiates	1	0.82%	20	2.10%
Amphetamines	1	0.82%	45	4.73%
Phencyclidine	0	0.00%	3	0.32%
Alcohol	57	46.72%	157	16.49%
TOTAL	122		952	

**Table 6C**  
**2003 Confirmed Positive Test Results By Substance And Work Category**

TYPE OF SUBSTANCE	LICENSEE EMPLOYEES		CONTRACTORS (Long-Term/Short-Term)	
	Number	Percent	Number	Percent
Marijuana	50	35.97%	472	52.50%
Cocaine	25	17.99%	208	23.14%
Opiates	5	3.60%	12	1.33%
Amphetamines	11	7.91%	53	5.90%
Phencyclidine	0	0.00%	0	0.00%
Alcohol	48	34.53%	154	17.13%
TOTAL	139		899	

**Table 7A**  
**2001 Confirmed Positives Test Results By Substance For Each Worker Category**

TYPE OF SUBSTANCE	Licensee Employees		Contractors (Long-Term/Short-Term)	
	Number	Percent	Number	Percent
Marijuana	55	37.93%	468	52.94%
Cocaine	24	16.55%	201	22.74%
Opiates	0	0.00%	17	1.92%
Amphetamines	12	8.28%	38	4.30%
Phencyclidine	0	0.00%	2	0.23%
Alcohol	54	37.24%	158	17.87%
TOTAL*	145		884	

\*These numbers include tests results for the "Other " test category.

**Table 7B**  
**2002 Confirmed Positives Test Results By Substance For Each Worker Category**

TYPE OF SUBSTANCE	Licensee Employees		Contractors (Long-Term/Short-Term)	
	Number	Percent	Number	Percent
Marijuana	47	38.22%	515	54.10%
Cocaine	16	13.11%	212	22.27%
Opiates	1	0.82%	20	2.10%
Amphetamines	1	0.82%	45	4.73%
Phencyclidine	0	0.00%	3	0.32%
Alcohol	57	46.72%	157	16.49%
TOTAL*	122		952	

\*These numbers include tests results for the "Other " test category.

**Table 7C**  
**2003 Confirmed Positives Test Results By Substance For Each Worker Category**

TYPE OF SUBSTANCE	Licensee Employees		Contractors (Long-Term/Short-Term)	
	Number	Percent	Number	Percent
Marijuana	50	36.97%	468	52.76%
Cocaine	25	17.99%	203	22.89%
Opiates	5	3.60%	12	1.35%
Amphetamines	11	7.91%	53	5.98%
Phencyclidine	0	0.00%	0	0.00%
Alcohol	48	34.53%	151	17.02%
TOTAL*	139		887	

\*These numbers include tests results for the "Other " test category.



**Table 8 - Significant Fitness-For-Duty Events (1990-2003)**

Type of Event	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Reactor Operators	19	16	18	8	7	8	8	9	5	5	5	4	3	6	121
Licensee Supervisors	26	18	22	25	11	16	19	16	10	2	11	9	3	3	191
Contract Supervisors	12	24	28	16	11	10	8	10	10	12	8	12	12	8	181
FFD Program Personnel	1	5	0	0	1	0	2	0	3	2	0	0	3	0	17
Substances Found	6	8	6	2	0	5	5	4	0	2	3	0	1	2	44
Adulterated Specimen														9	9
<b>Total</b>	<b>64</b>	<b>69</b>	<b>74</b>	<b>51</b>	<b>30</b>	<b>39</b>	<b>42</b>	<b>39</b>	<b>28</b>	<b>23</b>	<b>27</b>	<b>25</b>	<b>22</b>	<b>28</b>	<b>563</b>

\* Reactor Operators- this category refers to licensee reactor operators and to any person licensed under 10 CFR Part 55.

**Table 9 - Trends in testing by test type (1990 - 2003)**

Type of Test	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Pre-Access															
Number Tested	122,491	104,508	104,842	91,471	80,217	79,305	81,041	84,320	69,146	69,139	68,333	63,744	73,188	72,988	1,164,700
Number Positive	1,548	983	1,110	952	977	1,122	1,132	1,096	822	934	965	720	805	757	13,923
Percent Positive	1.26%	0.94%	1.06%	1.04%	1.22%	1.41%	1.40%	1.30%	1.19%	1.35%	1.41%	1.13%	1.10%	1.04%	1.20%
Random															
Number Tested	148,743	153,818	156,730	146,605	78,391	66,791	62,307	60,829	56,969	54,457	51,955	50,080	49,848	49,402	1,186,818
Number Positive	550	510	461	341	223	180	202	172	157	140	204	148	114	132	3,534
Percent Positive	0.37%	0.33%	0.29%	0.23%	0.28%	0.27%	0.32%	0.28%	0.28%	0.26%	0.39%	0.30%	0.23%	0.27%	0.30%
For-Cause															
Number Tested	732	727	696	751	758	763	848	722	720	736	883	730	1,072	1,052	11,190
Number Positive	214	167	178	163	122	139	138	149	100	120	138	101	112	126	1,967
Percent Positive	29.23%	22.97%	25.27%	21.70%	16.09%	18.22%	16.27%	20.64%	13.89%	16.30%	15.67%	13.84%	10.45%	11.98%	17.58%
Followup															
Number Tested	2,633	3,544	4,283	4,139	3,875	3,262	3,262	3,296	2,863	3,008	2,861	2,649	2,892	3,142	45,709
Number Positive	65	62	69	56	50	35	40	31	43	30	49	35	21	42	628
Percent Positive	2.47%	1.75%	1.61%	1.35%	1.29%	1.07%	1.23%	0.94%	1.50%	1.00%	1.71%	1.32%	0.73%	1.34%	1.37%
TOTAL*															
Number Tested	274,599	262,597	266,551	242,966	163,241	150,12	147,458	149,167	129,698	127,340	124,032	117,203	127,000	126,584	2,439,537
Number Positive	2,377	1,722	1,818	1,512	1,372	1,476	1,512	1,448	1,122	1,224	1,356	1,004	1,052	1,057	20,530
Percent Positive	0.87%	0.66%	0.68%	0.62%	0.84%	0.98%	1.03%	0.97%	0.87%	0.96%	1.09%	0.86%	0.83%	0.84%	0.82%

\* Does not include test results from the "Other" test category.

**Table 10 - Trends in substances identified (1990-2003)**

Substance	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Marijuana	1,153	746	953	781	739	819	868	842	606	672	620	523	562	518
Cocaine	706	549	470	369	344	374	352	336	269	273	251	225	228	228
Alcohol	452	401	427	357	251	265	281	262	212	230	211	212	214	199
Amphetamines	69	31	31	51	54	61	53	49	46	40	50	50	46	64
Opiates	45	24	8	13	11	17	14	39	19	16	32	17	21	17
Phencyclidine	8	11	4	5	1	7	2	0	1	2	1	2	3	0
Total*	2,433	1,762	1,893	1,576	1,400	1,543	1,570	1,528	1,153	1,233	1,168	1,029	1,074	1,026

\* These totals do not equal the total number of positives for each year because some positives were for multiple substances and for other substances than those listed above.

**Table 11**  
**Trends In Positive Test Rates For Workers With Unescorted Access (1990 - 2003)**

Year	Positive Test Rate
1990	0.54%
1991	0.47%
1992	0.44%
1993	0.37%
1994	0.48%
1995	0.50%
1996	0.57%
1997	0.54%
1998	0.50%
1999	0.50%
2000	0.70%
2001	0.53%
2002	0.46%
2003	0.56%

\*Includes random, for-cause, and follow-up testing results. The reduction in random test rate from 100% to 50% has been in effect since 1994.