

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, DC 20555-0001

September 2, 2008

NRC INFORMATION NOTICE 2008-16: SUMMARY OF FITNESS-FOR-DUTY PROGRAM  
PERFORMANCE REPORTS FOR CALENDAR  
YEAR 2007

## ADDRESSEES

All holders of operating licenses for nuclear power reactors and licensees authorized to possess, use, or transport formula quantities of special strategic nuclear material (SSNM).

## PURPOSE

The U.S. Nuclear Regulatory Commission (NRC) is issuing this Information Notice (IN) to report the lessons learned by licensees as detailed in their 2007 fitness-for-duty (FFD) program performance reports. The agency expects that recipients of this IN will review the information for applicability to their facilities and consider, as appropriate, taking corrective actions to improve the future performance of their FFD programs. However, suggestions contained in this IN are not NRC requirements and, therefore, no specific action or written response is required.

## DESCRIPTION OF CIRCUMSTANCES

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 26.71(d), requires NRC licensees to submit their FFD program performance reports to the agency 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 the performance data and published an annual volume, NUREG/CR-5758, "Fitness for Duty in the Nuclear Power Industry – Annual Summary of Program Performance Reports." Beginning with calendar year 1996 data, the summary and analysis of FFD program performance data has been published through the NRC's generic communication program. The enclosure to this IN provides FFD program performance data for calendar year 2007.

This IN presents FFD program performance information covering 74 sites:

- 64 Reactor Sites. Note: one utility aggregated the performance data for two different reactor sites into one performance report. Therefore, while this IN only distinguishes between 64 reactor sites in the following analyses, the actual test results address all 65 reactor sites.
- 6 Corporate FFD Program Offices. Some utilities with multiple reactor sites administer the FFD program at a location different from the reactor sites and therefore, report data for these personnel separately.
- 4 Contractors/SSNM. These include Nuclear Fuel Services, BWX Technologies, Institute of Nuclear Power Operations, and Westinghouse Electric Company.

**ML081790193**

## DISCUSSION

This section is divided into four categories (Certified Laboratories; Random Testing; Policies and Procedures; Program and System Management) that provide summaries of the problems encountered and lessons learned, management initiatives, and associated corrective actions taken by licensees in 2007.

The use of the term licensee in this IN is based on how FFD program performance data are reported to the NRC. Each nuclear power reactor licensee reports performance data by site (i.e., one or more reactors at single location). Therefore, in the four category discussions below, a licensee refers to information reported for a specific reactor site or by a SSNM licensee.

### 1. Certified Laboratories

Five licensees experienced problems with laboratory performance involving equipment malfunctions and/or potential weaknesses related to human error.

- One licensee reported that the Department of Health and Human Services (HHS) certified laboratory reported a negative test result for a pre-access test using an incorrect marijuana cutoff level (the licensee required initial testing at a 50 nanograms per milliliter (ng/mL) cutoff level; the laboratory used a 100 ng/mL cutoff level). This error was not detected by the licensee and the individual was granted access. Three days after granting access the HHS-certified laboratory provided the licensee with an amended report indicating a positive marijuana test result for the individual using the 50 ng/mL cutoff level. The licensee removed the individual from site, a medical review officer interview was conducted, unescorted access was denied, the NRC was notified, a prompt investigation was conducted, and an on-site investigation of HHS-certified laboratory process was performed. The licensee replaced the HHS-certified laboratory.
- One licensee reported that the HHS-certified laboratory reported a false negative test result for a blind performance test sample containing amphetamine/methamphetamine. The HHS-certified laboratory determined that the error resulted from an inadvertent oversight by the certifying scientist. The laboratory implemented corrective action to address the situation.
- One licensee reported that the HHS-certified laboratory reported a false negative test result for a blind performance test sample containing amphetamine/methamphetamine. The testing error occurred because the sample, which initially screened positive, was sent for additional testing at a 1:10 dilution. Confirmatory testing at the 1:10 dilution resulted in a negative test result. The certifying scientist did not follow the correct laboratory procedure to rerun the specimen at a lower dilution level.
- One licensee reported that the HHS-certified laboratory reported a false negative test result for a blind performance test sample containing opiates. An investigation determined that the blind performance test sample supplier spiked the specimen with an opiate concentration too close to the initial drug test cutoff level which could have

resulted in the negative test result. The blind performance test sample supplier replaced the opiate-spiked specimens from the batch in question. The performance of the HHS-certified laboratory was determined to be acceptable.

- One licensee reported that the HHS-certified laboratory returned a false negative test result for a blind performance test specimen. The licensee had not concluded its investigation on this matter at the time of the FFD performance report submission.

## 2. Random Testing

One licensee reported a problem related to the random drug and alcohol testing selection process.

- The licensee incorrectly coded some workers as licensee or contractor employees which resulted in some individuals being assigned to the incorrect random testing pool. To address this situation the licensee conducted an evaluation of all workers granted unescorted access and ensured that each employee was assigned to the correct random testing pool.

## 3. Policies and Procedures

Two licensees reported issues involving testing program policies and procedures.

- One licensee reported that a self-assessment team concluded that the employee assistance program (EAP) could improve the methods used to notify management in instances when an individual constituted a risk to himself/herself or others. The self-assessment team determined that the EAP provider needed to develop a more structured protocol to effect notification from the EAP provider to management when required by regulation. The self-assessment team also determined that the notification protocol should be included in the scope of services for EAP providers and that a subsequent effectiveness review needed to be conducted at least six months after the closure of the final action.
- One licensee implemented new software, the Security Screening Information System, to standardize and streamline many processes in the implementation of both the Access Authorization and FFD programs.

## 4. Program and System Management

In previous years, this sub-section employed the term “licensee” to mean an FFD program, which can encompass one or more reactor sites. To improve clarity, this IN uses “licensee” to mean one reactor site or license holder.

Licensees continue to report improvements in overall FFD program management.

*Alcohol Testing:*

- Two licensees reported testing at a stricter cutoff level than required by the NRC (0.02 percent blood alcohol content (BAC)) for pre-access and follow-up testing.
- Twelve licensees reported testing at stricter cutoff levels (four at 0.011 - 0.039 percent BAC and eight at 0.02 - 0.039 percent BAC) due to the range of extrapolation.

*Drug Testing:*

- Marijuana cutoff level:
  - 60 licensees reported testing at a stricter cutoff level than required by the NRC (50 ng/15 mL).
  - Two licensees reported testing at a stricter cutoff level than required by the NRC (50 ng/10 mL).
  - Three licensees reported testing at a stricter cutoff level than required by the NRC (20 ng/15 mL).
- Opiate cutoff level:
  - One licensee reported testing at a stricter cutoff level than required by the NRC (300 ng/150 mL).
- Amphetamine cutoff level:
  - One licensee reported testing at a stricter cutoff level than required by the NRC (1000 ng/250 mL).
- Testing for other drugs:
  - One licensee reported testing for Barbiturates, Benzodiazepines, Methadone, and Methaqualone.
  - One licensee reported testing for barbiturates, benzodiazepines, and propoxyphene until November 2007. This testing resulted in one positive test result.
  - One licensee reported testing for barbiturates, benzodiazepines, methadone, and propoxyphene.
  - One licensee reported testing for benzodiazepines which resulted in one positive test result.
- One licensee reported re-screening dilute negative specimens (i.e., specimens with a creatinine concentration of less than 20 milligrams per deciliter).
- One licensee implemented an accelerated random testing program because of an increase in the number of amphetamine/methamphetamine positive test results.

## CONTACT

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

*/RA/*

Michael J. Case, Director  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

*/RA/*

Daniel H. Dorman, Director  
Division of Fuel Cycle Safety and Safeguards  
Office of Nuclear Material Safety and Safeguards

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

Enclosure: As stated

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

**CONTACT**

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

**/RA/**

Michael J. Case, Director  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

**/RA/**

Daniel H. Dorman, Director  
Division of Fuel Cycle Safety and Safeguards  
Office of Nuclear Material Safety and Safeguards

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

Enclosure: As stated

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

DISTRIBUTION: IN Reading File

ADAMS Accession Number: ML081790193

OFFICE	NSIR:RSLPB	TECH EDITOR	NSIR:RSLPB	NSIR:RSB:BC	NSIR:DDRSR:DD
NAME	TMcCune	CHse	PPrescott	DHuyck	SMorris
DATE	06/30/08	08/14/08	06/30/08	06/30/08	07/02/08
OFFICE	NSIR:D		OGC	PGCB:DPR	PGCB:DPR
NAME	SMorris for RCorreia		HBenowitz	DBeaulieu	CHawes
DATE	08/08/08		08/20/08	08/27/08	08/28/08
OFFICE	PGCB:DPR:BC	DPR:D	D:NMSS:FCSS		
NAME	MMurphy	MCase	DDorman		
DATE	09/02/08	09/02/08	08/28/08		

**OFFICIAL RECORD COPY**

## Summary of FFD Program Performance Reports for 2007

Since the fitness-for-duty (FFD) rule (10 CFR Part 26) was published in 1989, licensees have submitted program performance reports to the NRC as required by 10 CFR 26.71(d). In the past, the NRC published a summary and analysis of calendar year data submitted by the licensees in an annual volume of NUREG/CR-5758, "Fitness for Duty in the Nuclear Power Industry - Annual Summary of Program Performance Reports." The tables and charts below present information for calendar year 2007 and in some cases present data over longer periods to present trends (e.g., 1990 to 2007).

**Table 1**  
**2007 Test Results for Each Test Category**

<b>Test Category</b>	<b>Number of Tests</b>	<b>Positive Tests</b>	<b>Percent Positive</b>
<b>Pre-Access</b>	81,932	668	0.82%
<b>Random</b>	51,665	117	0.23%
<b>For-Cause</b>			
<i>Observed Behavior</i>	720	81	11.25%
<i>Post-Accident</i>	895	10	1.12%
<b>Follow-Up</b>	4,991	31	0.62%
<b>Other</b>	1,866	43	2.30%
<b>TOTAL*</b>	<b>142,069</b>	<b>950</b>	<b>0.67%</b>
<b>TOTAL w/o Test Category "Other"</b>	<b>140,203</b>	<b>907</b>	<b>0.65%</b>

\*Includes the "Other" test category. Although some licensees specified the nature of the tests included in the "Other" category (e.g., return to work), most licensees did not provide clarifying information.

**Table 2**  
**2007 Test Results by Test Category and Work Category**

(January through December 2007)

<b>Test Category</b>	<b>Licensee Employees</b>	<b>Long-Term Contractors*</b>	<b>Short-Term Contractors*</b>	<b>Total</b>
<b>Pre-Access</b>				
Number Tested	9,783	640	71,509	<b>81,932</b>
Number Positive	34	8	626	<b>668</b>
Percent Positive	0.35%	1.25%	0.88%	<b>0.82%</b>
<b>Random</b>				
Number Tested	34,984	1,534	15,147	<b>51,665</b>
Number Positive	55	5	57	<b>117</b>
Percent Positive	0.16%	0.33%	0.38%	<b>0.23%</b>
<b>For-Cause</b>				
<i>Observed Behavior</i>				
Number Tested	292	22	406	<b>720</b>
Number Positive	15	2	64	<b>81</b>
Percent Positive	5.14%	9.09%	15.76%	<b>11.25%</b>
<i>Post-Accident</i>				
Number Tested	373	24	498	<b>895</b>
Number Positive	3	0	7	<b>10</b>
Percent Positive	0.80%	0.00%	1.41%	<b>1.12%</b>
<b>Follow-Up</b>				
Number Tested	2,542	31	2,418	<b>4,991</b>
Number Positive	8	0	23	<b>31</b>
Percent Positive	0.31%	0.00%	0.95%	<b>0.62%</b>
<b>Other</b>				
Number Tested	1,116	36	714	<b>1,866</b>
Number Positive	6	2	35	<b>43</b>
Percent Positive	0.54%	5.56%	4.90%	<b>2.30%</b>
<b>TOTAL</b>				
Number Tested	<b>49,090</b>	<b>2,287</b>	<b>90,692</b>	<b>142,069</b>
Number Positive	<b>121</b>	<b>17</b>	<b>812</b>	<b>950</b>
Percent Positive	<b>0.25%</b>	<b>0.74%</b>	<b>0.90%</b>	<b>0.67%</b>
<b>TOTAL w/o Test Category "Other"</b>				
Number Tested	<b>47,974</b>	<b>2,251</b>	<b>89,978</b>	<b>140,203</b>
Number Positive	<b>115</b>	<b>15</b>	<b>777</b>	<b>907</b>
Percent Positive	<b>0.24%</b>	<b>0.67%</b>	<b>0.86%</b>	<b>0.65%</b>

\*Some licensees distinguished between short term and long-term contractors, while others reported all as short-term.



**Table 3**  
**2007 Test Results by Test Category**

(January through December 2007)

<b>Test Category</b>	<b>First Six Months</b>	<b>Second Six Months</b>	<b>Year</b>
<b>Pre-Access</b>			
Number Tested	44,471	37,461	81,932
Number Positive	384	284	668
Percent Positive	0.86%	0.76%	0.82%
<b>Random</b>			
Number Tested	26,832	24,833	51,665
Number Positive	64	53	117
Percent Positive	0.24%	0.21%	0.23%
<b>For-Cause</b>			
<i>Observed Behavior</i>			
Number Tested	308	412	720
Number Positive	41	40	81
Percent Positive	13.31%	9.71%	11.25%
<i>Post-Accident</i>			
Number Tested	411	484	895
Number Positive	5	5	10
Percent Positive	1.22%	1.03%	1.12%
<b>Follow-Up</b>			
Number Tested	2,633	2,358	4,991
Number Positive	17	14	31
Percent Positive	0.65%	0.59%	0.62%
<b>Other</b>			
Number Tested	1,251	615	1,866
Number Positive	24	19	43
Percent Positive	1.92%	3.09%	2.30%
<b>TOTAL</b>			
Number Tested	<b>75,906</b>	<b>66,163</b>	<b>142,069</b>
Number Positive	<b>535</b>	<b>415</b>	<b>950</b>
Percent Positive	<b>0.70%</b>	<b>0.63%</b>	<b>0.67%</b>
<b>TOTAL w/o Test Category "Other"</b>			
Number Tested	<b>74,655</b>	<b>65,548</b>	<b>140,203</b>
Number Positive	<b>511</b>	<b>396</b>	<b>907</b>
Percent Positive	<b>0.68%</b>	<b>0.60%</b>	<b>0.65%</b>

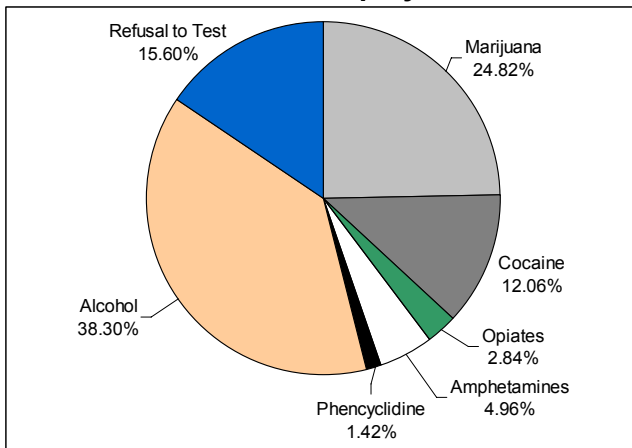
**Table 4**  
**2007 Confirmed Positive Test Results by Substance and by Work Category**  
**(All Test Types)**

(January through December 2007)

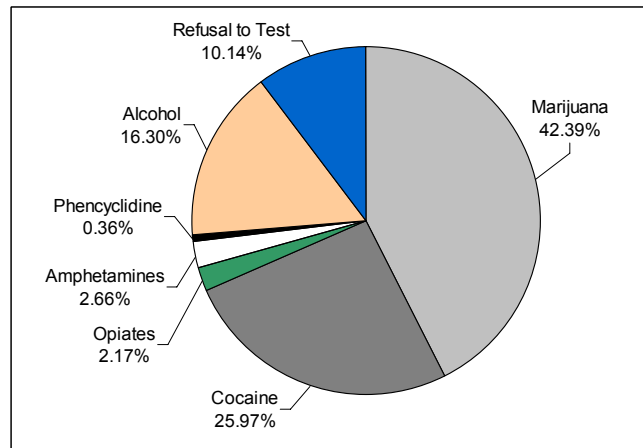
Positive Test Result	Licensee Employees		Contractors (Long-Term/Short-Term)		Total	
	Number	Percent	Number	Percent	Number	Percent
Marijuana	35	24.82%	351	42.39%	386	39.83%
Cocaine	17	12.06%	215	25.97%	232	23.94%
Opiates	4	2.84%	18	2.17%	22	2.27%
Amphetamines	7	4.96%	22	2.66%	29	2.99%
Phencyclidine	2	1.42%	3	0.36%	5	0.52%
Alcohol	54	38.30%	135	16.30%	189	19.50%
Refusal to Test	22	15.60%	84	10.14%	106	10.94%
<b>TOTAL*</b>	<b>141</b>	<b>100.00%</b>	<b>828</b>	<b>100.00%</b>	<b>969</b>	<b>100.00%</b>

The totals in this table may be higher than those reported in Tables 1, 2, and 3 due to instances where an individual tested positive for more than one substance.

**Chart 1**  
**2007 Positive Test Results by Substance - Licensee Employees**



**Chart 2**  
**2007 Positive Test Results by Substance - Contractors**



**Table 5**  
**Significant Fitness-for-Duty Events (1990 - 2007)**

<b>Year</b>	<b>Reactor Operators</b>	<b>Licensee Supervisors</b>	<b>Contract Supervisors</b>	<b>FFD Program Personnel</b>	<b>Substances Found</b>	<b>Adulterated Specimen*</b>	<b>Total</b>
1990	19	26	12	1	6	-	<b>64</b>
1991	16	18	24	5	8	-	<b>71</b>
1992	18	22	28	0	6	-	<b>74</b>
1993	8	25	16	0	2	-	<b>51</b>
1994	7	11	11	1	0	-	<b>30</b>
1995	8	16	10	0	5	-	<b>39</b>
1996	8	19	8	2	5	-	<b>42</b>
1997	9	16	10	0	4	-	<b>39</b>
1998	5	10	10	3	0	-	<b>28</b>
1999	5	2	12	2	2	-	<b>23</b>
2000	5	11	8	0	3	-	<b>27</b>
2001	4	9	12	0	0	-	<b>25</b>
2002	3	3	12	3	1	-	<b>22</b>
2003	6	3	8	0	2	9	<b>28</b>
2004	9	7	4	0	9	23	<b>52</b>
2005	5	13	14	1	9	29	<b>71</b>
2006	3	6	6	0	2	60	<b>77</b>
2007	3	7	1	1	0	47	<b>59</b>

\*Licensees did not consistently report adulterated specimens. For this report, an adulterated specimen is reported if the original specimen was determined to be adulterated, dilute, or possessed unusually low/high temperature, specific gravity, or creatinine levels and the individual either refused to provide a second specimen or the specimen collected under observed collection had a positive test result.

**Table 6A**  
**Trends in Testing by Test Type (1990 - 1999)**

Type of Test	1990	1991	1992	1993	1994*	1995	1996	1997	1998	1999
<b>Pre-Access</b>										
Number Tested	122,491	104,508	104,842	91,471	80,217	79,305	81,041	84,320	69,146	69,139
Number Positive	1,548	983	1,110	952	977	1,122	1,132	1,096	822	934
Percent Positive	1.26%	0.94%	1.06%	1.04%	1.22%	1.41%	1.40%	1.30%	1.19%	1.35%
<b>Random</b>										
Number Tested	148,743	153,818	156,730	146,605	78,391	66,791	62,307	60,829	56,969	54,457
Number Positive	550	510	461	341	223	180	202	172	157	140
Percent Positive	0.37%	0.33%	0.29%	0.23%	0.28%	0.27%	0.32%	0.28%	0.28%	0.26%
<b>For-Cause</b>										
Number Tested	732	727	696	751	758	763	848	722	720	736
Number Positive	214	167	178	163	122	139	138	149	100	120
Percent Positive	29.23%	22.97%	25.57%	21.70%	16.09%	18.22%	16.27%	20.64%	13.89%	16.30%
<b>Followup</b>										
Number Tested	2,633	3,544	4,283	4,139	3,875	3,262	3,262	3,296	2,863	3,008
Number Positive	65	62	69	56	50	35	40	31	43	30
Percent Positive	2.47%	1.75%	1.61%	1.35%	1.29%	1.07%	1.23%	0.94%	1.50%	1.00%
<b>TOTAL<sup>†</sup></b>										
<b>Number Tested</b>	<b>274,599</b>	<b>262,597</b>	<b>266,551</b>	<b>242,966</b>	<b>163,241</b>	<b>150,121</b>	<b>147,458</b>	<b>149,167</b>	<b>129,698</b>	<b>127,340</b>
<b>Number Positive</b>	<b>2,377</b>	<b>1,722</b>	<b>1,818</b>	<b>1,512</b>	<b>1,372</b>	<b>1,476</b>	<b>1,512</b>	<b>1,448</b>	<b>1,122</b>	<b>1,224</b>
<b>Percent Positive</b>	<b>0.87%</b>	<b>0.66%</b>	<b>0.68%</b>	<b>0.62%</b>	<b>0.84%</b>	<b>0.98%</b>	<b>1.03%</b>	<b>0.97%</b>	<b>0.87%</b>	<b>0.96%</b>

\* Beginning in 1994, the NRC reduced the minimum annual random testing rate from 100% to 50% of the subject population.

† Does not include results from the "Other" test category.

**Table 6B**  
**Trends in Testing by Test Type (2000 - 2007)**

Type of Test	2000	2001	2002	2003	2004	2005	2006	2007
<b>Pre-Access</b>								
Number Tested	68,333	63,744	73,155	72,988	76,119	79,005	79,980	81,932
Number Positive	965	720	805	757	737	648	747	668
Percent Positive	1.41%	1.13%	1.10%	1.04%	0.97%	0.82%	0.93%	0.82%
<b>Random</b>								
Number Tested	51,955	50,080	49,741	49,402	51,239	50,286	52,557	51,665
Number Positive	204	148	114	132	127	147	132	117
Percent Positive	0.39%	0.30%	0.23%	0.27%	0.25%	0.29%	0.25%	0.23%
<b>For-Cause</b>								
Number Tested	883	730	1,072	1,052	1,159	1,161	1,621	1,615
Number Positive	138	101	112	126	139	106	109	91
Percent Positive	15.63%	13.84%	10.45%	11.98%	11.99%	9.13%	6.72%	5.63%
<b>Followup</b>								
Number Tested	2,861	2,649	2,892	3,142	3,752	4,057	4,766	4,991
Number Positive	49	35	21	42	31	31	37	31
Percent Positive	1.71%	1.32%	0.73%	1.34%	0.83%	0.76%	0.78%	0.62%
<b>TOTAL*</b>								
<b>Number Tested</b>	<b>124,032</b>	<b>117,203</b>	<b>126,860</b>	<b>126,584</b>	<b>132,269</b>	<b>134,509</b>	<b>138,924</b>	<b>140,203</b>
<b>Number Positive</b>	<b>1,356</b>	<b>1,004</b>	<b>1,052</b>	<b>1,057</b>	<b>1,034</b>	<b>932</b>	<b>1,025</b>	<b>907</b>
<b>Percent Positive</b>	<b>1.09%</b>	<b>0.86%</b>	<b>0.83%</b>	<b>0.84%</b>	<b>0.78%</b>	<b>0.69%</b>	<b>0.74%</b>	<b>0.65%</b>

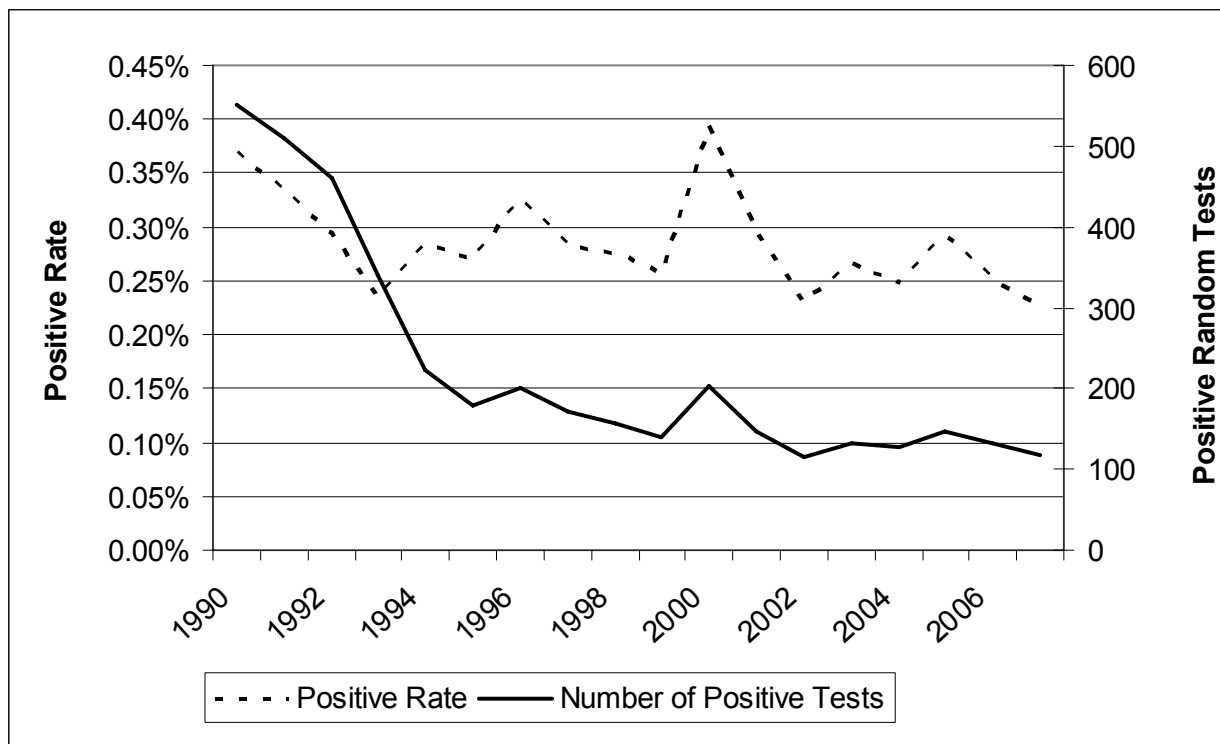
\*Does not include results from the "Other" test category.

**Table 6C**  
**Trends in Testing by Test Type (2002 - 2007)**

<b>Type of Test</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Pre-Access</b>						
Number Tested	73,155	72,988	76,119	79,005	79,980	81,932
Number Positive	805	757	737	648	747	668
Percent Positive	1.10%	1.04%	0.97%	0.82%	0.93%	0.82%
<b>Random</b>						
Number Tested	49,741	49,402	51,239	50,286	52,557	51,665
Number Positive	114	132	127	147	132	117
Percent Positive	0.23%	0.27%	0.25%	0.29%	0.25%	0.23%
<b>For-Cause</b>						
Number Tested	1,072	1,052	1,159	1,161	1,621	1,615
Number Positive	112	126	139	106	109	91
Percent Positive	10.45%	11.98%	11.99%	9.13%	6.72%	5.63%
<b>Followup</b>						
Number Tested	2,892	3,142	3,752	4,057	4,766	4,991
Number Positive	21	42	31	31	37	31
Percent Positive	0.73%	1.34%	0.83%	0.76%	0.78%	0.62%
<b>TOTAL<sup>†</sup></b>						
<b>Number Tested</b>	<b>126,860</b>	<b>126,584</b>	<b>132,269</b>	<b>134,509</b>	<b>138,924</b>	<b>140,203</b>
<b>Number Positive</b>	<b>1,052</b>	<b>1,057</b>	<b>1,034</b>	<b>932</b>	<b>1,025</b>	<b>907</b>
<b>Percent Positive</b>	<b>0.83%</b>	<b>0.84%</b>	<b>0.78%</b>	<b>0.69%</b>	<b>0.74%</b>	<b>0.65%</b>

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

**Chart 3**  
**Trends in Positive Random Testing Rates (1990 - 2007)**



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

**Table 7**  
**Trends in Substances Identified (1990 - 2007)**

<b>Year</b>	<b>Marijuana</b>	<b>Cocaine</b>	<b>Alcohol</b>	<b>Amphet- amines</b>	<b>Opiates</b>	<b>Phen- cyclidine</b>	<b>Total</b>
1990	1,153	706	452	69	45	8	<b>2,433</b>
1991	746	549	401	31	24	11	<b>1,762</b>
1992	953	470	427	31	8	4	<b>1,893</b>
1993	781	369	357	51	13	5	<b>1,576</b>
1994	739	344	251	54	11	1	<b>1,400</b>
1995	819	374	265	61	17	7	<b>1,543</b>
1996	868	352	281	53	14	2	<b>1,570</b>
1997	842	336	262	49	39	0	<b>1,528</b>
1998	606	269	212	46	19	1	<b>1,153</b>
1999	672	273	230	40	16	2	<b>1,233</b>
2000	620	251	211	50	32	1	<b>1,165</b>
2001	523	225	212	50	17	2	<b>1,029</b>
2002	560	228	214	47	21	3	<b>1,073</b>
2003	518	228	199	64	17	0	<b>1,026</b>
2004	514	247	222	60	14	1	<b>1,058</b>
2005	432	246	196	59	16	2	<b>951</b>
2006	446	307	206	53	14	1	<b>1,027</b>
2007	386	232	189	29	22	5	<b>863</b>



**Table 8**  
**Trends in Positive Test Rates for Workers with Unescorted Access (1990 - 2007)**

Year	Random Testing		For-Cause Testing		Total (Random and For-Cause Testing)	
	Number of Tests	Percent Positive	Number of Tests	Percent Positive	Number of Tests	Percent Positive
1990	148,743	0.37%	732	29.23%	<b>149,475</b>	<b>0.54%</b>
1991	153,818	0.33%	727	22.97%	<b>154,545</b>	<b>0.47%</b>
1992	156,730	0.29%	696	25.57%	<b>157,426</b>	<b>0.44%</b>
1993	146,605	0.23%	751	21.70%	<b>147,356</b>	<b>0.37%</b>
1994*	78,391	0.28%	758	16.09%	<b>79,149</b>	<b>0.48%</b>
1995	66,791	0.27%	763	18.22%	<b>67,554</b>	<b>0.50%</b>
1996	62,307	0.32%	848	16.27%	<b>63,155</b>	<b>0.57%</b>
1997	60,829	0.28%	722	20.64%	<b>61,551</b>	<b>0.54%</b>
1998	56,969	0.28%	720	13.89%	<b>57,689</b>	<b>0.50%</b>
1999	54,457	0.26%	736	16.30%	<b>55,193</b>	<b>0.50%</b>
2000	51,955	0.39%	883	15.63%	<b>52,838</b>	<b>0.70%</b>
2001	50,080	0.30%	730	13.84%	<b>50,810</b>	<b>0.53%</b>
2002	49,741	0.23%	1,072	10.45%	<b>50,813</b>	<b>0.46%</b>
2003	49,402	0.27%	1,052	11.98%	<b>50,454</b>	<b>0.56%</b>
2004	51,239	0.25%	1,159	11.99%	<b>52,398</b>	<b>0.51%</b>
2005	50,286	0.29%	1,161	9.13%	<b>51,447</b>	<b>0.49%</b>
2006	52,557	0.25%	1,621	6.72%	<b>54,178</b>	<b>0.44%</b>
2007	51,665	0.23%	1,615	5.63%	<b>53,014</b>	<b>0.39%</b>

\* Minimum annual random testing rate reduced from 100% to 50% of subject population.

**Table 9**  
**Trends in Positive Test Rates (All Test Types)\* by Work Category (1993 - 2007)**

Year	Licensee Employees		Long-Term Contractors		Short-Term Contractors	
	Number Positive	Percent Positive	Number Positive	Percent Positive	Number Positive	Percent Positive
1993	274	0.25%	17	0.21%	1,221	0.97%
1994	219	0.33%	25	0.49%	1,128	1.22%
1995	197	0.34%	14	0.40%	1,265	1.44%
1996	244	0.43%	21	0.69%	1,247	1.42%
1997	187	0.34%	29	0.80%	1,232	1.37%
1998	169	0.33%	22	0.67%	931	1.25%
1999	159	0.32%	22	0.65%	1,043	1.39%
2000	206	0.44%	78	1.51%	1,072	1.48%
2001	147	0.32%	22	0.64%	835	1.24%
2002	117	0.26%	12	0.46%	923	1.18%
2003	146	0.33%	12	0.61%	899	1.13%
2004	123	0.27%	15	0.58%	896	1.06%
2005	122	0.27%	19	0.78%	791	0.90%
2006	118	0.25%	14	0.68%	893	1.00%
2007	115	0.24%	15	0.67%	777	0.86%

\*Includes all test categories with the exception of the "Other" test category.

**Table 10**  
**Trends in Positive Pre-Access Testing Rates by Work Category (1993 - 2007)**

Year	Licensee Employees		Long-Term Contractors		Short-Term Contractors	
	Number Positive	Percent Positive	Number Positive	Percent Positive	Number Positive	Percent Positive
1993	47	0.42%	7	0.47%	898	1.14%
1994	49	0.48%	12	0.86%	916	1.34%
1995	60	0.57%	7	0.61%	1,055	1.56%
1996	94	0.95%	13	1.21%	1,025	1.46%
1997	62	0.55%	17	1.34%	1,017	1.42%
1998	50	0.53%	12	0.88%	760	1.30%
1999	44	0.52%	10	0.75%	880	1.48%
2000	51	0.67%	60	2.06%	854	1.48%
2001	44	0.52%	16	0.98%	660	1.23%
2002	28	0.35%	10	0.80%	767	1.20%
2003	41	0.49%	8	1.03%	708	1.11%
2004	35	0.46%	8	0.73%	694	1.03%
2005	28	0.34%	12	1.56%	608	0.87%
2006	24	0.26%	7	1.33%	716	1.02%
2007	34	0.35%	8	1.25%	626	0.88%

**Table 11**  
**Trends in Positive Random Test Rates by Work Category (1993 - 2007)**

Year	Licensee Employees		Long-Term Contractors		Short-Term Contractors	
	Number Positive	Percent Positive	Number Positive	Percent Positive	Number Positive	Percent Positive
1993	157	0.17%	7	0.11%	177	0.39%
1994	96	0.18%	7	0.19%	120	0.54%
1995	82	0.18%	5	0.21%	93	0.50%
1996	94	0.21%	4	0.21%	104	0.64%
1997	76	0.18%	6	0.27%	90	0.54%
1998	71	0.18%	9	0.48%	77	0.52%
1999	71	0.18%	7	0.35%	62	0.45%
2000	116	0.32%	5	0.24%	83	0.64%
2001	64	0.18%	4	0.24%	80	0.65%
2002	55	0.15%	1	0.08%	58	0.45%
2003	61	0.18%	3	0.26%	68	0.48%
2004	51	0.15%	6	0.43%	70	0.46%
2005	60	0.18%	5	0.33%	82	0.54%
2006	55	0.16%	5	0.35%	72	0.44%
2007	55	0.16%	5	0.33%	57	0.38%

**Table 12**  
**Trends in Positive Observed Behavior Testing Rates by Work Category (1993 - 2007)**

Year	Licensee Employees		Long-Term Contractors		Short-Term Contractors	
	Number Positive	Percent Positive	Number Positive	Percent Positive	Number Positive	Percent Positive
1993	35	15.58%	2	16.67%	126	35.29%
1994	39	19.60%	5	35.71%	75	24.35%
1995	35	14.89%	2	16.67%	101	30.70%
1996	34	13.93%	4	33.33%	98	26.85%
1997	34	16.35%	6	37.50%	104	33.88%
1998	26	14.05%	1	11.11%	70	26.82%
1999	29	14.29%	4	23.53%	87	30.42%
2000	21	10.24%	12	13.48%	99	31.43%
2001	20	9.13%	2	10.00%	77	28.84%
2002	23	9.47%	1	12.56%	86	23.50%
2003	22	9.48%	0	0%	101	25.70%
2004	23	8.65%	0	0%	111	26.62%
2005	19	6.15%	2	12.50%	84	24.28%
2006	24	7.45%	2	9.52%	78	20.91%
2007	15	5.14%	2	9.09%	64	15.76%

### FFD Performance Testing Results by Site

Previous Information Notices (IN) did not provide FFD program performance testing data on a site-specific basis and primarily presented industry trends by test and work categories. This section of the 2008 IN presents distributional information by site for pre-access, random, and observed behavior testing. Distributional information is presented to provide licensees with additional information to evaluate the performance of their FFD programs.

**Table 13**  
**Industry Positive Test Results for Pre-Access, Random, and Observed Behavior Testing, by Work Category, 2007**

<b>Pre-Access Testing</b>		
<b>Work Category</b>	<b>Percent Positive</b>	<b>Range of % Positive (by Site)</b>
Licensee Employees	0.35	0 - 2.13
Contractors	0.88	0 - 3.08
<b>Industry Total</b>	<b>0.82</b>	<b>n/a</b>
<b>Random Testing</b>		
<b>Work Category</b>	<b>Percent Positive</b>	<b>Range of % Positive (by Site)</b>
Licensee Employees	0.16	0 - 0.71
Contractors	0.37	0 - 2.38
<b>Industry Total</b>	<b>0.23</b>	<b>n/a</b>
<b>Observed Behavior Testing</b>		
<b>Work Category</b>	<b>Percent Positive</b>	<b>Range of % Positive (by Site)</b>
Licensee Employees	5.14	0 - 100
Contractors	15.42	0 - 100
<b>Industry Total</b>	<b>11.25</b>	<b>n/a</b>

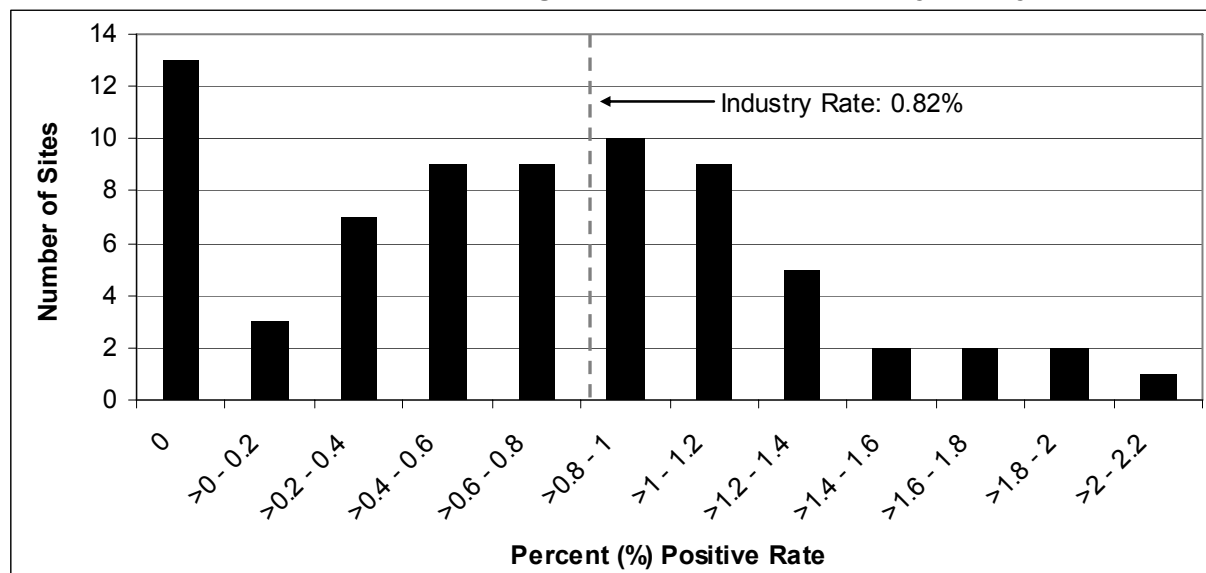
2007 Pre-Access Testing Positive Rates by Site

**Table 14**  
**Distribution of Pre-Access Testing Positive Rates by Work Category by Site, 2007**

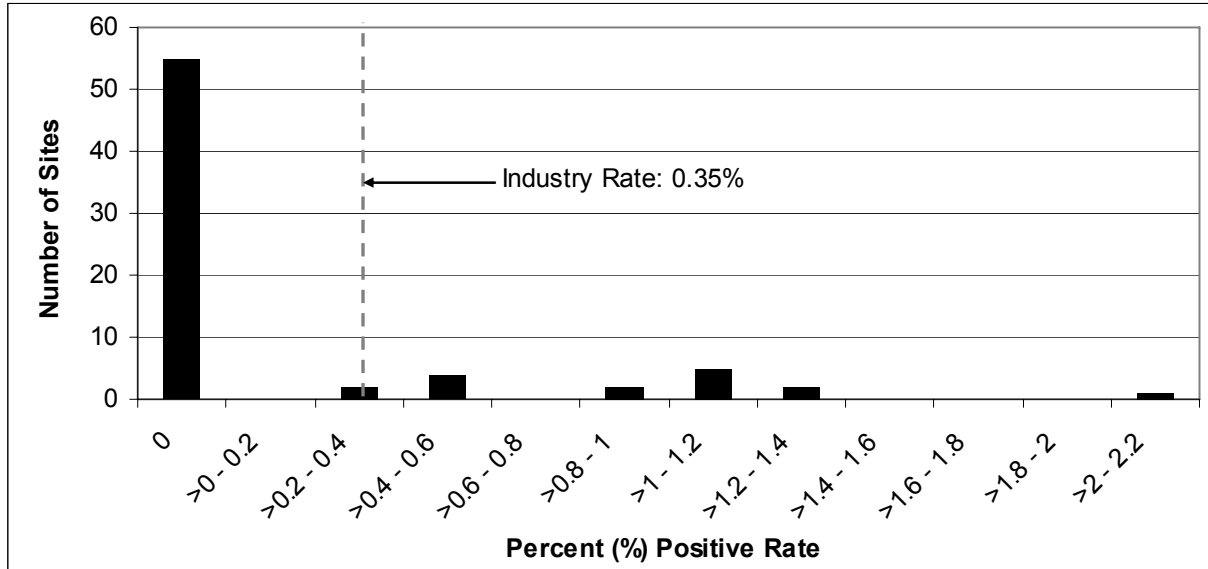
All Employees		Licensee Employees		Contractors	
Positive Rate Range (%)	Sites	Positive Rate Range (%)	Sites	Positive Rate Range (%)	Sites
0	13	0	55	0	11
>0.0 - 0.2	3	>0.0 - 0.2	0	>0.0 - 0.3	4
>0.2 - 0.4	7	>0.2 - 0.4	2	>0.3 - 0.6	14
>0.4 - 0.6	9	>0.4 - 0.6	4	>0.6 - 0.9	12
>0.6 - 0.8	9	>0.6 - 0.8	0	>0.9 - 1.2	11
>0.8 - 1.0	10	>0.8 - 1.0	2	>1.2 - 1.5	8
>1.0 - 1.2	9	>1.0 - 1.2	5	>1.5 - 1.8	4
>1.2 - 1.4	5	>1.2 - 1.4	2	>1.8 - 2.1	2
>1.4 - 1.6	2	>1.4 - 1.6	0	>2.1 - 2.4	3
>1.6 - 1.8	2	>1.6 - 1.8	0	>2.4 - 2.7	0
>1.8 - 2.0	2	>1.8 - 2.0	0	>2.7 - 3.0	0
>2.0 - 2.2	1	>2.0 - 2.2	1	>3.0 - 3.3	1
<b>Total Sites*</b>	<b>72</b>	<b>Total Sites</b>	<b>71</b>	<b>Total Sites</b>	<b>70</b>

\* Total site counts may differ because a site may not have tested one work category.

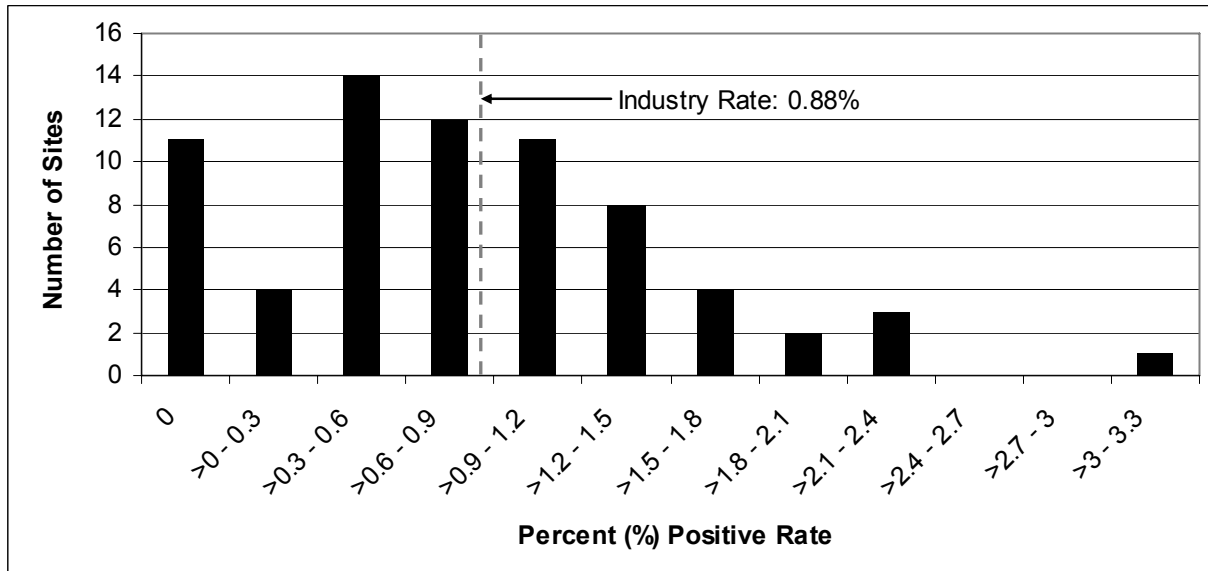
**Chart 4**  
**Distribution of Pre-Access Testing Positive Rates (All Employees) by Site, 2007**



**Chart 5**  
**Distribution of Pre-Access Testing Positive Rates (Licensee Employees) by Site, 2007**



**Chart 6**  
**Distribution of Pre-Access Testing Positive Rates (Contractors) by Site, 2007**



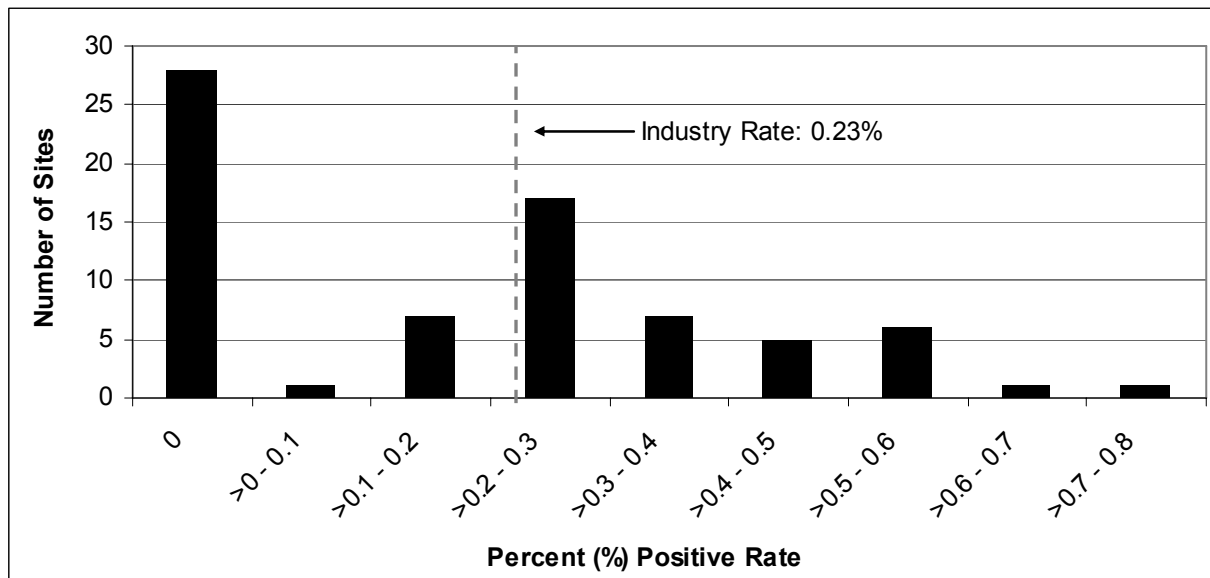
**2007 Random Testing Positive Rates by Site**

**Table 15**  
**Distribution of Random Testing Positive Rates by Work Category by Site, 2007**

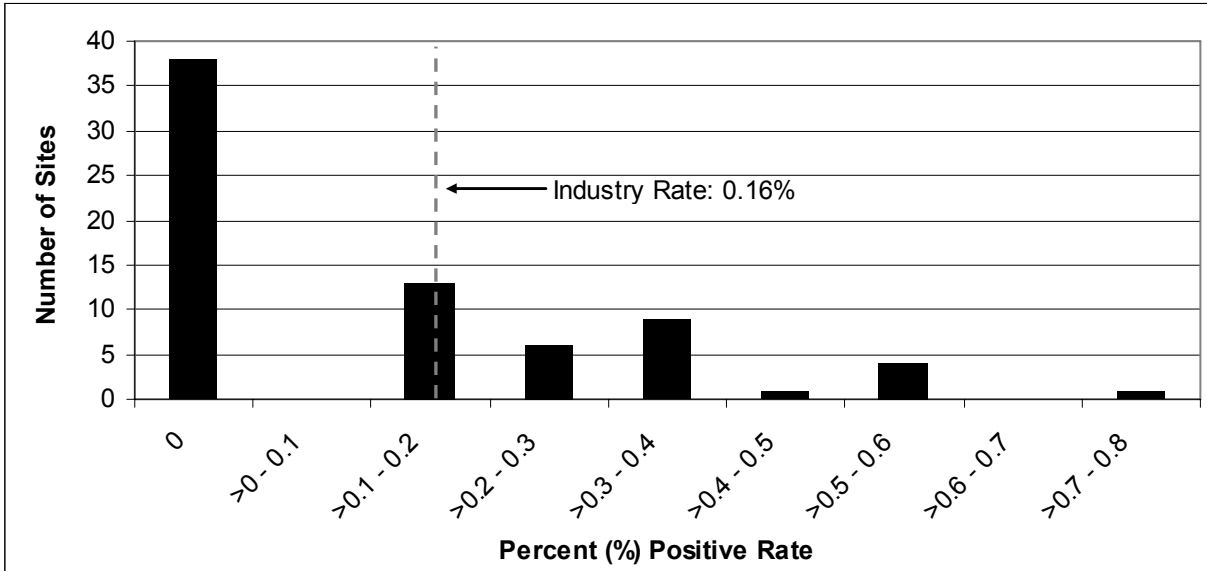
All Employees		Licensee Employees		Contractors	
Positive Rate Range (%)	Sites	Positive Rate Range (%)	Sites	Positive Rate Range (%)	Sites
0	28	0	38	0	39
>0.0 - 0.1	1	>0.0 - 0.1	0	>0.0 - 0.3	4
>0.1 - 0.2	7	>0.1 - 0.2	13	>0.3 - 0.6	10
>0.2 - 0.3	17	>0.2 - 0.3	6	>0.6 - 0.9	6
>0.3 - 0.4	7	>0.3 - 0.4	9	>0.9 - 1.2	8
>0.4 - 0.5	5	>0.4 - 0.5	1	>1.2 - 1.5	4
>0.5 - 0.6	6	>0.5 - 0.6	4	>1.5 - 1.8	0
>0.6 - 0.7	1	>0.6 - 0.7	0	>1.8 - 2.1	0
>0.7 - 0.8	1	>0.7 - 0.8	1	>2.1 - 2.4	1
<b>Total Sites</b>	<b>73</b>	<b>Total Sites</b>	<b>72</b>	<b>Total Sites</b>	<b>72</b>

\* Total site counts may differ because a site may not have tested one work category.

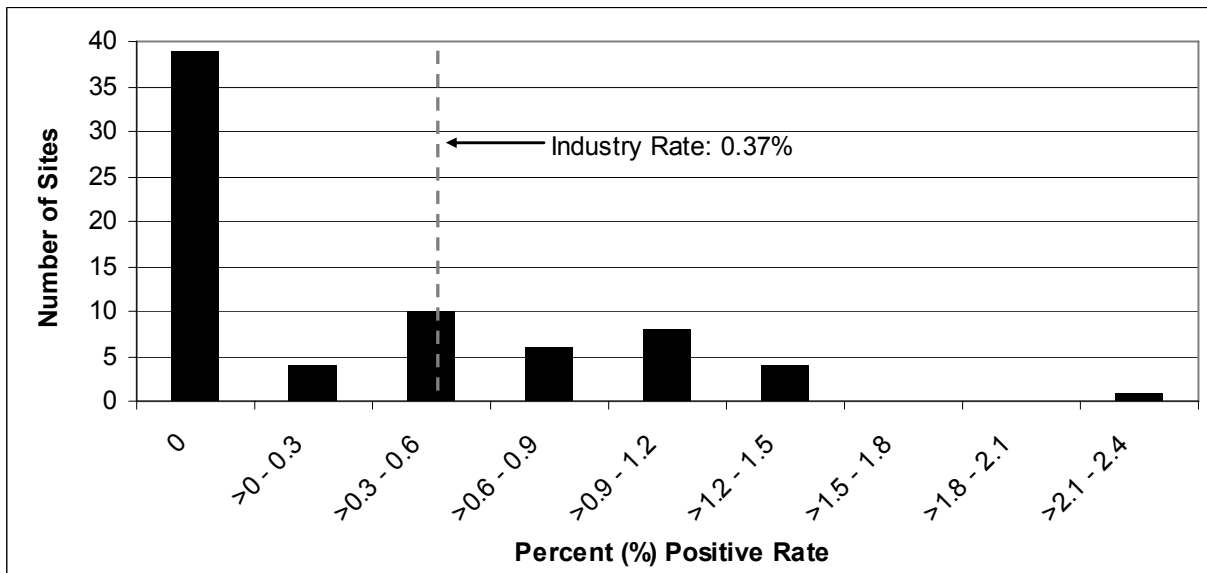
**Chart 7**  
**Distribution of Random Testing Positive Rates (All Employees) by Site, 2007**



**Chart 8**  
**Distribution of Random Testing Positive Rates (Licensee Employees) by Site, 2007**



**Chart 9**  
**Distribution of Random Testing Positive Rates (Contractors) by Site, 2007**





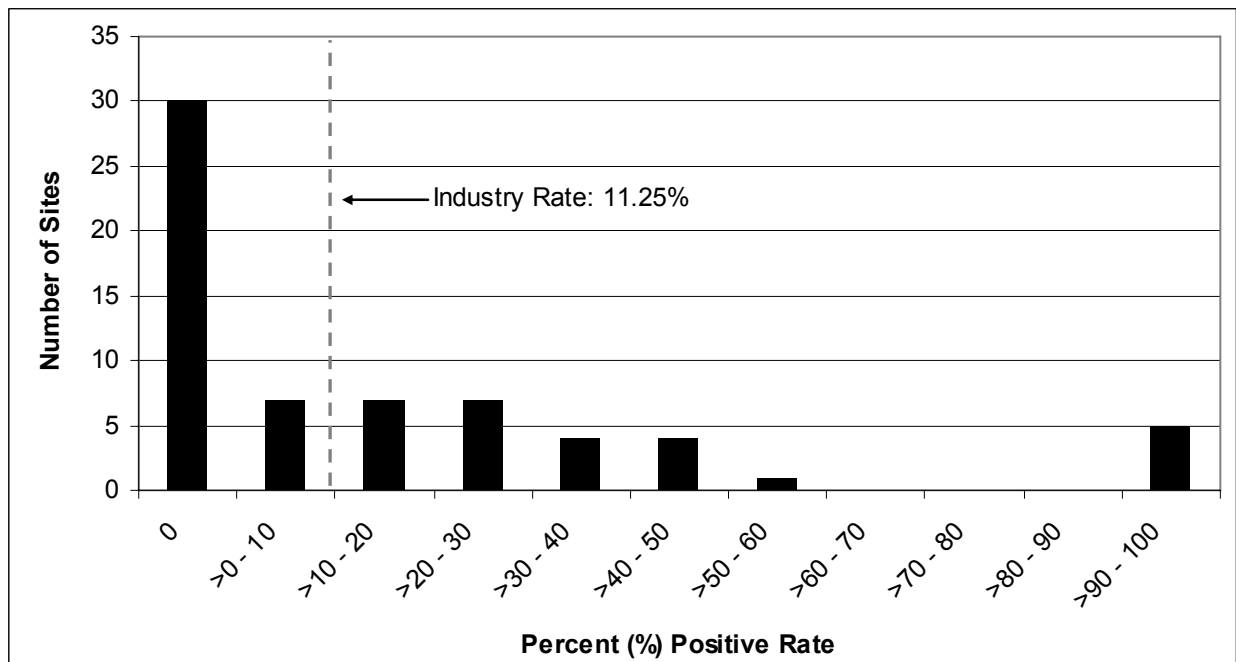
**2007 Observed Behavior Testing Rates by Site**

**Table 16**  
**Distribution of Observed Behavior Testing Positive Rates by Work Category by Site, 2007**

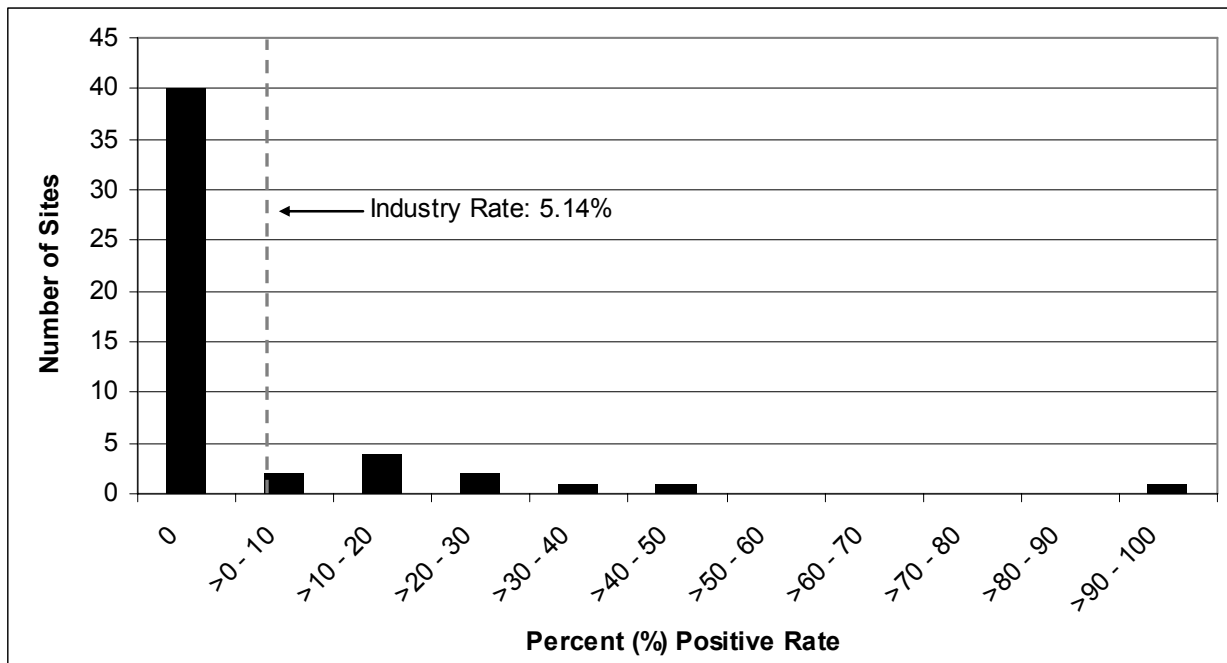
All Employees		Licensee Employees		Contractors	
Positive Rate Range (%)	Sites	Positive Rate Range (%)	Sites	Positive Rate Range (%)	Sites
0	30	0	40	0	27
>0 - 10	7	>0 - 10	2	>0 - 10	3
>10 - 20	7	>10 - 20	4	>10 - 20	6
>20 - 30	7	>20 - 30	2	>20 - 30	3
>30 - 40	4	>30 - 40	1	>30 - 40	7
>40 - 50	4	>40 - 50	1	>40 - 50	0
>50 - 60	1	>50 - 60	0	>50 - 60	3
>60 - 70	0	>60 - 70	0	>60 - 70	1
>70 - 80	0	>70 - 80	0	>70 - 80	0
>80 - 90	0	>80 - 90	0	>80 - 90	0
>90 - 100	5	>90 - 100	1	>90 - 100	7
<b>Total Sites</b>	<b>65</b>	<b>Total Sites</b>	<b>51</b>	<b>Total Sites</b>	<b>57</b>

\* Total site counts may differ because a site may not have tested one work category.

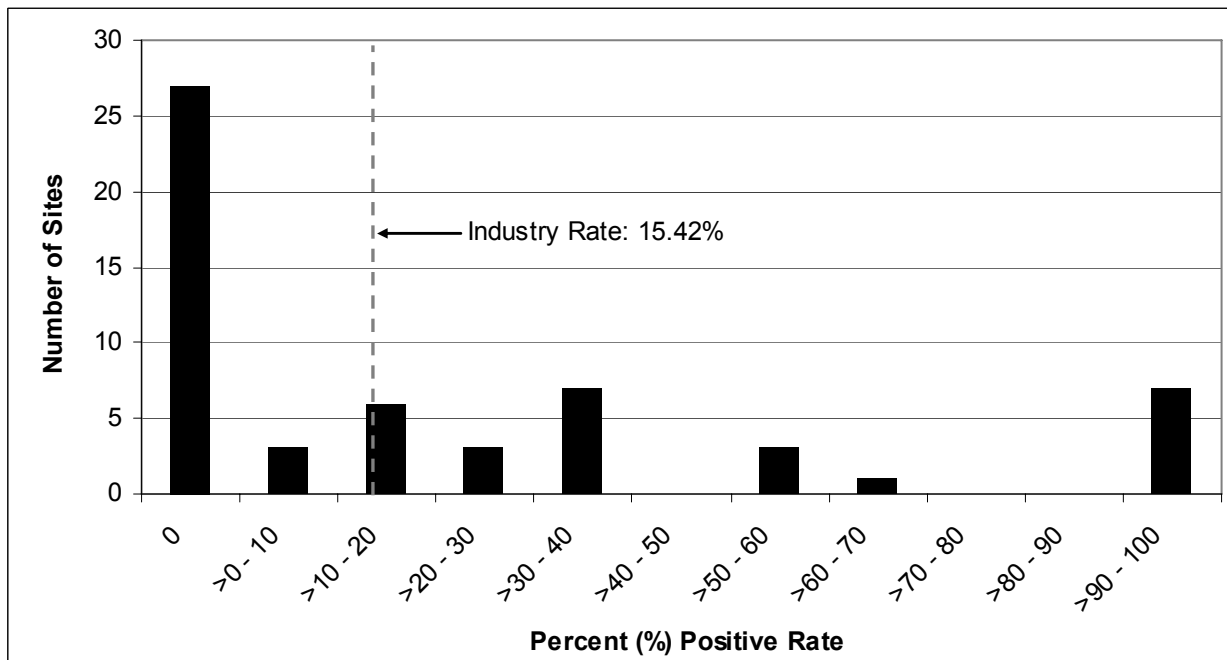
**Chart 10**  
**Distribution of Observed Behavior Testing Positive Rates (All Employees) by Site, 2007**



**Chart 11**  
**Distribution of Observed Behavior Testing Positive Rates**  
**(Licensee Employees) by Site, 2007**

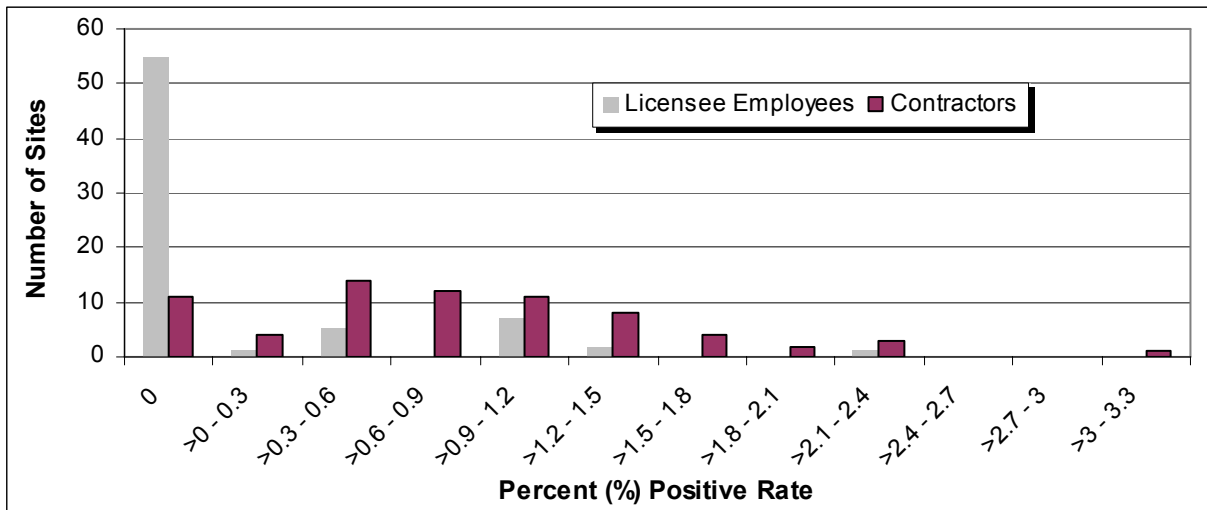


**Chart 12**  
**Distribution of Observed Behavior Testing Positive Rates (Contractors) by Site, 2007**



**2007 Distribution of Test Results by Sites and Work Category – Summary**

**Chart 13: Comparison of Site Pre-Access Testing Positive Rates by Work Category, 2007**



**Chart 14: Comparison of Site Random Testing Positive Rates by Work Category, 2007**

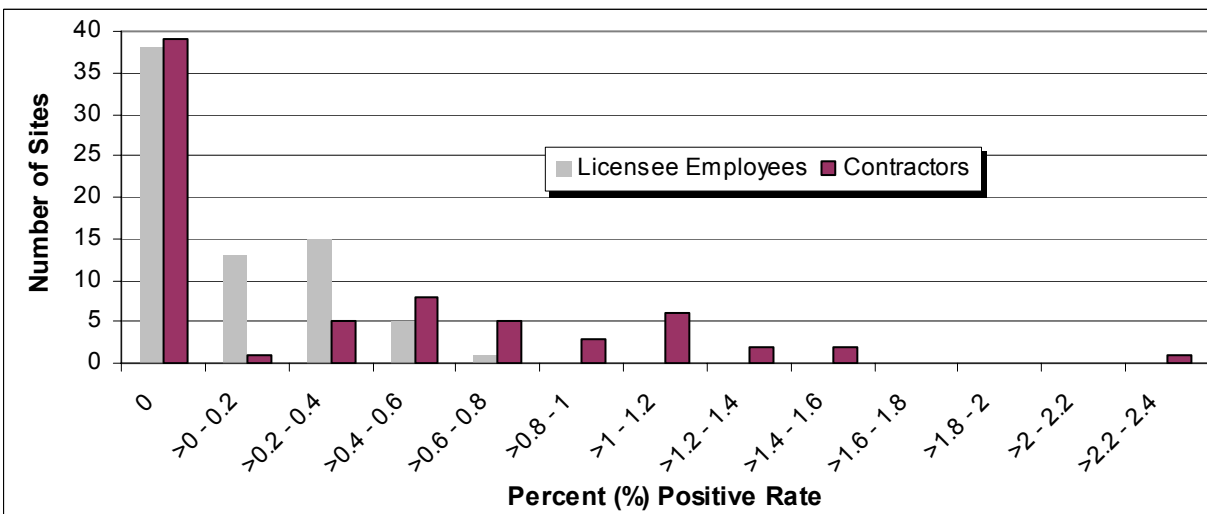
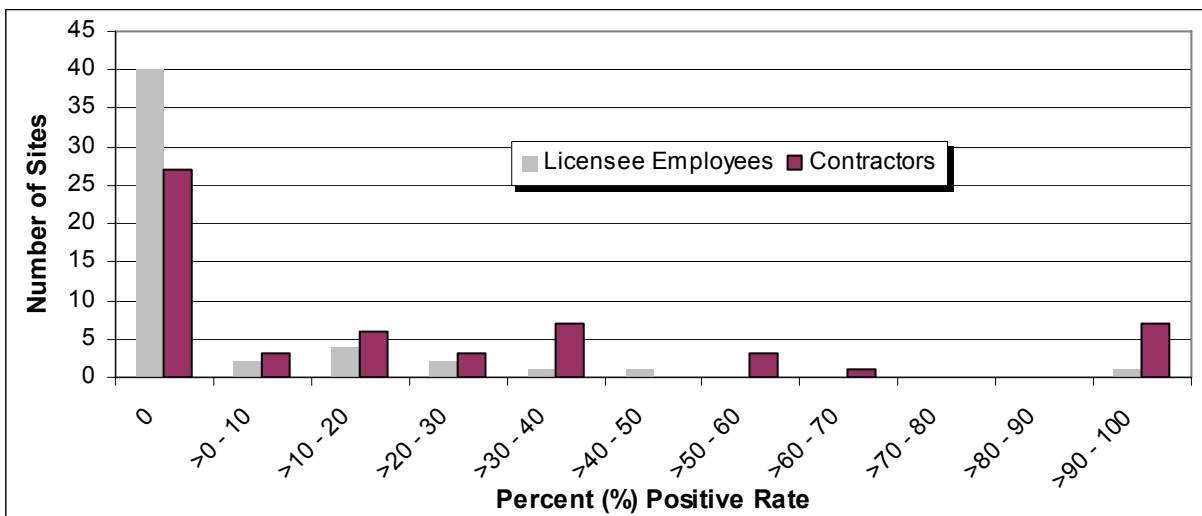


Chart 15: Comparison of Site Observed Behavior Testing Positive Rates by Work Category, 2007



**Table of Changes – 2008 IN**

This table highlights the changes that have been made to the tables in this IN (2008 IN) relative to the 2007 IN (IN 2007-24, "Summary Of Fitness-For-Duty Program Performance Reports For Calendar Year 2006," Agencywide Documents Access and Management System Accession No. ML071590308). The table below identifies each table in the 2007 IN, describes the change(s) made to the table, and identifies the table in this IN (2008 IN).

2007 IN		2008 IN		Changes Made
Table No.	Table Title	Table No.	Table Title	
1	2006 Test Results for Each Test Category	1	2007 Test Results for Each Test Category	<ul style="list-style-type: none"> <li>• Broke out test results for the "For-Cause" test category into "Observed Behavior" and "Post-Accident" results.</li> <li>• Slightly revised the note describing "Other" test category.</li> </ul>
2	2006 Test Results for Each Test Category and Work Category	2	2007 Test Results by Test Category and Work Category	<ul style="list-style-type: none"> <li>• Added a table comment describing the "long-term" and "short-term" contractor work categories.</li> <li>• Minor title change.</li> </ul>
3	2006 Test Results by Test Category	3	2007 Test Results by Test Category	<ul style="list-style-type: none"> <li>• None.</li> </ul>
4	2006 Test Results for Licensee Employees and Contractor Personnel	-	-	<ul style="list-style-type: none"> <li>• Deleted this table because most information is already included in other tables.</li> <li>• 2007 IN Table 2 presented the same test results as 2007 IN Table 4 with one exception. Table 4 presented the results for the first and second six month reporting periods while Table 2 only presented total results for the year.</li> </ul>

2007 IN		2008 IN		Changes Made
Table No.	Table Title	Table No.	Table Title	
5	2006 Number of Confirmed Positives by Substance	-	-	<ul style="list-style-type: none"> <li>Deleted this table because most information is already included in other tables.</li> <li>2007 IN Table 5 presented results by substance type by reporting period (i.e., first and second six months). 2007 IN Table 6 presented results by substance type by work category for the year (and not first/second six month reporting period).</li> </ul>
6	2006 Confirmed Positive Test Results by Substance and Work Category	4	2007 Confirmed Positive Test Results by Substance and by Work Category (All Test Types)	<ul style="list-style-type: none"> <li>Changed table number.</li> <li>Minor title change.</li> <li>Added columns to present total positive tests and percent positive by substance for all work categories.</li> <li>Changed the column header "Type of Substance" to "Positive Test Result".</li> <li>Added positive test result type "Refusal to Test".</li> <li>Added table comment explaining that the totals may be higher than those in Tables 1, 2, and 3 because an individual might test positive for more than one substance.</li> </ul>

2007 IN		2008 IN		Changes Made
Table No.	Table Title	Table No.	Table Title	
7	Significant Fitness-for-Duty Events (1990-2006)	5	Significant Fitness-for-Duty Events (1990-2007)	<ul style="list-style-type: none"> <li>• Changed table number.</li> <li>• Reversed the table column header and row orientation such that the type of event (e.g., Substances Found) is the column header and the table rows present the results by year.</li> <li>• Added a table comment for adulterated specimen.</li> </ul>
8	Trends in Testing by Test Type (1990-2006)  (Note: the table was split, one table for 1990 - 1999 and one table for 2000 - 2006)	6A  6B  6C	Trends in Testing by Test Type (1990-1995)  Trends in Testing by Test Type (1996-2001)  Trends in Testing by Test Type (2002-2007)	<ul style="list-style-type: none"> <li>• Changed table numbers.</li> <li>• Added table comment to indicate that the minimum annual random testing rate was reduced from 100% to 50% in 1994.</li> </ul>
9	Trends in Substances Identified (1990-2006)  (Note: the table was split, one table for 1990-1999 and one table for 2000-2006)	7	Trends in Substances Identified (1990-2007)	<ul style="list-style-type: none"> <li>• Changed table number.</li> <li>• Reversed the table column header and row orientation such that the "substance" is the column header and the table rows present the results by year. This change consolidated the results into one table.</li> </ul>
10	Trends in Positive Test Rates for Workers with Unescorted Access (1990-2006)	8	Trends in Positive Test Rates for Workers with Unescorted Access (1990-2007)	<ul style="list-style-type: none"> <li>• Changed table number.</li> <li>• 2007 IN presented a single positive rate by year, which accounted for random testing and for-cause testing positives.</li> <li>• Revised the table by adding separate columns for random and for-cause testing results (number of tests and positive rate).</li> </ul>