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**Federal Transit
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The Drug and Alcohol Testing Results 1997 Annual Report is a compilation and analysis of mass transit drug and alcohol testing reported by transit systems in the United States during 1997. The report covers testing results for the following drug types: marijuana (THC), cocaine, phencyclidine (PCP), opiates, and amphetamines. The test types covered are: pre-employment, random, post-accident, reasonable suspicion, return-to-duty, and follow-up. The report also covers testing results for alcohol for the following test types: random, post-accident, reasonable suspicion, return-to-duty, and follow-up.

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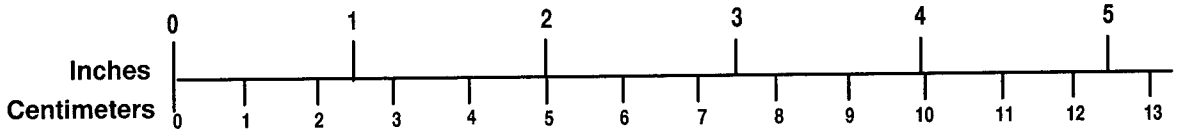

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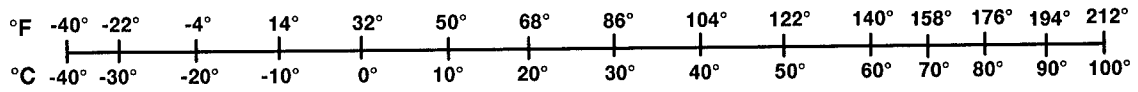

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EXECUTIVE SUMMARY

INTRODUCTION

This report presents the results of mandatory drug and alcohol testing conducted by transit systems and their contractors receiving funds from the Federal Transit Administration (FTA). Under the Omnibus Transportation Employee Testing Act passed by Congress in 1991, the FTA was required to establish regulations for drug and alcohol testing of transit employees performing safety-sensitive functions. These regulations require that each recipient of FTA funds (1) implement an anti-drug program to deter and detect the use of prohibited drugs, (2) establish a program to prevent the misuse of alcohol, and (3) report the results of its programs to FTA annually. The 1997 Annual Report is the third annual report which summarizes the reported results of drug and alcohol tests from all such transit systems.

Compliance with FTA's drug and alcohol testing program is a condition of Federal assistance. Failure of a recipient to establish and implement a drug and alcohol testing program–either in its own operations or in those of an entity operating on its behalf–may result in the suspension of Federal transit funding to the recipient. Because a recipient may not always directly provide mass transit services, the FTA uses the term "operator" or "employer" to describe those who actually provide transit services. The direct recipient of FTA funds, however, is the entity legally responsible to the FTA for compliance.

DISTRIBUTION OF TRANSIT SYSTEMS AND CONTRACTORS

The FTA received drug and alcohol reporting forms for calendar year 1997 from 2,317 individual employers representing 1,613 transit systems (304 large operators and 1,309 small operators) and 704 contractors. Approximately 71 percent of all employers reported no positive drug test results, and 96 percent of employers reported no alcohol test results greater than or equal to 0.04 percent. Contractors submitted a greater percentage of forms with at least one positive drug test result than did transit systems, and contractors submitted a greater percentage of forms with at least one alcohol test result greater than 0.04 percent than did transit systems.

The largest number of employees performing safety-sensitive functions are engaged in revenue vehicle operation, followed by revenue vehicle and equipment maintenance. Revenue vehicle control/dispatch, CDL/non-revenue vehicle, and armed security personnel together make up less than 12 percent of the overall labor force (transit systems and contractors). For large operators, contractors comprise a relatively small percent of the total number of FTA-covered employees at 13.24 percent. For small operators, contractors comprise a higher percent of the total number of FTA-covered employees at 32.16 percent.

DRUG TEST RESULTS

All employers must establish an anti-drug program that encompasses testing and training for employees and supervisors performing safety-sensitive functions. Supervisors receive specific training to recognize the signs and symptoms of prohibited drug use. The FTA's rule specifies that safety-sensitive employees may not use any of five prohibited substances (or their

metabolites): marijuana, cocaine, phencyclidine (PCP), opiates (e.g., heroin, morphine, codeine), or amphetamines (e.g., racemic, amphetamine, dextroamphetamine, and methamphetamine).

If an FTA-covered employee has a verified positive result from a drug test, the employee must be removed from the safety-sensitive position, be informed of available educational and treatment programs, and be referred to a substance abuse professional to determine whether the employee has a drug problem. If the employer's policy allows for a "second chance," the regulations state that the employee must complete a course of treatment prescribed by the Substance Abuse Professional (SAP) and take a return-to-duty drug test with a verified negative result prior to returning to a safety-sensitive position.

The 1997 drug-testing program performed by large and small transit employers revealed the following major findings:

A total of 107,047 specimens were collected for random drug testing. Of that figure, 1,295 specimens tested positive for one or more of the five prohibited drugs. Random drug testing accounted for 38.32 percent of the positive specimens (of 3,379 total positive specimens).

The overall positive random test rate was 1.21 percent industry-wide, as shown in Exhibit ES-1. The positive random test results were 1.06 percent for transit systems and 1.92 percent for contractors. The 1996 positive test result for random testing was 1.50 percent.

Table ES-1. 1997 Random Drug Test Results

Employers	Number of Specimens	Number Positive	Percent Positive
Transit Systems	88,799	945	1.06
Contractors	18,248	350	1.92
Totals	107,047	1,295	1.21

There was little disparity in the percent of random drug positives between large and small operators (1.17% and 1.34%, respectively).

In 1997, the FTA's regulation required that the number of random drug tests conducted must equal at least 50 percent of the total number of safety-sensitive employees. Transit systems had a higher rate of compliance with the 50 percent drug testing requirement then did contractors. Approximately 52.01 percent of the transit systems randomly tested a number equal to at least 50 percent of their covered employees for drugs. In comparison, approximately 52.05 percent of the contractors met the testing requirement. Large operators met the requirement more often than did small operators (58.73% and 49.65%, respectively). A number of employers joined consortia to increase the efficiency of the testing process. As members of a consortium, their employees were included in a larger pool of employees; thus, each employer may not have achieved the required levels of testing individually.

Of the six drug test types (pre-employment, random, post-accident, reasonable suspicion, return-to-duty, and follow-up), the highest percent of positive specimens was for reasonable suspicion testing (8.08%). Contractors reported positive results using reasonable suspicion testing at a higher rate than did transit systems (15.20% vs. 6.70%).

Random drug testing returned the lowest overall percent of positive results (1.21%).

There was some variation in the percent of positive random tests across employee categories. The lowest rate was 0.16 percent for armed security personnel, and the highest was 1.56% percent for CDL/non-revenue vehicle operators.

Marijuana and cocaine were detected most frequently in the specimens that tested positive for drugs. Of the 3,379 positive specimens, 59.90 percent tested positive for marijuana and 36.55 percent tested positive for cocaine.

There were 249 reportable accidents that resulted in a positive post-accident drug test (166 from transit systems and 83 from contractors). There were five fatalities reported as resulting from these accidents.

ALCOHOL TEST RESULTS

Transit systems are required to establish and conduct an alcohol misuse prevention program in which employees performing safety-sensitive functions are tested for the misuse of alcohol and supervisors are trained to recognize the signs and symptoms of alcohol misuse. Employees are subject to five types of alcohol tests: random, reasonable suspicion, post-accident, return-to-duty, and follow-up. In addition, employers may not allow safety-sensitive employees to consume alcohol under four specific circumstances: (1) 4 hours before performing a safety-sensitive function; (2) while performing a safety-sensitive function; (3) after a fatal accident, unless the employee has received a post-accident test or 8 hours have elapsed, whichever occurs first; or (4) after a non-fatal accident unless the employee's involvement was completely discounted as a contributing factor to the accident, the employee has been tested, or 8 hours have elapsed.

Alcohol screening tests may be conducted with a saliva testing device, an Evidential Breath-Testing (EBT) device, or a non-EBT device. A confirmation test must be conducted using an EBT device if the result of a screening test is an alcohol concentration of 0.02 percent or greater. The alcohol concentration level is the alcohol in a volume of breath expressed in terms of grams of alcohol per 210 liters of breath. An employer may only take disciplinary action based on the results of a confirmation test.

An employee with an alcohol concentration of 0.02 or greater but less than 0.04 must be removed from duty for 8 hours or until a re-test shows an alcohol concentration of less than 0.02. An employee with an alcohol concentration ≥ 0.04 must be prohibited from performing any safety-sensitive duties, removed from his/her safety-sensitive position, and be evaluated by a substance abuse professional. To return to a safety-sensitive position, the employee must

properly complete a course of treatment prescribed by the SAP and pass a return-to-duty alcohol test.

The 1997 alcohol testing program performed by large and small transit employers revealed the following findings:

- A total of 62,161 random alcohol screening tests were conducted. Of that figure, 85 confirmation tests results of ≥ 0.04 were detected (0.14%).

- The FTA alcohol-testing rule includes a definition for the violation rate. The definition describes the violation rate as the number of random tests results ≥ 0.04 plus the number of employees who refused a random test, divided by the total number of random tests administered plus the number of employees who refused a random test. The violation rate for 1997 for all employers (transit systems and contractors) is 0.19 percent.

- The percent of random test results ≥ 0.04 was 0.14 percent industry-wide, as shown in Table ES-2. The rate for transit systems was 0.15 percent. For contractors, the rate was 0.09 percent. In 1996, the random rate was 0.16 percent.

Table ES-2. 1997 Random Alcohol Test Results

Employer	Number Screens	Number Positive	Percent ≥ 0.04
Transit Systems	52,260	76	0.15
Contractors	9,901	9	0.09
Totals	**62,161**	**85**	**0.14**

- For 1997, the FTA's regulation required that the number of random alcohol tests conducted be equal to at least 25 percent of the total number of safety-sensitive employees. Transit systems and contractors had a rate of compliance with this requirement of 56.03 percent and 51.05 percent, respectively. Large operators met the requirement at 60.07 percent and small operators met the requirement at 52.53 percent.

- Of the five required alcohol test types, the highest percent of test results ≥ 0.04 was for reasonable suspicion testing at 9.09 percent. Contractors returned alcohol concentrations at ≥ 0.04 during reasonable suspicion testing more often than transit systems (17.14% vs. 7.65%).

- Overall, the percent of random alcohol tests ≥ 0.04 for each employee category was at or below 0.22 percent. The lowest percent was 0.00 percent for armed security personnel, and the highest was 0.22 percent for revenue vehicle and equipment maintenance employees.

- There were 17 accidents reported that resulted in a post-accident alcohol test result of 0.04 or greater. There were no fatalities resulting from these accidents.

COMPARISON OF DRUG AND ALCOHOL RESULTS

A comparison of the 1997 drug and alcohol testing performed by large transit employers revealed the following findings:

- Random testing revealed a higher percent of drug tests with positive results than alcohol tests with results of ≥ 0.04 (1.21% vs. 0.14%). Results of random drug testing in transit systems show a positive rate of 1.06 percent, while the rate for alcohol tests with results ≥ 0.04 was 0.15 percent. The positive drug testing result rate for contractors was 1.92 percent, whereas the rate for random alcohol testing results ≥ 0.04 was 0.09 percent.

- CDL/non-revenue vehicle operators, revenue vehicle operators, and revenue vehicle and equipment maintenance employees had the highest percent of random positive drug test results with 1.56 percent, 1.30 percent, and 1.12 percent, respectively. Revenue vehicle and equipment maintenance employees had the highest random alcohol test results ≥ 0.04 (0.22%), followed by revenue vehicle control/dispatch at 0.13 percent and revenue vehicle operators with 0.12 percent.

- A total of 7 employers reported that they had a total of 10 employees who tested positive for drugs and alcohol at the same time.

COMPARISON OF LARGE AND SMALL OPERATORS

Almost two-thirds (65.85%) of safety-sensitive employees who worked for large operators were revenue vehicle operators, whereas more than three-quarters (78.08%) of safety-sensitive employees who worked for small operators were revenue vehicle operators.

Across all employee categories, large operators showed test results ≥ 0.04 for random alcohol tests at a rate of 0.14 percent. Small operators tested ≥ 0.04 at a rate of 0.10 percent. However, small operators had a higher percentage of positive random drug tests than did large operators (1.34% vs. 1.17%).

The reported data show that large operators met the random testing requirements for drugs more often than small operators (58.73% vs. 49.65%). Additionally, the data show that large operators also met the testing requirement for alcohol more often than small operators (60.07% vs. 52.23%). Federal regulations allow employers to use a consortium to perform drug and alcohol testing. Because the consortium is performing random testing on its entire pool, individual employers may not achieve the required minimum testing rates.

COMPARISON OF 1996 AND 1997 RESULTS

The percent of positive random drug test results and the percent of alcohol test results greater than or equal to 0.04 decreased from 1996 to 1997. In 1996, random alcohol testing detected results ≥ 0.04 at a rate of 0.16 percent; in 1997, that figure was 0.14 percent. In 1996, random

drug testing detected positive results 1.50 percent of the time. In 1997, random drug testing detected positive results 1.21 percent of the time.

Most employee categories saw a reduction in the percent of random positive test results for drugs and alcohol test results ≥ 0.04. Only one employee category did show an increase; revenue vehicle control/dispatch jumped from 0.08 percent in 1996 to 0.13 percent in 1997.

Most employee categories saw an increase in the number of specimens collected (drugs) and screening test conducted (alcohol) in 1997. Only the CDL/non-revenue employee category had a decrease in both. Specimen collections decreased by 48.22 percent and screening tests decreased by 43.65 percent from 1996. These considerable reductions are the result of a more stringent application of the FTA's definition of CDL/non-revenue vehicle employee; only those employees holding CDLs in transit-specific environments are included.

Every region except Region 7 showed decreases in the rate of positive random drug test results. Regions 2, 4, 5, 6, and 10 showed decreases in the rate of random alcohol test results ≥ 0.04.

1. INTRODUCTION

This annual report presents the results of mandatory drug and alcohol testing conducted by transit systems receiving funds from the Federal Transit Administration (FTA). Under the Omnibus Transportation Employee Testing Act passed by Congress in 1991, the FTA was required to establish regulations for drug and alcohol testing of transit employees performing safety-sensitive functions. The purpose of requiring transit agencies to implement drug and alcohol programs is to achieve a drug- and alcohol-free work force in the interest of the health and safety of transit employees and the traveling public. This is the third annual report summarizing the results of drug and alcohol tests administered under the FTA regulations. This annual report covers the testing results from calendar year 1997.

The FTA regulations require that recipients of specific FTA funds implement an anti-drug program to deter and detect the use of prohibited drugs by transit employees and to establish a program to prevent prohibited alcohol use. Covered under these regulations are employees of transit systems that receive grant funds and employees of contractors to those transit systems. Large operators (i.e., those providing transit services in urbanized areas of 200,000 or more in population) were required to begin their drug and alcohol testing programs for calendar year 1995. Small operators (i.e., those providing transit services in areas of less than 200,000) were required to begin their drug and alcohol testing programs for calendar year 1996. The drug and alcohol testing results for both large and small operators for calendar year 1997 are included in this annual report.

1.1 Who Must Report

Transit systems that receive funding from the FTA sources listed in Figure 1-1 are required to have drug and alcohol testing programs.[1] Under FTA regulations, all recipients must implement the required drug and alcohol testing programs and must report the results of their programs to the FTA annually. The results must be submitted to the FTA on specific Management Information System (MIS) forms approved by the Office of Management and Budget (OMB). Recipients of 5310 (Section 16) funds only, are not required to comply with FTA drug and alcohol testing requirements, unless they provide contract services to recipients receiving Section 5307, 5309, and 5311 funds. In those instances, they must report as contractors.

Section 5307. Block Grants

Section 5309. Discretionary Grants and Loans

Section 5311. Financial Assistance for Other Than Urbanized Areas

Figure 1-1. FTA Federal Funding Sources (1997)

[1] The section numbers for the funding sources listed in Figure 1-1 are different than those listed on the FTA's MIS Data Collection forms. Section 5307 corresponds to Section 9, Section 5309 corresponds to Section 3, and Section 5311 corresponds to Section 18.

Some recipients provide mass transit services directly. Others rely on additional public or private entities to provide services in whole or in part. In these cases, the direct recipient of FTA funds is legally responsible for assuring that any entity operating on its behalf is in compliance with FTA testing rules.

Transit systems that receive funding directly from the FTA must certify annually that they are in compliance with the drug and alcohol testing regulations. States must certify regulatory compliance on behalf of the transit authorities that receive FTA funding through a state agency.

Failure of a recipient to establish and implement a drug and alcohol testing program–either in its own operations or in those of an entity operating on its behalf–may result in the suspension of Federal transit funding to the recipient. Because a recipient may not always provide transit services directly, the FTA uses the term "operator" or "employer" to describe those who actually provide transit services and who, therefore, must implement the FTA requirements.

1.2 Which Employees Must be Tested

Under the FTA's drug and alcohol testing regulations, employees and supervisors who perform any of the following functions are considered safety-sensitive employees:

- Operating revenue service vehicles, including when the vehicle is not in revenue service;
- Maintaining revenue service vehicles or equipment used in revenue service, unless the recipient receives Section 5311 funding and contracts out such services;
- Controlling the dispatch or movement of revenue service vehicles;
- Operating a non-revenue service vehicle (e.g., snowplow or wrecker in support of transit operations) and performing a function requiring a Commercial Driver's License (CDL); and/or
- Providing security and carrying a firearm.

Maintenance contractors (except for 5311 recipients' contractors) that perform routine, ongoing repair, or maintenance work for FTA recipients and subrecipients must comply if their employees perform any of the identified safety-sensitive functions. In addition, supervisors who perform, or could be called upon to perform, any of the safety-sensitive functions are also included in the testing requirements.

1.3 Types of Tests

Employees who perform safety-sensitive functions are subject to six different types of tests: (1) pre-employment (drug only); (2) random; (3) post-accident; (4) reasonable suspicion; (5) return-to-duty; and (6) follow-up.

Pre-employment testing for drugs is performed on each prospective employee, including individuals who are being transferred into safety-sensitive positions. Employees may not be hired unless they have a verified negative drug test result. The FTA suspended required pre-employment testing for alcohol on May 10, 1995, as a result of a U.S. Court of Appeals decision.

Random testing must be unannounced and unpredictable. The tests must be based on a scientifically valid random-number selection method. All safety-sensitive employees must have an equal chance of being selected for testing each time a selection is made, must be included in the selection pool, and must remain in the pool after being tested. For 1997, the number of random tests conducted must equal at least 50 percent (for drugs) and 25 percent (for alcohol) of the total number of employees performing safety-sensitive functions. Transit systems have the option of joining a consortium, which is an entity that arranges testing services and that acts on behalf of the employers. If a transit system joins a consortium for random testing, the testing rate applies to the total number of safety-sensitive employees within the consortium. As a result, some transit operators may not meet the testing requirement individually.

Post-accident testing is required for accidents where there is loss of human life. For other non-fatal accidents that meet FTA-defined conditions, testing is required unless the covered employee's performance can be completely discounted as a causative or contributing factor. When an accident occurs, safety-sensitive employees operating the vehicle must be tested, as well as any other safety-sensitive personnel not on the vehicle whose performance could have contributed to the accident. Tests must be administered as soon as possible but no later than 8 hours after the accident for alcohol and 32 hours for drugs.

Reasonable suspicion testing is conducted when an employer suspects that an employee has used a prohibited drug or has misused alcohol as defined in the regulations. Reasonable suspicion determinations are made by trained supervisors and must be based on specific, contemporaneous, articulated observations concerning the appearance, behavior, speech, or body odor of the safety-sensitive employee.

Return-to-duty testing occurs when an employer's policy statement permits an employee who violated the regulations (e.g., tested positive for drugs, had an alcohol result of ≥ 0.04, refused to submit to a test) to return to duty to perform a safety-sensitive function after completion of rehabilitation. The employee must, however, be evaluated by a Substance Abuse Professional (SAP) and pass a return-to-duty test prior to performing a safety-sensitive function.

Follow-up testing occurs after an employee has been returned to duty after a positive drug or alcohol test. The employee is subject to unannounced follow-up testing for at least 12 but no more than 60 months as recommended by the SAP. Follow-up testing is separate from, and in addition to, random testing.

1.4 Drug Testing Program Overview

Transit systems must establish an anti-drug program that focuses on testing safety-sensitive employees and training for supervisors. FTA regulations specify that safety-sensitive employees may not use any of 5 prohibited substances (or their metabolites): marijuana; cocaine; opiates (e.g., heroin, morphine, codeine); amphetamines (e.g., racemic, amphetamine, extroamphetamine, and methamphetamine); or phencyclidine (PCP). Testing for any other drugs must be performed separately from the FTA test.

If an FTA-covered employee has a verified positive drug test result, the employee must be removed from the safety-sensitive position, be informed of the available educational and treatment programs, and be referred to an SAP. To return to a safety-sensitive position, the employee must complete a course of treatment prescribed by the SAP and take a return-to-duty drug test with a verified negative result.

1.5 Alcohol Testing Program Overview

Transit systems are required to establish and conduct an alcohol misuse prevention program in which employees performing safety-sensitive functions are tested for alcohol misuse. In addition, supervisors must receive specific training to recognize the signs and symptoms of possible alcohol misuse. Employers may not allow safety-sensitive employees to consume alcohol while on duty. There are four specific circumstances under which an employee is prohibited from consuming alcohol:

1. Four hours before performing a safety-sensitive function;

2. While performing a safety-sensitive function;

3. After a fatal accident unless a post-accident test has been administered, or 8 hours have elapsed (whichever occurs first); and/or

4. After a non-fatal accident unless the employee's involvement can be completely discounted as a contributing factor to the accident, the employee has been tested, or 8 hours have elapsed.

Alcohol screening tests may be conducted with a saliva testing device, an Evidential Breath Testing (EBT) device, or a non-EBT device. If the result of a screening test is an alcohol concentration of 0.02 or greater, a confirmation test must be performed. The confirmation test must be conducted using an EBT device, which is listed on the Conforming Product List (CPL)

of the National Highway Traffic Safety Administration (NHTSA). The confirmation test must be conducted at least 15 minutes, but not more than 30 minutes, after the completion of the screening test. If the initial screening test and confirmation test results are not identical, the confirmation test result is deemed the final result. An employer can only take action based on the confirmation test results.

An employee with an alcohol concentration of 0.02 or greater but less than 0.04 for a confirmation test must be removed from duty for at least 8 hours or until a re-test conducted by the employer shows an alcohol concentration of less than 0.02. If an employer elects to remove the employee from duty for 8 hours, the employer is not required to administer an alcohol test before the employee resumes performing a safety-sensitive function unless the employee exhibits signs of alcohol misuse upon returning to work.

A safety-sensitive employee with an alcohol concentration of ≥ 0.04 must be prohibited from performing any safety-sensitive functions, removed from his or her safety-sensitive position, and be referred to a SAP.

1.6 Drug and Alcohol MIS Data Quality and Validation

The Drug and Alcohol MIS data submitted to the FTA by transit operators are subjected to extensive analysis and validation, both manual and automated. The process entails detailed examination of each MIS report, identification of errors or questionable entries, and the resolution of these problems in conjunction with the reporting agencies.

In general, the quality of the database improves each year as the FTA simplifies and clarifies definitions of data items and reporting procedures, and designs more sophisticated validation checks. Despite extensive efforts, it should be noted that data validation encompasses primarily a review of the consistency and reasonableness of the reported data. Errors of significant magnitude have been detected and corrected, but some statistically minor errors may remain.

1.7 Organization of this Report

This report contains six chapters and two appendices. Chapter 2 provides general information from the reporting process, including how many employers reported testing results to the FTA. Chapters 3 and 4 present drug and alcohol testing results, respectively. Chapter 5 presents a comparison of drug and alcohol testing results. Chapter 6 provides a comparison of 1996 and 1997 testing results for all employers. To clarify the terms used throughout this report, Appendix A presents the Glossary of Terms. Appendix B provides a list of FTA regions.

1.8 Availability of Drug and Alcohol MIS Documentation

Copies of reporting guidance and MIS reporting forms and diskettes are available from the Drug and Alcohol MIS Project Office at (617) 494-6336. The FTA Safety and Security Clearinghouse can be reached at (617) 494-2108 for additional copies of this report, as well as previously

published annual reports. Other technical assistance materials including, *The Implementation Guidelines for Drug and Alcohol Regulations in Mass Transit,* may be acquired from the FTA's Office of Safety & Security at (202) 366-2896.

2. GENERAL INFORMATION–DRUG AND ALCOHOL TEST RESULTS

This chapter presents the drug and alcohol information provided by transit systems and contractors submitting FTA Drug & Alcohol MIS forms to the FTA for 1997. The discussion presents data on the number of forms received and the distribution of workers by employee category, as well as the number of employees covered by the United States Coast Guard (USCG). This section also includes the compliance levels of transit systems and contractors with the requirements for drug and prohibited alcohol random testing (percent of safety-sensitive employees tested), their commitment to training employees and supervisors, and sources of FTA funds.

2.1 Distribution of Transit Systems and Contractors

For calendar year 1997, the FTA received drug and alcohol forms from 2,317 individual operators representing 1,613 transit systems (304 large transit systems and 1,309 small transit systems) and 704 contractors. Table 2-1 identifies the number of drug and alcohol forms received and shows the percentage of drug forms reporting a positive test result for at least one drug and the percentage of alcohol forms reporting an alcohol concentration of ≥ 0.04.

Table 2-1. Number of Drug and Alcohol Forms Received for 1997 Percent With a Positive Test Result

Operator	Number of MIS Data Collection Forms Received		Percent With A Positive Test Result	
	Drug Forms	Alcohol Forms	Drug Forms	Alcohol Forms
Transit Systems	1,613	1,613	23.56	3.66
Contractors	704	704	40.91	4.26
Totals	**2,317**	**2,317**	**28.83**	**3.84**

Approximately 76 percent of transit systems and 59 percent of contractors reported no positive drug test results in any of the testing categories. Approximately 96 percent of forms received by both transit systems and their contractors reported no alcohol test results of ≥ 0.04 in any of the testing categories.

Almost 77 percent of the FTA-covered employees worked in large systems in 1997. Figure 2-1 shows the number of transit system and contractor employees who worked in both large and small systems. Contractors serviced a larger percentage of small operators than large operators (32.16% vs. 13.24%).

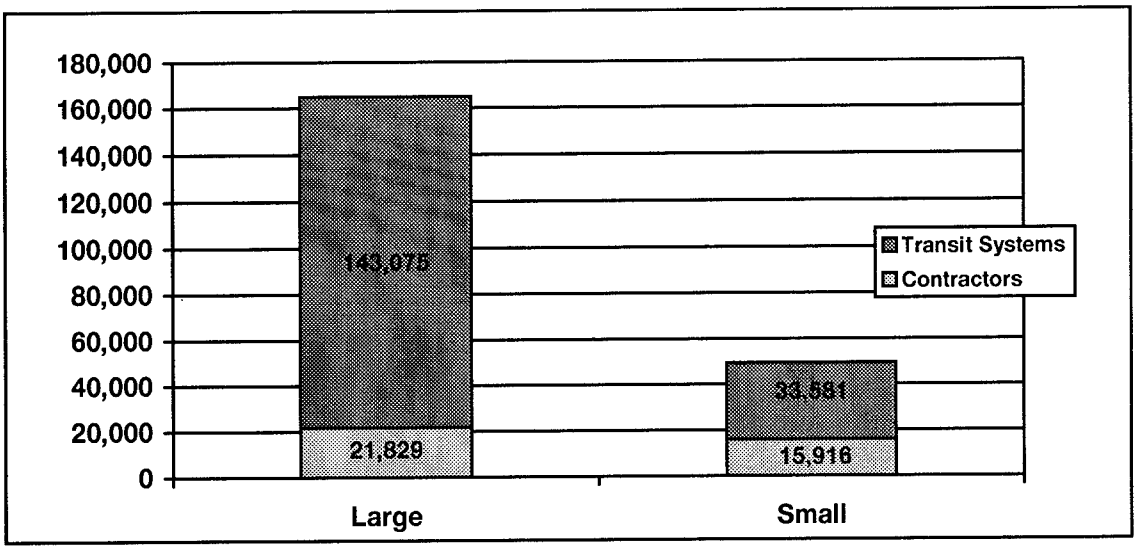

Figure 2-1. Number of Transit System and Contractor-Covered Employees for Large and Small Operators for 1997

The number of FTA-covered employees in each employee category for the large and small operators is shown in Figures 2-2 and 2-3, respectively. Almost two-thirds (65.85%) of FTA-covered employees who worked for large operators were revenue vehicle operators, whereas over three-quarters (78.05%) of FTA-covered employees who worked for small operators were revenue vehicle operators. In both cases, revenue vehicle operators were the largest group of FTA-covered employees.

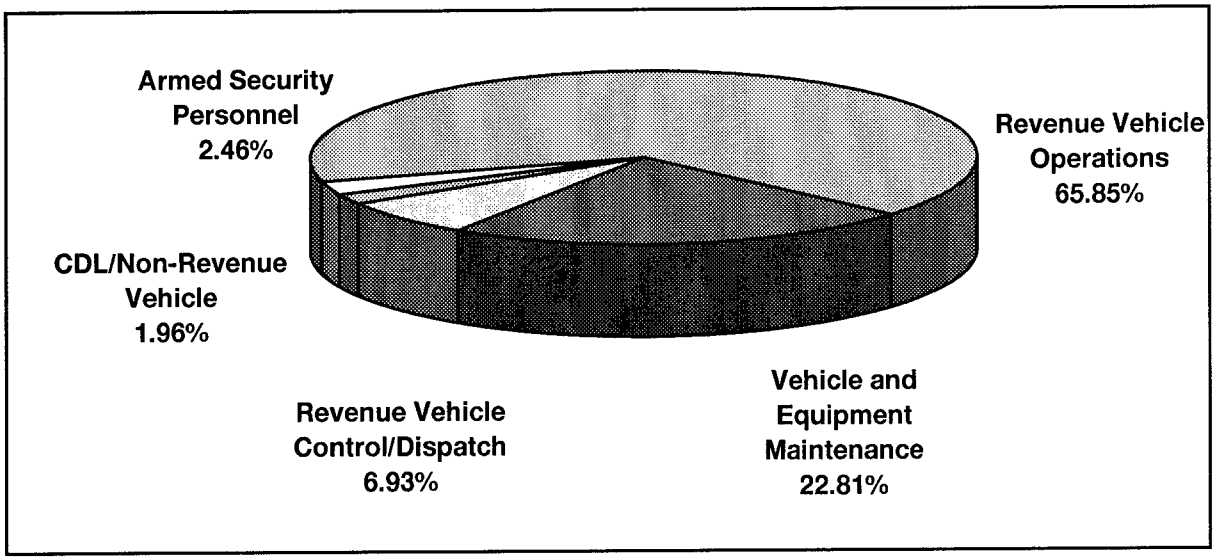

Figure 2-2. Percent of FTA-Covered Employees in Each Employee Category for 1997 – Large Operators

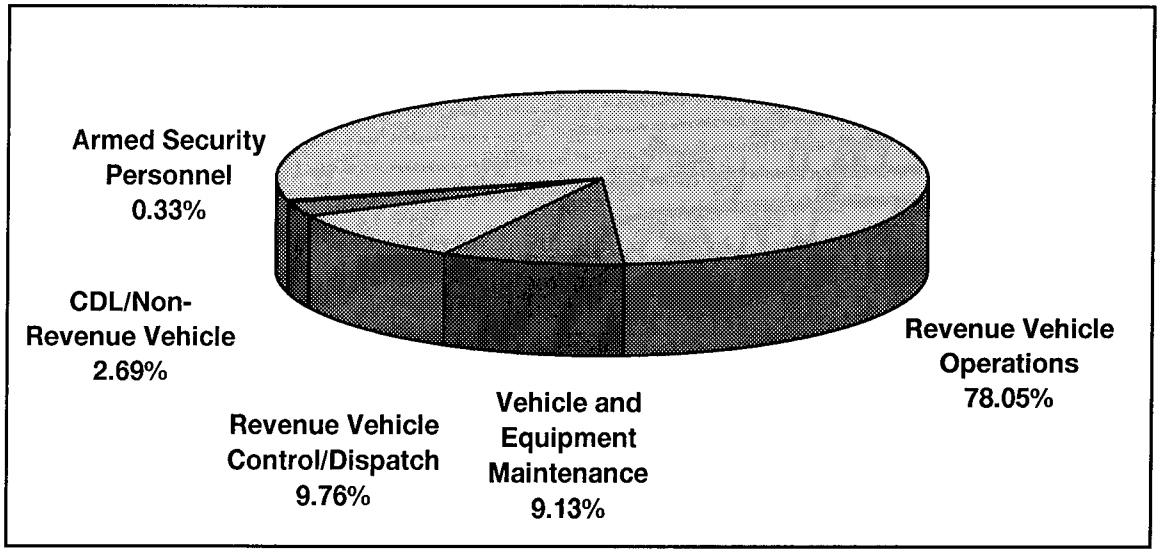

Figure 2-3. Percent of FTA-Covered Employees in Each Employee Category for 1997 – Small Operators

Table 2-2 presents the distribution of FTA-covered employees by employee category for transit systems and contractors. The accompanying pie charts (Figures 2-4 through 2-6) illustrate these results. Contractors comprise a relatively small percentage of the total number of FTA-covered employees at 17.60 percent. On a category-specific percentage basis, contractors were more often employed as revenue vehicle operators and revenue vehicle control/dispatchers (20.10% and 17.65%, respectively) and were least often employed as CDL/non-revenue vehicle operators (7.34%). In Figure 2-4, the largest number of FTA-covered employees was revenue vehicle operators (68.67%), followed by revenue vehicle and equipment maintenance employees (19.65%). Revenue vehicle control/dispatch, CDL/non-revenue vehicle, and armed security personnel together made up 11.68 percent of the overall reported labor force.

Table 2-2. Number of FTA-Covered Employees by Employee Category for 1997/ Percent of Labor Force that was Contracted

	Number of FTA-Covered Employees			
Employee Category	**Transit Systems**	**Contractors**	**Totals**	**Percent of Labor Force Contracted**
Revenue Vehicle Operations	117,640	29,592	147,232	20.10
Revenue Vehicle and Equipment Maintenance	37,787	4,342	42,129	10.31
Revenue Vehicle Control/Dispatch	13,393	2,870	16,263	17.65
CDL/Non-Revenue Vehicle	4,232	335	4,567	7.34
Armed Security Personnel	3,604	606	4,210	14.39
Totals	**176,656**	**37,745**	**214,401**	**17.60**

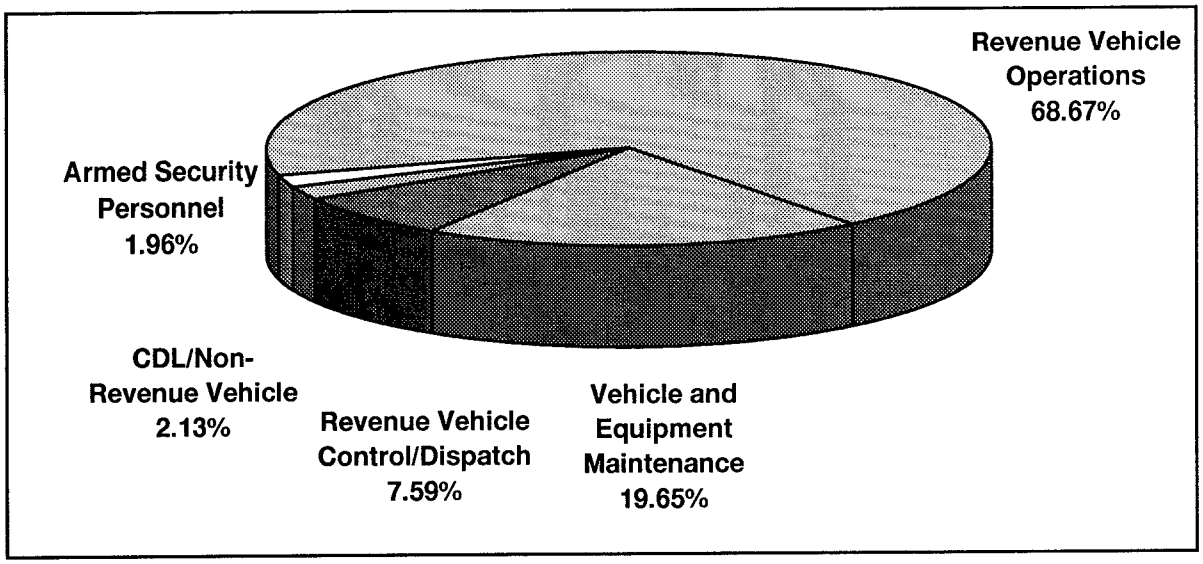

Figure 2-4. Percent of FTA-Covered Employees in Each Employee Category for 1997

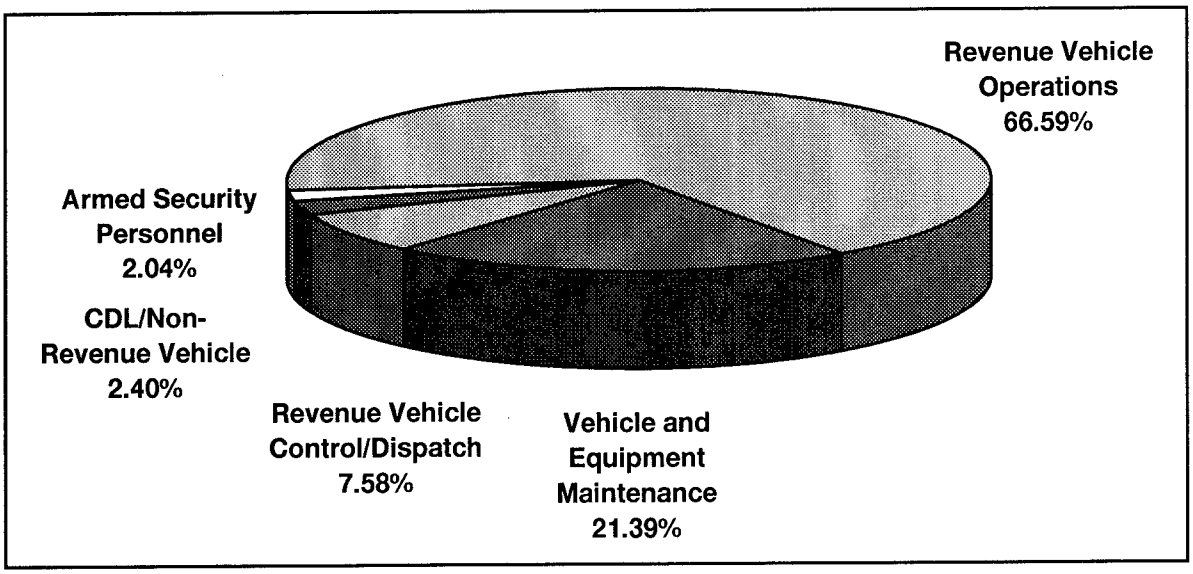

Figure 2-5. Percent of FTA-Covered Employees in Each Employee Category for 1997 - Transit System Employees

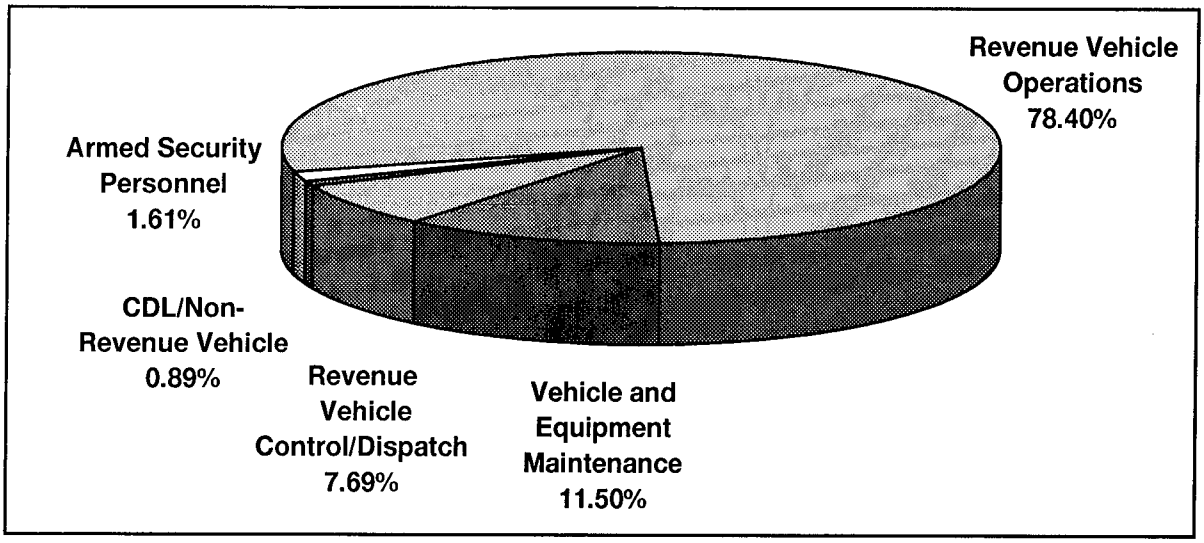

Figure 2-6. Percent of FTA-Covered Employees in Each Employee Category for 1997 - Contractor Employees

2.2 U.S. Coast Guard-Covered Employees

Many USCG-covered employees performed safety-sensitive functions for transit providers who received FTA funds; therefore the FTA requires the number of USCG-covered employees to be reported on the Drug MIS Form.

Nineteen operators reported USCG-covered employees performing safety-sensitive functions. Table 2-3 identifies the number of USCG-covered employees by employee category.

Table 2-3. Distribution of USCG-Covered Employees by Employee Category for 1997

Employee Category	Number of USCG Employees			Percent of Total USCG Employees	
	Transit Systems	Contractors	Totals	Transit Systems	Contractors
Revenue Vehicle Operations	1,428	48	1,476	96.75	3.25
Revenue Vehicle and Equipment Maintenance	87	28	115	75.65	24.35
Revenue Vehicle Control/Dispatch	81	0	81	100.00	0.00
CDL/Non-Revenue Vehicle	38	0	38	100.00	0.00
Armed Security Personnel	0	5	5	0.00	100.00
Totals	**1,634**	**81**	**1,715**	**95.28**	**4.72**

Transit systems and their contractors employed 1,715 USCG-covered employees, which was 0.80 percent of the total reported FTA-covered employees. USCG-covered employees were involved mainly in revenue vehicle operations at a rate of 87.39 percent. Contractors made up a smaller overall percent of the USCG-covered employment (4.72%) compared to the total FTA-covered workforce (17.60%).[2]

2.3 Random Testing Percent Requirements

One of the most important aspects of the FTA's drug and alcohol testing program is the requirement that each operator conduct the required level of random testing. For 1997, the number of random drug tests conducted was required to equal at least 50 percent of the total number of FTA-covered employees. The number of random alcohol tests conducted was required to be at least 25 percent of the total number of FTA-covered employees.

A slightly higher percentage of contractors met the required drug testing level than did transit systems (52.13% to 52.01%, respectively). A higher percentage of large operators (58.73%) met the drug testing requirements than small operators (49.65%). A majority of both the large and small operators (59.38% and 51.82%, respectively) met the drug testing compliance. This information is presented in Table 2-4.

Table 2-4. Percent of Operators that Met the Required Random Testing Levels for 1997

	Drug Testing				Alcohol Testing			
	Transit Systems	Contractors	Large Operators	Small Operators	Transit Systems	Contractors	Large Operators	Small Operators
Met Requirement	52.01	52.13	58.73	49.65	55.30	50.43	59.38	51.82
Did Not Meet Requirement	47.99	47.87	41.17	50.35	44.70	49.57	40.62	48.18

[2] Because the drug testing results for USCG-covered employees were co-mingled with the results for FTA-covered employees, a separate presentation of the drug testing results for USCG-covered employees was not possible.

2.4 FTA-Required Training

Based on the information reported, 54,036 FTA-covered employees (25.20% of the total number of employers reporting) received at least 60 minutes of initial training on the consequences, manifestations, and behavioral cues of illegal drug use during 1997. In addition, 6,879 supervisory personnel received 60 minutes of initial training on the specific contemporaneous physical, behavioral, and performance indicators of probable drug use and 8,181 supervisory personnel received similar training for alcohol misuse during 1997.

2.5 Federal Funds

Transit systems are required to report the types of FTA funds they received. Specifically, transit systems are required to identify the particular sections of the Federal Transit Act under which they received Federal funds (i.e., Sections 5309, 5307, 5310[3], and 5311). Many of the 1,613 transit systems received funding under multiple sections, as shown in Table 2-5. Section 5309 refers to discretionary grants and loans for capital projects, new and existing fixed guideway systems, an efficient mass transportation system coordinated with other transportation systems, the introduction of new technologies, the enhancement of urban economic development or the incorporation of private investment, and mass transportation projects to meet the needs of the elderly and individuals with disabilities. Section 5307 refers to block grants for capital projects and to finance the planning, improvement, and operating costs of equipment, facilities, and associated capital maintenance items for use in mass transportation. Section 5310 refers to grants and loans for special needs of the elderly and individuals with disabilities. Section 5311 refers to financial assistance for non-urbanized areas.

Table 2-5. Number and Percent of Transit Systems that Received Federal Funds in 1997 by Source of Funding

	Section 5309	Section 5307	Section 5310	Section 5311
Number of Transit Systems	398	524	331	1,128
Percent of Transit Systems	24.67	32.49	20.52	69.93

[3] Recipients of Section 5310 funds are not required to comply with the FTA drug and alcohol rules, unless they provide contract services to recipients of Section 5307, 5309, and 5311 funds. In those instances, they must report as contractors.

3. DRUG TEST RESULTS

This chapter provides background information and a summary of the 1997 drug testing results. For drug testing, a urine specimen is collected for analysis. The prohibited drugs for which each urine specimen must be tested are marijuana, cocaine, phencyclidine (PCP), opiates, and amphetamines.

3.1 Introduction

A total of 190,831 samples were collected for all types of drug testing in 1997. The types of tests administered are: pre-employment; random; post-accident; reasonable suspicion; return-to-duty; and follow-up. The results of the random drug testing provide an indication of the overall level of industry-wide drug use among FTA-covered transit system and contractor employees.

As shown in Table 3-1, in 1997 a total of 107,047 specimens were collected under random drug testing during the year. Overall, 1.21 percent of those specimens tested positive for one or more of the five prohibited drugs. Among transit systems, 1.06 percent of all random specimens tested positive, and among contractors 1.92 percent tested positive.

Table 3-1. 1997 Random Drug Test Results

Employer	Number of Specimens	Number Positive	Percent Positive
Transit Systems	88,799	945	1.06
Contractors	18,248	350	1.92
Totals	**107,047**	**1,295**	**1.21**

Among large operators, 1.17 percent of all random specimens tested positive, and among small operators 1.34 percent tested positive, as depicted in Table 3-2. The FTA drug rule provides that if the results from industry-wide drug testing are less than 1.00 percent for 2 consecutive years, then the FTA may lower the required random drug testing rate from the current 50 percent requirement to 25 percent. However, in 1995, 1996, and 1997, the industry-wide random positive rate exceeded 1.00 percent.

Table 3-2. Random Drug Test Results by Employer Size for 1997

Operator Size	Number of Specimens	Number Positive	Percent Positive
Large	83,608	982	1.17
Small	23,439	313	1.34
Totals	**107,047**	**1,295**	**1.21**

3.2 Results of Drug Tests Presented by Test Types

Six types of drug testing information are required of transit systems and their contractors: pre-employment; random; post-accident; reasonable suspicion; return-to-duty; and follow-up. Table 3-3 presents drug test results by test type for transit systems, contractors, and their combined totals. It shows the number of specimens collected, the number of positive results, and the percent of positive results. The totals indicate that the positive drug test results show some variation when viewed by test types. Over all employment categories, 8.08 percent of the reasonable suspicion tests were positive. Return-to-duty tests were 3.37 percent positive. Pre-employment, post-accident, and follow-up tests were 2.69, 1.87, and 1.76 percent, respectively. Random tests had the lowest percentage of positive results at 1.21 percent.

The positive results were higher for contractors than for transit systems in all six testing categories. For pre-employment testing, contractors had 3.81 percent positive versus 1.98 percent for transit systems. Random testing rates were 1.92 percent and 1.06 percent for contractors and transit systems, respectively. For post-accident testing, contractors exceeded transit systems with a positive rate of 2.94 percent versus 1.59 percent. Reasonable suspicion testing yielded a testing rate of 15.20 percent for contractors and 6.30 percent for transit systems. Contractors had 6.67 percent positive tests for return-to-duty testing versus 2.80 percent for transit systems. For follow-up testing contractors and transit systems had positive testing rates of 4.05 percent and 1.65 percent, respectively.

3.2.1 Pre-Employment Drug Test Results

Pre-employment drug test results produced an overall positive rate of 2.69 percent. Transit systems had 1.98 percent positive, while contractors had 3.81 percent positive.

For pre-employment testing, CDL/non-revenue vehicle personnel had the highest overall positive result, at 3.80 percent. For transit systems, this employee category was also the highest at 4.09 percent. For contractors, revenue vehicle and equipment maintenance workers had the highest positive result at 6.27 percent. For both transit systems and contractors, armed security personnel had the lowest positive rate, with 0.20 percent and 0.27 percent, respectively.

Table 3-3. Drug Test Results by Test Type and Employee Category for 1997									
	Transit Systems			Contractors			Totals		
Test Type	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive
TOTALS BY TEST TYPE, ALL EMPLOYEE CATEGORIES									
Pre-Employment	32,419	643	1.98%	20,506	781	3.81%	52,925	1,424	2.69%
Random	88,799	945	1.06%	18,248	350	1.92%	107,047	1,295	1.21%
Post-Accident	10,914	173	1.59%	2,962	87	2.94%	13,876	260	1.87%
Reasonable Suspicion	881	59	6.70%	171	26	15.20%	1,052	85	8.08%
Return-to-Duty	1,854	52	2.80%	315	21	6.67%	2,169	73	3.37%
Follow-Up	13,120	216	1.65%	642	26	4.05%	13,762	242	1.76%
TOTALS	**147,987**	**2,088**	**1.41%**	**42,844**	**1,291**	**3.01%**	**190,831**	**3,379**	**1.77%**
	Transit Systems			Contractors			Totals		
Employee Category	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive
PRE-EMPLOYMENT									
Revenue Vehicle Operation	26,062	491	1.88%	18,278	699	3.82%	44,340	1,190	2.68%
Revenue Veh. and Equip. Maint.	4,130	114	2.76%	1,068	67	6.27%	5,198	181	3.48%
Revenue Veh. Control/Disp.	1,117	12	1.07%	720	13	1.81%	1,837	25	1.36%
CDL/Non-Revenue Vehicle	611	25	4.09%	73	1	1.37%	684	26	3.80%
Armed Security Personnel	499	1	0.20%	367	1	0.27%	866	2	0.23%
RANDOM									
Revenue Vehicle Operation	59,759	667	1.12%	14,101	292	2.07%	73,860	959	1.30%
Revenue Veh. and Equip. Maint.	19,826	211	1.06%	2,197	36	1.64%	22,023	247	1.12%
Revenue Veh. Control/Disp.	5,861	35	0.60%	1,329	18	1.35%	7,190	53	0.74%
CDL/Non-Revenue Vehicle	1.910	32	1.68%	202	1	0.49%	2,112	33	1.56%
Armed Security Personnel	1,443	0	0.00%	419	3	0.72%	1,862	3	0.16%

Table 3-3. Drug Test Results by Test Type and Employee Category for 1997 (continued)									
	Transit Systems			Contractors			Totals		
Test Type	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive
POST-ACCIDENT									
Revenue Vehicle Operation	9,906	162	1.64%	2,793	84	3.01%	12,699	246	1.94%
Revenue Veh. and Equip. Maint.	703	10	1.42%	112	2	1.79%	815	12	1.47%
Revenue Veh. Control/Disp.	163	0	0.00%	24	0	0.00%	187	0	0.00%
CDL/Non-Revenue Vehicle	79	1	1.27%	14	0	0.00%	93	1	1.08%
Armed Security Personnel	63	0	0.00%	19	1	5.26%	82	1	1.22%
REASONABLE SUSPICION									
Revenue Vehicle Operation	729	45	6.17%	143	18	12.59%	872	63	7.22%
Revenue Veh. and Equip. Maint.	101	12	11.88%	22	7	31.82%	123	19	15.44%
Revenue Veh. Control/Disp.	36	0	0.00%	2	0	0.00%	38	0	0.00%
CDL/Non-Revenue Vehicle	15	2	13.33%	4	1	25.00%	19	3	15.79%
Armed Security Personnel	0	0	0.00%	0	0	0.00%	0	0	0.00%
RETURN-TO-DUTY									
Revenue Vehicle Operation	1,336	32	2.40%	279	19	6.81%	1,615	51	3.16%
Revenue Veh. and Equip. Maint.	397	14	3.53%	27	2	7.41%	424	16	3.77%
Revenue Veh. Control/Disp.	47	5	10.64%	4	0	0.00%	51	5	9.80%
CDL/Non-Revenue Vehicle	52	1	1.92%	1	0	0.00%	53	1	1.89%
Armed Security Personnel	22	0	0.00%	4	0	0.00%	26	0	0.00%
FOLLOW-UP									
Revenue Vehicle Operation	8,491	139	1.64%	558	19	3.41%	9,049	158	1.75%
Revenue Veh. and Equip. Maint.	3,599	62	1.72%	59	7	11.86%	3,658	69	1.89%
Revenue Veh. Control/Disp.	495	6	1.21%	21	0	0.00%	516	6	1.16%
CDL/Non-Revenue Vehicle	500	7	1.40%	4	0	0.00%	504	7	1.39%
Armed Security Personnel	35	2	5.71%	0	0	0.00%	35	2	5.71%

3.2.2 Random Drug Test Results

Random testing was the most frequently conducted test industry-wide (56.10% of all tests). Random testing also was the most frequently conducted test type by transit systems (60%). However, random testing was not the most frequently conducted test type by contractors (42.59%). Contractors conducted more pre-employment tests than any other test type (47.86%).

Random testing accounted for the lowest percent of positive results compared to the other testing categories, resulting in a positive result of 1.21 percent industry-wide. Random testing had the lowest positive rate for both transit systems (1.06%) and contractors (1.92%). Within this same category, only revenue vehicle control and dispatch employees and armed security personnel had overall positive rates less than 1.00 percent.

3.2.3 Post-Accident Drug Test Results

Post-accident testing was 1.59 percent positive for transit systems and 2.94 percent positive for contractors. For contractors, there were no positive tests for CDL/non-revenue and revenue vehicle control/dispatch for this test type. The contractor employee category reporting the highest positive result was armed security personnel, with 5.26 percent. For transit systems, the revenue vehicle operator category ranked highest at 1.64 percent positive.

3.2.4 Reasonable Suspicion Drug Test Results

Reasonable suspicion testing produced the highest percent of positive results for transit systems, contractors, and industry-wide (6.30%, 15.20%, and 8.08% respectively). However, while this testing type accounted for the highest percent of positive results, it was the least often conducted test. Overall, it accounted for 1,052 tests or 0.55 percent of all drug tests administered. Within the reasonable suspicion category, CDL/non-revenue vehicle personnel tested positive most frequently with a rate of 15.79 percent. Revenue vehicle operators and equipment maintenance employees had the next highest rate within this test type at 15.44 percent. Among contractors, positive results were found more often for tests of revenue vehicle and equipment maintenance, CDL/non-revenue vehicle, and revenue vehicle operator personnel than for transit system employees in the same categories (31.82% vs. 11.88%; 25.00% vs. 13.33%; and 12.59% vs. 6.17%).

For both transit agencies and contractors there were no positive reasonable suspicion tests for revenue vehicle control/dispatch and armed security personnel.

3.2.5 Return-to-Duty Drug Test Results

Overall, 3.37 percent of the specimens tested in the return-to-duty category were positive. Transit systems reported positive test results of 2.80 percent. Contractors indicated positive test results at 6.67 percent.

Overall, the revenue vehicle control/dispatch employee category had the highest percent of positive results within this test type at 9.80 percent. Revenue vehicle and equipment maintenance employees ranked second with 3.77 percent. No positive results were found for the 26 tests conducted for armed security personnel (22 tests conducted by transit systems and four by contractors).

3.2.6 Follow-Up Drug Test Results

Overall results for follow-up testing were 1.76 percent positive for follow-up drug testing. Transit systems reported results at 1.65 percent positive. Contractors reported a higher positive result of 4.05 percent. The majority of tests in this category were conducted by transit systems (13,120, or 95.33%).

Overall within this test type, the armed security personnel employee category accounted for the highest percent of positive results at 5.71 percent, and the revenue vehicle and equipment maintenance employee category ranked second with 1.89 percent positive test results.

3.3 Results of Drug Tests Presented by Employee Category

This section presents drug test results by employee category for transit systems and contractors and their combined totals. Table 3-4 identifies the number of specimens collected, the number of positive results, and the percent of positive results.

The majority (74.64%) of the specimens were collected from revenue vehicle operators. Revenue vehicle and equipment maintenance personnel had the next greatest amount of specimens collected at 16.90 percent, with the remainder (8.47%) from employees in the other three categories: revenue vehicle control/dispatch; CDL/non-revenue vehicle; and armed security personnel.

CDL/non-revenue vehicle operators had the highest positive number of pre-employment drug tests, while armed security personnel had the lowest. CDL/non-revenue operators, again, had the highest percentage of positive random drug tests at 1.56 percent, versus armed security personnel who had the lowest at 0.16 percent.

CDL/non-revenue vehicles had the highest percentage of reasonable suspicion testing (15.79%); revenue vehicle control/dispatchers and armed security personnel again had none. Revenue vehicle operators, with 1.94 percent, had the highest rate of post-accident positive drug tests, while revenue vehicle control/dispatchers had the least, with zero.

Revenue vehicle control/dispatchers had the highest positive rate in one area, return-to-duty testing, with 9.80 percent, while armed security personnel had the least with zero. Armed security personnel, however, had the greatest percent of positive follow-up drug tests with 5.71 percent, while revenue vehicle control/dispatchers had the lowest number of positives with 1.16 percent.

Table 3-4. Drug Test Results by Employee Category and Test Type for 1997									
	Transit Systems			Contractors			Totals		
Employee Category	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive
TOTALS BY EMPLOYEE CATEGORY, ALL TEST TYPES									
Revenue Vehicle Operation	106,283	1,536	1.45%	36,152	1,131	3.13%	142,435	2,667	1.87%
Revenue Veh. and Equip. Maint.	28,756	423	1.47%	3,485	121	3.47%	32,241	544	1.69%
Revenue Veh. Control/Disp.	7,719	58	0.75%	2,100	31	1.48%	9,819	89	0.91%
CDL/Non-Revenue Vehicle	3,167	68	2.15%	298	3	1.01%	3,465	71	2.05%
Armed Security Personnel	2,062	3	0.15%	809	5	0.62%	2,871	8	0.28%
TOTALS	**147,987**	**2,088**	**1.41%**	42,844	1,291	3.01%	190,831	3,379	1.77%
	Transit Systems			Contractors			Totals		
Test Type	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive
REVENUE VEHICLE OPERATOR									
Pre-Employment	26,062	491	1.88%	18,278	699	3.82%	44,340	1,190	2.68%
Random	59,759	667	1.12%	14,101	292	2.07%	73,860	959	1.30%
Post-Accident	9,906	162	1.64%	2,793	84	3.01%	12,699	246	1.94%
Reasonable Suspicion	729	45	6.17%	143	18	12.59%	872	63	7.22%
Return-to-Duty	1,336	32	2.40%	279	19	6.81%	1,615	51	3.16%
Follow-Up	8,491	139	1.64%	558	19	3.41%	9,049	158	1.75%
REVENUE VEHICLE AND EQUIPMENT MAINTENANCE									
Pre-Employment	4,130	114	2.76%	1,068	67	6.27%	5,198	181	3.48%
Random	19,826	211	1.06%	2,197	36	1.64%	22,023	247	1.12%
Post-Accident	703	10	1.42%	112	2	1.79%	815	12	1.47%
Reasonable Suspicion	101	12	11.88%	22	7	31.82%	123	19	15.45%
Return-to-Duty	397	14	3.53%	27	2	7.41%	424	16	3.77%
Follow-Up	3,599	62	1.72%	59	7	11.86%	3,658	69	1.89%

Table 3-4. Drug Test Results by Employee Category and Test Type for 1997 (continued)									
	Transit Systems			Contractors			Totals		
Test Type	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive	Number of Specimens Collected	Number of Positive Results	Percent Positive
REVENUE VEHICLE CONTROL/ DISPATCH									
Pre-Employment	1,117	12	1.07%	720	13	1.81%	1,837	25	1.36%
Random	5,861	35	0.60%	1,329	18	1.35%	7,190	53	0.74%
Post-Accident	163	0	0.00%	24	0	0.00%	187	0	0.00%
Reasonable Suspicion	36	0	0.00%	2	0	0.00%	38	0	0.00%
Return-to-Duty	47	5	10.64%	4	0	0.00%	51	5	9.80%
Follow-Up	495	6	1.21%	21	0	0.00%	516	6	1.16%
CDL/NON-REVENUE VEHICLE									
Pre-Employment	611	25	4.09%	73	1	1.37%	684	26	3.80%
Random	1,910	32	1.68%	202	1	0.49%	2,112	33	1.56%
Post-Accident	79	1	1.27%	14	0	0.00%	93	1	1.08%
Reasonable Suspicion	15	2	13.33%	4	1	25.00%	19	3	15.79%
Return-to-Duty	52	1	1.92%	1	0	0.00%	53	1	1.89%
Follow-Up	500	7	1.40%	4	0	0.00%	504	7	1.39%
ARMED SECURITY PERSONNEL									
Pre-Employment	499	1	0.20%	367	1	0.27%	866	2	0.23%
Random	1,443	0	0.00%	419	3	0.72%	1,862	3	0.16%
Post-Accident	63	0	0.00%	19	1	5.26%	82	1	1.22%
Reasonable Suspicion	0	0	0.00%	0	0	0.00%	0	0	0.00%
Return-to-Duty	22	0	0.00%	4	0	0.00%	26	0	0.00%
Follow-Up	35	2	5.71%	0	0	0.00%	35	2	5.71%

3.3.1 Drug Test Results for Revenue Vehicle Operation Category

Industry-wide, the most frequently tested employees were revenue vehicle operators (142,435 of 190,831 tests or 74.63 percent of all tests). In this employee category, 74.61 percent of the employees tested were from transit systems, while contractors accounted for 25.38 percent of the tests.

Random testing for this employee category industry-wide resulted in 1.30 percent of the specimens testing positive. Transit systems recorded a positive rate of 1.12 percent, while contractors were significantly higher at 2.07 percent. In contrast to random testing, reasonable suspicion testing resulted in 7.22 percent of the positive tests in this employee category. Positive result rates for reasonable suspicion testing were also higher than for random testing for both the transit systems and contractors (6.17% and 12.59%, respectively).

3.3.2 Drug Test Results for Revenue Vehicle and Equipment Maintenance Category

Random drug testing of the revenue vehicle and equipment maintenance category produced an overall positive rate of 1.12 percent. Transit system employees in this category had a random positive test rate of 1.06 percent; the positive test rate for contractors was slightly higher at 1.64 percent. Within this employee category, reasonable suspicion testing accounted for the highest percent of positive specimens for both transit systems and contractors (11.88% and 31.82%, respectively). For transit systems and contractors, the lowest percent of positives within this employee category was for random tests; 1.06 percent for transit systems and 1.64 percent for contractors. Pre-employment, follow-up, and return-to-duty test results in this employee category also had a higher percent of positives than did random testing for both contractors and transit systems.

3.3.3 Drug Test Results for Revenue Vehicle Control/Dispatch Category

Random testing in this employee category resulted in 0.74 percent of the specimens testing positive. Transit systems reported 0.60 percent positive, and contractors reported 1.35 percent positive.

Within this employee category, return-to-duty tests had the highest percent of positive results overall (9.80%). There were zero positive return-to-duty tests for contractors; however transit systems reported a positive rate of 10.64 percent. For transit systems, pre-employment, random, post-accident, and follow-up testing positives were 1.07 percent, 0.60 percent, 0.00 percent and 1.21 percent, respectively. For contractors, 1.81 percent of pre-employment specimens were positive and 1.35 percent of random tests were positive.

There were no positive test results for post-accident, reasonable suspicion, return-to-duty, and follow-up tests for contractors. For transit systems there were no positive results for reasonable suspicion testing.

3.3.4 Drug Test Results for CDL/Non-Revenue Vehicle Category

Overall random testing of this employee category resulted in 1.56 percent of the specimens testing positive. Results for transit systems were 1.68 percent, and lower for contractors at 0.49 percent.

Other testing within this employee category revealed that reasonable suspicion had the highest percent of positive test results (15.79% overall). This was true for both the transit systems, with 13.33 percent and contractors at 25.00 percent. In addition, contractors reported no positive results for positive post-accident, return-to-duty, and follow-up testing, while transit systems reported 1.20 percent, 1.92 percent, and 1.40 percent positive, respectively.

3.3.5 Drug Test Results for Armed Security Personnel Category

Overall positive random test results for armed security personnel were reported at 0.16 percent. Of the eight total positive results for this employee category, three occurred in random testing. In addition, there were no positive results reported by transit systems for random, post-accident, reasonable suspicion and return-to-duty testing. For contractors, there were no positives for reasonable suspicion, return-to-duty, and follow-up tests.

3.4 Distribution of Positive Drug Test Results

This section presents the distribution of positive drug test results for employees who tested positive for one or more of the five prohibited drugs. To be recorded as a positive result, an employee may have tested positive for one drug or a combination of drugs (e.g., marijuana and cocaine, etc.).

3.4.1 Distribution of Positive Drug Test Results for One or More Drugs

As presented in Table 3-5, of the 190,831 specimens collected for drug testing overall, 77.54 percent (147,987) were collected by transit systems, and 22.45 percent (42,844) were collected by contractors. Of the 190,831 total specimens collected, 3,379 tested positive for one or more drugs (1.88%). Transit systems reported 2,088 total positive results, and contractors reported 1,291.

Table 3-5. Number of Specimens Collected in 1997/Number of Positive Specimens and the Proportion of the Totals that Each Represents					
	Transit Systems		Contractors		Totals
	Number	Percent of Total	Number	Percent of Total	Number
Number of Specimens Collected	147,987	77.54	42,844	22.45	190,831
Number of Positive Specimens	2,088	61.79	1,291	38.20	3,379

3.4.2 Distribution of Positive Drug Test Results by Type of Drug

Of the five prohibited drugs, marijuana (THC) was detected most frequently (2,024 of 3,593 specimens or 56.33%), followed by cocaine (1,235 or 34.37%), as indicated in Table 3-6. The occurrence of PCP was the lowest of the five drug types, with 21 positives (0.58%). It should be noted that the total number of specimens containing each type of drug is higher than the total number of positive specimens referenced elsewhere in this report. This discrepancy is due to the reporting requirement for specimens containing multiple drugs in a single sample. For instance, one positive sample may have contained two or more drugs.

Table 3-6. Number and Percent of all Positive Specimens for 1997 that Contained Each Type of Drug by Employer Type						
	Transit Systems		Contractors		Totals	
	Number Positive	Percent of Total	Number Positive	Percent of Total	Number Positive	Percent of Total
Marijuana	1,195	54.02	829	60.03	2,024	56.33
Cocaine	820	37.07	415	30.05	1,235	34.37
PCP	10	0.45	11	0.80	21	0.58
Opiates	93	4.20	45	3.26	138	3.84
Amphetamines	94	4.25	81	5.87	175	4.87

As presented in Table 3-6, the overall number of positive test results for marijuana was 2,024: 1,195 for transit systems and 829 for contractors. For cocaine, the overall number of positive test results was 1,235: 820 for transit systems and 415 for contractors. The number of positive test results for amphetamines was 94 for transit systems and 81 for contractors. For transit systems, the number of positive test results for opiates was 93, while for contractors the number was 45. There were very few positive test results for PCP was 21: 10 positive for transit systems and 11 positive for contractors. Figure 3-1 shows the number of positive specimens by drug type for contractors and transit systems. The figures in the columns should not be totaled because this will result in double counting those employees who tested positive for more than one drug at the same time. For example, if an employee tested positive for both marijuana and cocaine it would have been recorded as one positive result. However, if the numbers from Figure 3-1 are added

together then this one positive result will be counted both as one positive marijuana test and one positive cocaine test.

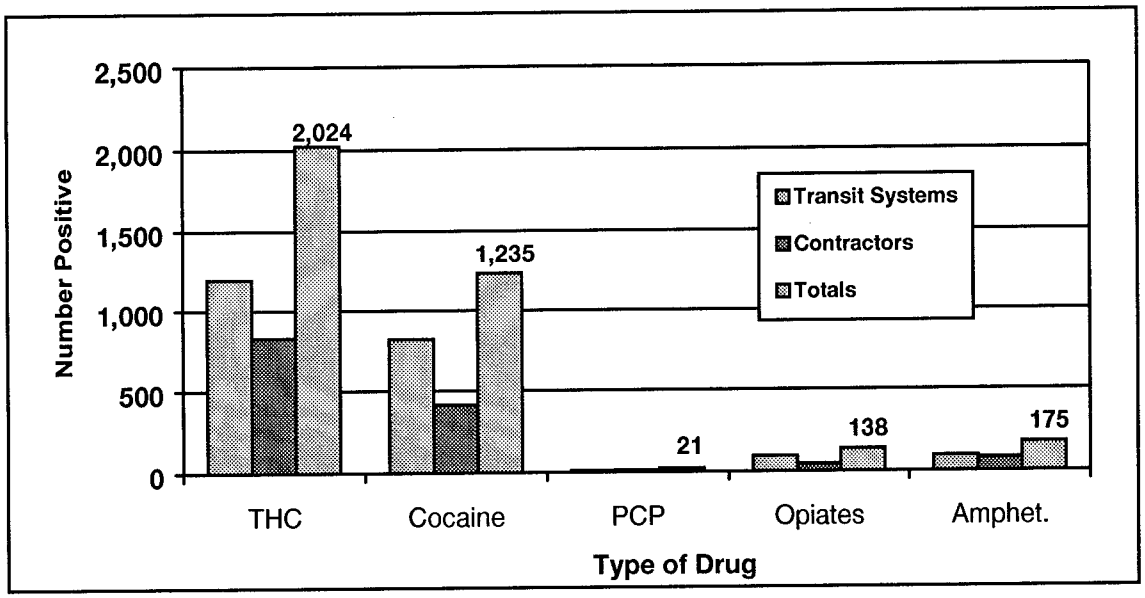

Figure 3-1. Number of Positive Specimens by Type of Drug for 1997

Overall, 1.06 percent of all 190,831 specimens collected tested positive for marijuana; 0.81 percent for transit systems and 1.93 percent for contractors, as presented in Figure 3-2. For cocaine, the overall positive rate was 0.65 percent. For transit systems, the rate was 0.55 percent; the rate was 0.97 percent for contractors. For contractors, the percent positive for opiates and amphetamines was 0.10 percent and 0.19 percent, respectively. For transit systems, the percent positive for each of those drugs was 0.06 and 0.07, respectively.

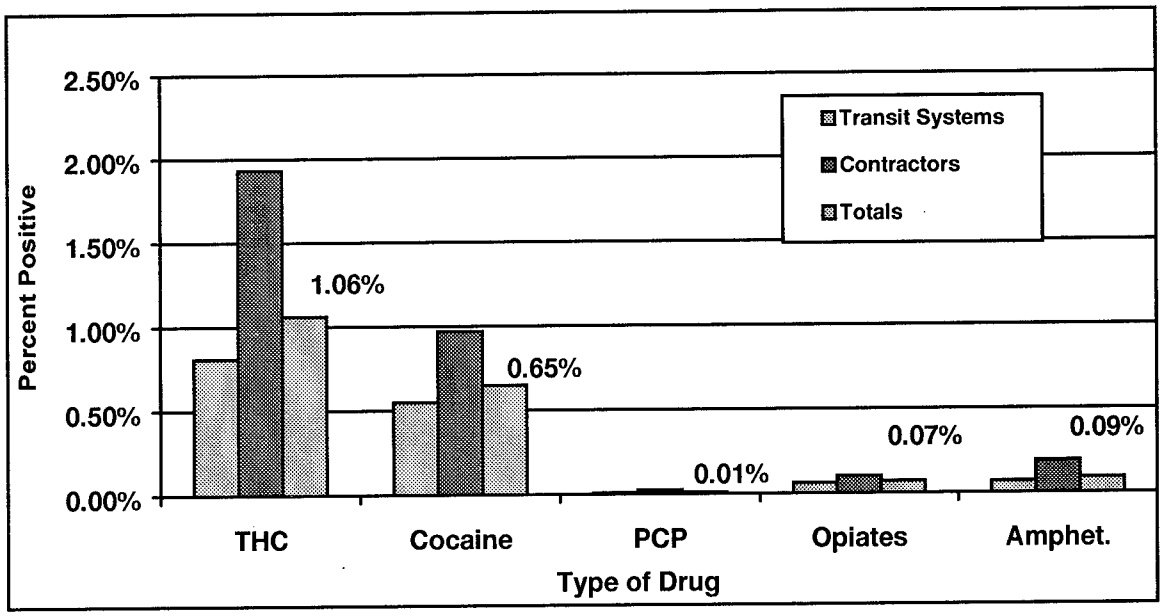

Figure 3-2. Percent of Positive Specimens by Type of Drug for 1997

3.5 Drug Test Results by FTA Region

This section reports drug test results by FTA region. As seen in Figure 3-3, of the 10 FTA Regions, Regions 9 and 5 had the highest percent of specimens positive for one or more drugs with 2.30 and 2.00 percent, respectively. Region 6 was third, with 1.81 percent positive.

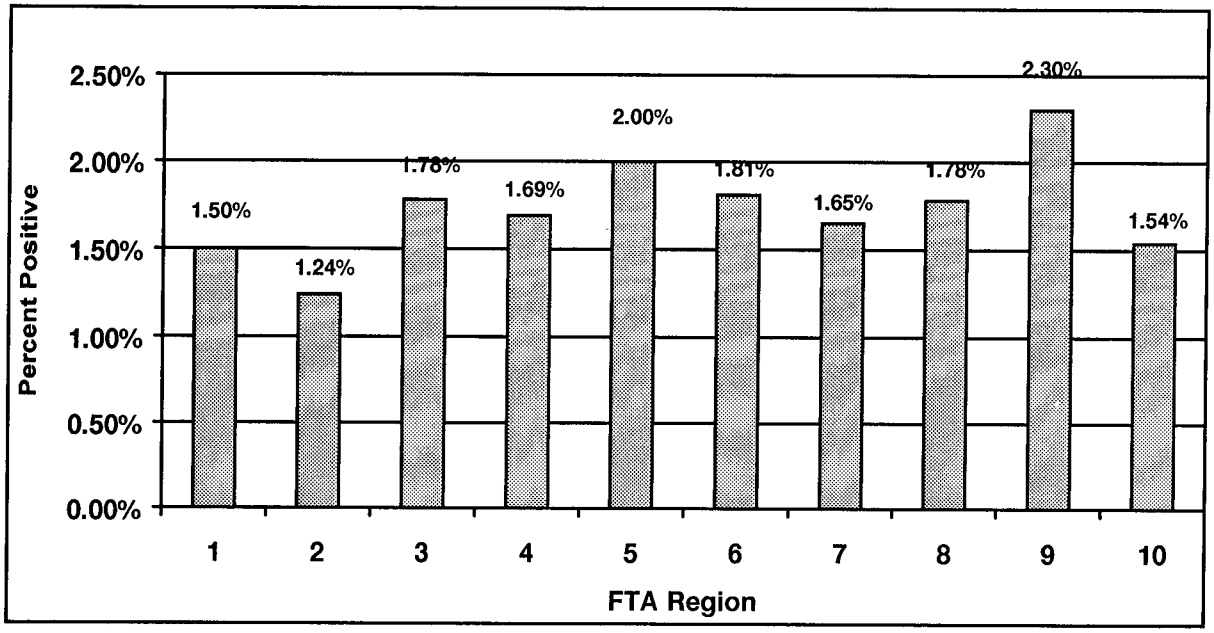

Figure 3-3. Percent of Positive Overall Drug Specimens by FTA Region for 1997

Figure 3-4 presents the regional distribution of positive drug test results. Marijuana had the highest percent of positive results in 9 out of the 10 regions. In Region 2, the rate of cocaine positives was slightly higher than the rate of marijuana positives (0.62% and 0.61%, respectively).

Region 5 had the highest percent of positive marijuana specimens with 1.26 percent. Regions 9 and 4 were second and third (1.25% and 1.18%, respectively). Region 2 had the lowest percent of specimens positive for marijuana with 0.61 percent. For cocaine, Region 3 had the highest percent of positive specimens with 0.78 percent. The region with the lowest percent of specimens positive for cocaine was Region 10 with 0.25 percent. Across all FTA Regions, the percent positive for PCP was at or below 0.02 percent. In fact, four regions had zero positives for this category (Regions 1, 4, 8, and 10). The results for opiate testing did not exceed 0.12 percent. For amphetamines, Region 9 had the highest positive rate with 0.43 percent. Two regions, Regions 1 and 2 had zero positives for amphetamines.

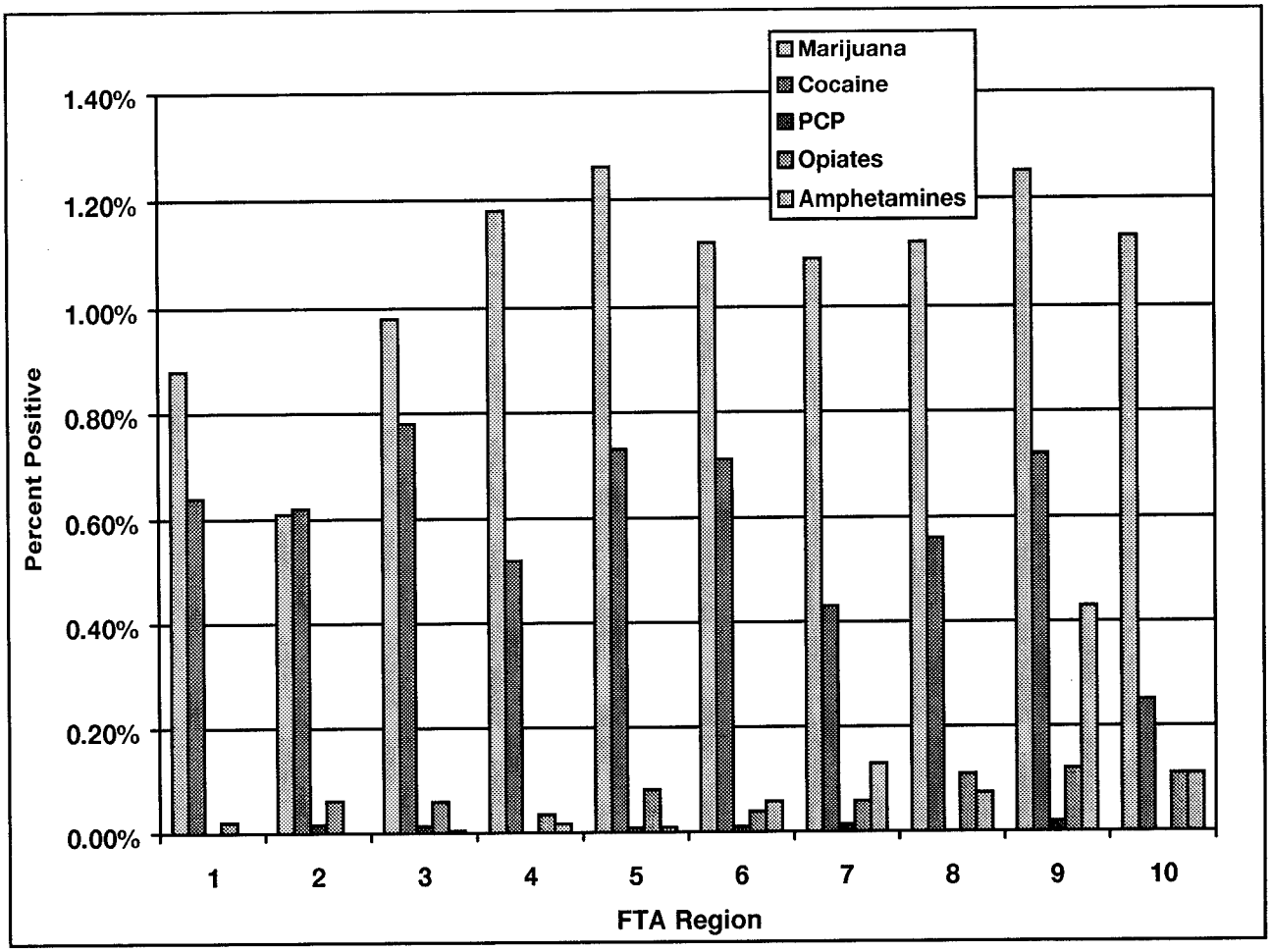

Figure 3-4. Percent of Specimens Testing Positive for Each of the Drug Types by FTA Region for 1997

3.6 Drug Test Refusals

When directed to provide specimens for drug testing, some employees refused to be tested. In 1997, there were 69 reported cases of a covered employee refusing a random drug test and 33 cases of a covered employee refusing a non-random drug test. This is a total of 102 refusals. These refusals reflect 0.05 percent of the total number of drug tests attempted.

3.7 Return-to-Duty Positive Rate

The number of employees who returned to duty after a positive drug test or who refused a drug test was 744. Because the consequences for refusing a drug test and for testing positive on a return-to-duty test are the same, the MIS form used to collect information from employers combines these figures.

3.8 Pre-Employment Drug Test Results

There were 1,424 positive specimens among the 52,925 pre-employment drug tests administered in 1997. The number of persons denied a FTA-covered position as a result of a positive test was 1,390, 2.62 percent of the total number of pre-employment drug tests and 97.61 percent of the prospective employees who tested positive in the pre-employment drug tests.

3.9 Post-Accident Drug Test Results

The reported number of accidents that resulted in a positive post-accident drug test was 260. Of these reported accidents, 173 were reported by transit systems and 87 were reported by contractors. The positive post-accident drug test result rate was 2.94 percent for contractors and 1.59 percent for transit systems. As a result of these accidents, there were five fatalities.

3.10 Comparison of Transit System and Contractor Positive Random Drug Test Results

In four out of the five employee categories, contractors had a higher percent of positive random drug test results than did transit systems (see Table 3-7). The exception was the CDL/non-revenue vehicle category, in which the transit systems random positive rate was 1.68 percent and the contractor random positive rate was 0.49 percent.

Contractors conducted a total of 18,248 random drug tests, 17.05 percent of all random drug tests conducted. From these tests, contractors had a total of 350 positive results or 27.03 percent of the total number of positive random drug tests (1,295 positive tests). The CDL/non-revenue personnel had a positive testing rate of 1.56 percent. The employee category with the lowest percent of positive random test results is armed security personnel with 0.16 percent. The three remaining employee categories had overall positive rates between 0.74 and 1.30 percent.

Table 3-7. Comparison of Positive Random Drug Test Results for 1997 by Employer Type and Employee Category

	Transit System			Contractors			Totals		
	Number of Specimens	Number Positive	Percent Positive	Number of Specimens	Number Positive	Percent Positive	Number of Specimens	Number Positive	Percent Positive
Revenue Vehicle Operation	59,759	667	1.12	14,101	292	2.07	73,860	954	1.30
Vehicle and Equipment Maintenance	19,826	211	1.06	2,197	36	1.64	22,023	247	1.12
Revenue Vehicle Control/Dispatch	5,861	35	0.60	1,329	18	1.35	7,190	53	0.74
CDL/Non-Revenue Vehicle	1,910	32	1.68	202	1	0.49	2,112	33	1.51
Armed Security Personnel	1,443	0	0	419	3	0.72	1,862	3	0.16
Totals	**88,799**	**945**	**1.06**	**18,248**	**350**	**1.92**	**107,047**	**1,295**	**1.21**

3.11 Comparison of Large Operator and Small Operator Positive Random Drug Test Results

In three of the five employee categories, small operators (those operating in areas with populations of less than 200,000) had a higher percent of positive random drug test results than did large operators (those operating in areas with populations of 200,000 or more) (see Table 3-8). In the remaining two categories (CDL/non-revenue vehicle and armed security personnel) the small operators' positive rate was 1.46 percent and zero, respectively, and the large operators' positive rate was 1.60 percent and 0.17 percent, respectively. The largest disparity was in the vehicle and equipment maintenance category, in which the small operators had a positive rate of 1.57 percent, compared to the large operators which had a positive rate of 1.07 percent.

Table 3-8. Comparison of Positive Random Drug Test Results for 1997 by Operator Size

	Large			Small		
	Number of Specimens	Number Positive	Percent Positive	Number of Specimens	Number Positive	Percent Positive
Revenue Vehicle Operation	55,635	713	1.28	18,225	245	1.35
Vehicle and Equipment Maintenance	19,609	209	1.07	2,414	38	1.57
Revenue Vehicle Control/Dispatch	5,079	33	0.65	2,111	20	0.95
CDL/Non-Revenue Vehicle	1,497	24	1.60	615	9	1.46
Armed Security Personnel	1,788	3	0.17	74	0	0
Totals	**83,608**	**982**	**1.17**	**23,439**	**313**	**1.34**

4. ALCOHOL TEST RESULTS

This chapter provides background information on the alcohol testing procedures and a summary of the 1997 alcohol test results. Section 4.1 provides an introduction and explanation of the testing procedures and the consequences of a screening test result of ≥ 0.02. This section also examines results of random testing. Sections 4.2 and 4.3 present a detailed examination of the findings according to test type and employee category. The other sections of the chapter include information on results by Federal Transit Administration (FTA) region, employees who refused testing, employees who were returned to duty, the violation rate, a comparison between transit systems and contractors, and a comparison between large and small operators.

4.1 Introduction

FTA regulations prohibit covered employees who perform safety-sensitive functions from reporting to duty or staying on duty while having an alcohol concentration ≥ 0.02. In addition, employees are prohibited from using alcohol within four hours prior to performing safety-sensitive functions and from consuming alcohol while on-call. Because employees are prohibited from using alcohol while performing safety-sensitive functions, an employer who has knowledge that an employee is using alcohol must prohibit that employee from performing these functions. (An on-call employee must be given the opportunity to acknowledge use of alcohol at the time he or she is called to duty and must be given an alcohol test if the employee claims to be able to perform his or her safety-sensitive function). The FTA provides two different sets of consequences (see Figure 4-1) should an alcohol confirmation test show that an employee's alcohol concentration is (1) ≥ 0.02 but < 0.04, or (2) ≥ 0.04. A confirmation test result that shows an alcohol concentration ≥ 0.04 results in the employee's removal from his or her safety-sensitive position. The alcohol concentration level is the alcohol in a volume of breath expressed in terms of grams of alcohol per 210 liters of breath. Alcohol tests are conducted in two parts: a screening test followed by a confirmation test for those employees whose screening test results indicate a ≥ 0.02 alcohol concentration.

An employee with a concentration of ≥ 0.02 but < 0.04 must be removed from his or her safety-sensitive position for 8 hours or until a re-test shows an alcohol concentration of < 0.02.

An employee with an alcohol concentration of ≥ 0.04 must be removed from his or her safety-sensitive position, be told about educational and treatment programs available, and be referred to a substance abuse professional.

Figure 4-1. Consequences of an Alcohol Test for FTA-Covered Employees

The data collected by the FTA from transit systems and contractors include information on the number of screening tests conducted, the number of confirmation tests conducted, and the results from these confirmation tests. In this report, the alcohol test results are derived from the number of screening tests conducted and found to be ≥ 0.04. The number of screening tests is used to better reflect accurate testing percentages. Because confirmation tests are only performed once a screening test has resulted in a result ≥ 0.02, to report rates ≥ 0.04 out of confirmation tests would result in high and misleading percentages.

Table 4-1 shows the results of random alcohol testing for transit systems and contractors. Random alcohol testing was the type of test conducted most frequently (62,161 out of a total of 93,410 tests conducted). Although Table 4-1 shows the number of random "positives" for alcohol tests ≥ 0.02 but < 0.04, for reporting purposes verified positives are considered ≥ 0.04.

Table 4-1. Random Alcohol Test Results at Both Levels for Transit Systems and Contractors for 1997

Employer	Total Screens	Number 0.02 - 0.04	Number ≥ 0.04	Percent 0.02 - 0.04	Percent ≥ 0.04
Transit Systems	52,260	51	76	0.10	0.15
Contractors	9,901	12	9	0.12	0.09
Totals	**62,161**	**63**	**85**	**0.10**	**0.14**

Figure 4-2 provides the random test results for transit systems and contractors and their combined totals at both the lower level (0.02 to < 0.04) and at the higher level (≥ 0.04) alcohol concentrations. The results differed only slightly between transit systems and contractors. Transit systems had a slightly greater percent of random alcohol test results at the higher level, ≥ 0.04. At the higher level of ≥ 0.04, transit systems had a 0.15 percent positive rate and contractors had a 0.09 percent positive rate. At the lower level, transit systems had a 0.10 percent positive rate and contractors were slightly higher with a 0.12 percent positive rate. Since there were a greater number of tests administered by transit systems, the number of random alcohol tests at ≥ 0.04 percent are also greater for transit systems (76) than for contractors (9).

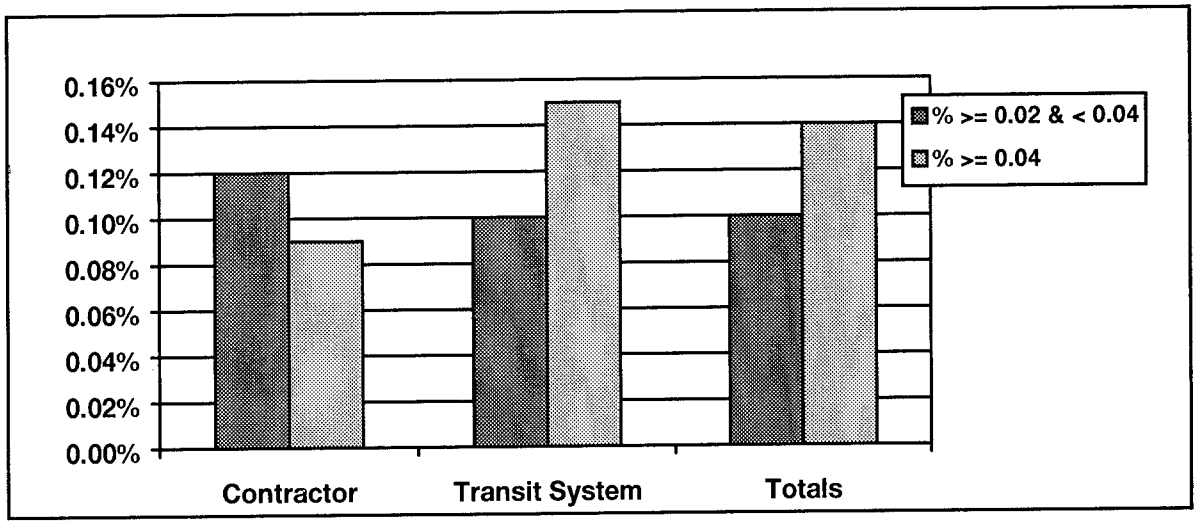

Figure 4-2. Percent of Random Alcohol Tests at Both Levels in 1997

4.2 Results of Alcohol Testing Presented by Test Type

Alcohol test information was required from transit systems and their contractors for five test types: random; post-accident; reasonable suspicion; return-to-duty; and follow-up. The requirement to conduct pre-employment testing was suspended by the FTA as of May 10, 1995. However, some employers continued to submit data for pre-employment testing in 1997. In an effort to be comprehensive, the FTA is reporting these data as submitted.

Table 4-2 presents the alcohol test results by test type and by employee category, for transit systems and contractors and identifies the combined totals. This table also presents the number of screening tests administered, the number of test results ≥ 0.04, and the percent of test results ≥ 0.04.

The totals indicate that alcohol test results ranged from 0.07 percent for pre-employment to 9.09 percent for reasonable suspicion. However, discounting reasonable suspicion, all of the other test types had test results ≥ 0.04 that were below 0.30 percent.

Table 4-2. Alcohol Test Results by Test Type and Employee Category for 1997

Test Type	Transit Systems			Contractors			Totals		
	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
TOTALS BY TEST TYPE, ALL EMPLOYEE CATEGORIES									
Pre-Employment	3,985	2	0.05%	2,691	3	0.11%	6,676	5	0.07%
Random	52,260	76	0.15%	9,901	9	0.09%	62,161	85	0.14%
Post-Accident	10,860	12	0.11%	2,622	6	0.23%	13,482	18	0.13%
Reasonable Suspicion	784	60	7.65%	140	24	17.14%	924	84	9.09%
Return-to-Duty	1,402	3	0.21%	144	0	0.00%	1,546	3	0.19%
Follow-Up	8,273	23	0.28%	348	2	0.57%	8,621	25	0.29%
TOTALS	**77,564**	**176**	**0.23%**	**15,846**	**44**	**0.28%**	**93,410**	**220**	**0.24%**
	Transit Systems			**Contractors**			**Totals**		
Employee Category	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
PRE-EMPLOYMENT									
Revenue Vehicle Operations	3,182	1	0.03%	2,357	3	0.13%	5,539	4	0.07%
Vehicle and Equipment Maintenance	481	1	0.21%	162	0	0.00%	643	1	0.16%
Revenue Vehicle Control/Dispatch	113	0	0.00%	67	0	0.00%	180	0	0.00%
CDL/Non-Revenue Vehicle	97	0	0.00%	8	0	0.00%	105	0	0.00%
Armed Security Personnel	112	0	0.00%	97	0	0.00%	209	0	0.00%
RANDOM									
Revenue Vehicle Operations	35,161	44	0.13%	7,570	6	0.08%	42,731	50	0.12%
Vehicle and Equipment Maintenance	11,767	28	0.24%	1,199	1	0.08%	12,966	29	0.22%
Revenue Vehicle Control/Dispatch	3,210	3	0.09%	711	2	0.28%	3,921	5	0.13%
CDL/Non-Revenue Vehicle	1,128	1	0.09%	110	0	0.00%	1,238	1	0.08%
Armed Security Personnel	994	0	0.00%	311	0	0.00%	1,305	0	0.00%

Table 4-2. Alcohol Test Results by Test Type and Employee Category for 1997 (continued)									
	Transit Systems			Contractors			Totals		
Employee Category	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
POST-ACCIDENT									
Revenue Vehicle Operations	9,799	10	0.10%	2,471	5	0.20%	12,270	15	0.12%
Vehicle and Equipment Maintenance	751	0	0.00%	99	0	0.00%	850	0	0.00%
Revenue Vehicle Control/Dispatch	162	1	0.62%	21	0	0.00%	183	1	0.55%
CDL/Non-Revenue Vehicle	84	1	1.19%	13	0	0.00%	97	1	1.03%
Armed Security Personnel	64	0	0.00%	18	1	5.55%	82	1	1.22%
REASONABLE SUSPICION									
Revenue Vehicle Operations	638	39	6.11%	126	20	15.87%	764	59	7.72%
Vehicle and Equipment Maintenance	98	12	12.24%	12	3	25.00%	110	15	13.64%
Revenue Vehicle Control/Dispatch	34	6	17.65%	0	0	0.00%	34	6	17.65%
CDL/Non-Revenue Vehicle	14	3	21.42%	2	1	50.00%	16	4	25.00%
Armed Security Personnel	0	0	0.00%	0	0	0.00%	0	0	0.00%
RETURN-TO-DUTY									
Revenue Vehicle Operations	992	0	0.00%	124	0	0.00%	1,116	0	0.00%
Vehicle and Equipment Maintenance	322	2	0.62%	12	0	0.00%	334	2	0.60%
Revenue Vehicle Control/Dispatch	34	1	2.94%	3	0	0.00%	37	1	2.70%
CDL/Non-Revenue Vehicle	33	0	0.00%	1	0	0.00%	34	0	0.00%
Armed Security Personnel	21	0	0.00%	4	0	0.00%	25	0	0.00%
FOLLOW-UP									
Revenue Vehicle Operations	5,290	10	0.19%	263	0	0.00%	5,553	10	0.18%
Vehicle and Equipment Maintenance	2,275	9	0.40%	77	2	2.60%	2,352	11	0.47%
Revenue Vehicle Control/Dispatch	311	1	0.32%	5	0	0.00%	316	1	0.32%
CDL/Non-Revenue Vehicle	363	3	0.83%	3	0	0.00%	366	3	0.82%
Armed Security Personnel	34	0	0.00%	0	0	0.00%	34	0	0.00%

4.2.1 Pre-Employment Alcohol Test Results

The FTA suspended the requirement for pre-employment alcohol testing as of May 10, 1995. The suspension of this test accounts for the low number of pre-employment tests administered and reported. Of the 6,676 pre-employment alcohol tests, 5 (or 0.07%) were ≥ 0.04. Because these tests were not required, and results were reported voluntarily, these reported results should not be considered reflective of industry wide pre-employment alcohol testing.

4.2.2 Random Alcohol Test Results

Random testing was the most frequently conducted test industry-wide (62,161 of 93,410 tests or 66.55%), as shown in Table 4-2. Of the random alcohol tests conducted, 0.14 percent were ≥ 0.04. For both transit systems and contractors, random testing was the most frequently conducted test, accounting for 67.38 percent and 62.48 percent of the tests administered, respectively. Most of the random test results ≥ 0.04 occurred in one of two employee categories (revenue vehicle operation or revenue vehicle and equipment maintenance). These two categories account for 92.94 percent of all random test results ≥ 0.04 (79 out of 85). The three remaining categories (revenue vehicle control/dispatch, CDL/non-revenue vehicle and armed security personnel) combined, account for 6 random test results ≥ 0.04.

4.2.3 Post-Accident Alcohol Test Results

Post-accident tests were performed most frequently after random tests, accounting for 14.43 percent of the overall tests (13,482 out of 93,410 tests). Post-accident test results ≥ 0.04 were 0.11 percent for transit systems and 0.23 percent for contractors. The results ≥ 0.04 were found primarily in the revenue vehicle operation employee category (15 of 18 tests).

4.2.4 Reasonable Suspicion Alcohol Test Results

Reasonable suspicion testing produced the highest percent of test results ≥ 0.04 for all operators, as well as for transit systems and contractors (9.09%, 7.65%, and 17.14%, respectively). However, while this test type accounted for the highest percent of results ≥ 0.04, it was the least often administered test. In total, this test type accounted for 924 tests or 0.99 percent of all alcohol tests administered.

Transit systems had 7.65 percent test results ≥ 0.04, and contractors had 17.14 percent. Within the employee categories, CDL/non-revenue vehicle had the highest percent of results ≥ 0.04 (25.00%). There were no tests conducted for armed security personnel. The actual number of test results ≥ 0.04 were the highest for revenue vehicle operations (59) although it had the lowest percent of test results ≥ 0.04 (7.72%) of any category other than armed security personnel.

4.2.5 Return-to-Duty Alcohol Test Results

Return-to-duty testing resulted in 0.19 percent of tests ≥ 0.04. This test had the third highest percent of test results ≥ 0.04. Of the 1,546 tests conducted, all but 144 were conducted by transit systems. Only three test results ≥ 0.04 were detected, all in transit systems.

4.2.6 Follow-Up Alcohol Test Results

Follow-up testing resulted in 0.29 percent of tests ≥ 0.04. Of the 25 results ≥ 0.04, 23 (92.00%) were for transit systems. Two employee categories accounted for most of the results ≥ 0.04: revenue vehicle operation and revenue vehicle and equipment maintenance (21 out of 25 tests). No test results ≥ 0.04 were reported in the armed security personnel category for transit systems or contractors.

4.3 Results of Alcohol Testing Presented by Employee Category

Table 4-3 presents the information for alcohol testing by employee category and test type for transit systems, contractors, and totals. This table shows the number of screening tests administered, the number of test results ≥ 0.04, and the percent of test results ≥ 0.04. When examining each employee category, random tests were used as a measure because random tests were the most frequently conducted test and may be the most indicative of alcohol use by FTA-covered employees of transit systems and contractors.

There is some variation in the results of random alcohol testing ≥ 0.04 among employee categories. The CDL/non-revenue vehicle employee category had the highest percent of results ≥ 0.04 (0.48%). The revenue vehicle operation employee category had a rate of 0.20 percent ≥ 0.04. The revenue vehicle equipment maintenance employee category had the second highest percent of results ≥ 0.04 (0.34%). Revenue vehicle control/dispatch had a rate of 0.30 percent. Armed security personnel had one random test result ≥ 0.04 out of 1,655 tests performed.

Table 4-3. Alcohol Test Results by Employee Category and Test Type for 1997

Employee Category	Transit Systems			Contractors			Totals		
	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
TOTALS BY EMPLOYEE CATEGORY, ALL TEST TYPES									
Revenue Vehicle Operations	55,062	104	0.19%	12,911	34	0.26%	67,973	138	0.20%
Revenue Veh. and Equip. Maint.	15,694	52	0.33%	1,561	6	0.38%	17,255	58	0.34%
Revenue Veh. Control/Dispatch	3,864	12	0.31%	807	2	0.25%	4,671	14	0.30%
CDL/Non-Revenue Vehicle	1,719	8	0.47%	137	1	0.73%	1,856	9	0.48%
Armed Security Personnel	1,225	0	0.00%	430	1	0.23%	1,655	1	0.06%
TOTALS	**77,564**	**176**	**0.23%**	**15,846**	**44**	**0.28%**	**93,410**	**220**	**0.24%**
	Transit Systems			Contractors			Totals		
Test Type	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
REVENUE VEHICLE OPERATIONS									
Pre-Employment	3,182	1	0.03%	2,357	3	0.13%	5,539	4	0.07%
Random	35,161	44	0.13%	7,570	6	0.08%	42,731	50	0.12%
Post-Accident	9,799	10	0.10%	2,471	5	0.20%	12,270	15	0.12%
Reasonable Suspicion	638	39	6.11%	126	20	15.87%	764	59	7.72%
Return-to-Duty	992	0	0.00%	124	0	0.00%	1,116	0	0.00%
Follow-Up	5,290	10	0.19%	263	0	0.00%	5,553	10	0.18%
REVENUE VEHICLE AND EQUIPMENT MAINTENANCE									
Pre-Employment	481	1	0.21%	162	0	0.00%	643	1	0.16%
Random	11,767	28	0.24%	1,199	1	0.08%	12,966	29	0.22%
Post-Accident	751	0	0.00%	99	0	0.00%	850	0	0.00%
Reasonable Suspicion	98	12	12.24%	12	3	25.00%	110	15	13.64%
Return-to-Duty	322	2	0.62%	12	0	0.00%	334	2	0.60%
Follow-Up	2,275	9	0.40%	77	2	2.60%	2,352	11	0.47%

Table 4-3. Alcohol Test Results by Employee Category and Test Type for 1997 (continued)									
	Transit Systems			Contractors			Totals		
Test Type	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
REVENUE VEHICLE CONTROL/DISPATCH									
Pre-Employment	113	0	0.00%	67	0	0.00%	180	0	0.00%
Random	3,210	3	0.09%	711	2	0.28%	3,921	5	0.13%
Post-Accident	162	1	0.62%	21	0	0.00%	183	1	0.55%
Reasonable Suspicion	34	6	17.65%	0	0	0.00%	34	6	17.65%
Return-to-Duty	34	1	2.94%	3	0	0.00%	37	1	2.70%
Follow-Up	311	1	0.32%	5	0	0.00%	316	1	0.32%
CDL/NON-REVENUE VEHICLE									
Pre-Employment	97	0	0.00%	8	0	0.00%	105	0	0.00%
Random	1,128	1	0.09%	110	0	0.00%	1,238	1	0.08%
Post-Accident	84	1	1.19%	13	0	0.00%	97	1	1.03%
Reasonable Suspicion	14	3	21.43%	2	1	50.00%	16	4	25.00%
Return-to-Duty	33	0	0.00%	1	0	0.00%	34	0	0.00%
Follow-Up	363	3	0.83%	3	0	0.00%	366	3	0.82%
ARMED SECURITY PERSONNEL									
Pre-Employment	112	0	0.00%	97	0	0.00%	209	0	0.00%
Random	994	0	0.00%	311	0	0.00%	1,305	0	0.00%
Post-Accident	64	0	0.00%	18	1	5.56%	82	1	1.22%
Reasonable Suspicion	0	0	0.00%	0	0	0.00%	0	0	0.00%
Return-to-Duty	21	0	0.00%	4	0	0.00%	25	0	0.00%
Follow-Up	34	0	0.00%	0	0	0.00%	34	0	0.00%

4.3.1 Alcohol Test Results for Revenue Vehicle Operation Category

As Table 4-3 demonstrates, more tests were conducted on revenue vehicle operators (67,973 of 93,410 tests or 72.77%) than any other employee category. Transit systems administered 70.99 percent of their tests on revenue vehicle operators while the number for contractors was 81.48 percent.

Within the revenue vehicle operator employee category, reasonable suspicion testing accounted for the highest percent of test results ≥ 0.04 (7.72%). The percent of test results ≥ 0.04 for random testing and all other testing types was below 0.20 percent. Return-to-duty testing was the lowest with zero test results ≥ 0.04. Contractors reported no return-to-duty or follow-up test results ≥ 0.04 in this employee category. As noted above, little variation in the percent of test results ≥ 0.04 exists when comparing random testing results for the revenue vehicle operation category with other employee categories.

4.3.2 Alcohol Test Results for Revenue Vehicle and Equipment Maintenance Category

The percent of random alcohol test results ≥ 0.04 for this employee category was 0.22 percent (29 of 12,966 tests)—the highest random rate recorded for all of the employee categories. Of the 29 random test results ≥ 0.04, 28 (96.55%) were for transit system employees.

Within the revenue vehicle and equipment maintenance employee category, reasonable suspicion testing accounted for the highest percent of test results ≥ 0.04 (13.64%). There were no post-accident test results ≥ 0.04 for either transit systems or contractors within this employee category. The other testing types had rates ranging from 0.16 percent to 13.64 percent. In addition to post-accident tests, contractor results show no pre-employment or return-to-duty test results ≥ 0.04 in this employee category.

4.3.3 Alcohol Test Results for Revenue Vehicle Control/Dispatch Category

Testing for transit systems and contractors in this employee category resulted in 0.31 and 0.25 percent results ≥ 0.04, respectively. The percent of random alcohol test results ≥ 0.04 for this employee category was 0.13 percent. Most of the tests conducted within this employee category were random tests, which accounted for 83.94 percent of all testing. Within this employee category, reasonable suspicion had the highest percent of test results ≥ 0.04 (17.65%). Three test types (post-accident, return-to-duty, and follow-up) each recorded one result ≥ 0.04. There were zero reasonable suspicion tests administered.

4.3.4 Alcohol Test Results for CDL/Non-Revenue Vehicle Category

Industry wide random testing in this employee category resulted in 0.48 percent of the tests being ≥ 0.04. There were only 9 test results ≥ 0.04 for all test types within this employee category. Reasonable suspicion testing had the highest percent of test results ≥ 0.04 at 25.00 percent. However, it is important to note that reasonable suspicion testing only accounted for 16 of 1,856 tests and had 4 results ≥ 0.04. No results ≥ 0.04 were found for return-to-duty testing in this employee category.

4.3.5 Alcohol Test Results for Armed Security Personnel Category

Random testing in this employee category resulted in no test results ≥ 0.04. There was only one test result ≥ 0.04 out of 1,655 (0.06%). This test was a post-accident test administered by a contractor. Armed security personnel was the employee category least tested, comprising only 1.8 percent of the total number of screening tests administered.

4.4 Alcohol Test Results by FTA Region

This section presents alcohol test results by FTA Region. A listing of states found in each FTA Region can be found in Appendix A. Figure 4-3 shows test results ≥ 0.04 combined across all alcohol test categories. Region 2 (at 0.34%) was slightly higher than the next closest region, Region 1. Six of the other regions clustered between 0.19 percent and 0.25 percent.

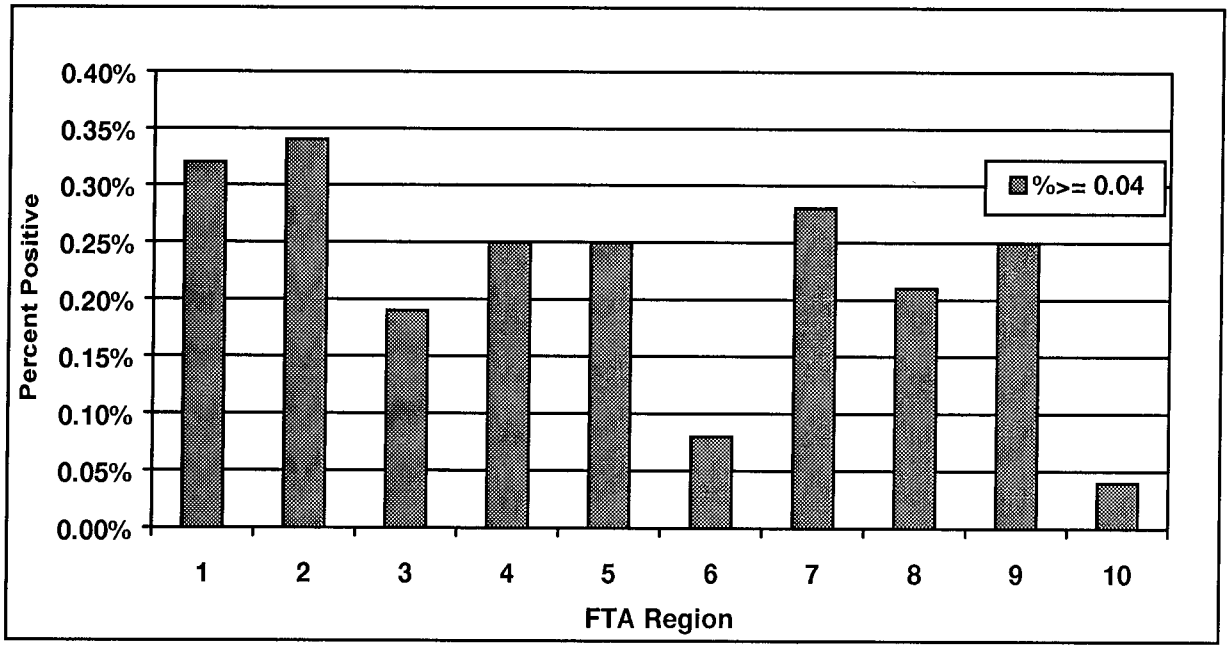

Figure 4-3. Percent of Alcohol Test Results ≥ 0.04 by FTA Region for 1997

4.5 Employees Who Refused Alcohol Testing

The FTA regulations stipulate that no employer shall permit an employee who refuses to submit to a required alcohol test to perform safety-sensitive functions. Table 4-4 shows that the number of employees who refused to be tested for alcohol is small (53 employees vs. 93,410 tests administered). Of the 53 employees who refused testing, 67.92 percent (36) refused a random test.

Table 4-4. Number of FTA-Covered Employees Who Refused Alcohol Testing in 1997

Alcohol Test Type	Number of Screening Tests	Number of Employees Who Refused Testing
Random	62,161	36
Non-Random	31,249	17
Total	93,410	53

4.6 Employees Returned to Duty

For 1997, 216 employees who had previously engaged in alcohol misuse were returned to duty. Each individual had to undergo a return-to-duty test and have a result indicating an alcohol concentration < 0.02. However, the reported figure of 216 employees may not be a reliable number. This figure was the total of all responses to the question on the MIS form that instructed employers to record the number of employees who had engaged in alcohol misuse and were returned to duty during the reporting period. In another section of the form, employers were asked to record the total number of return-to-duty tests conducted; which were 1,546.

4.7 Post-Accident Alcohol Test Results

Employers are required to report the number of accidents that resulted in a post-accident alcohol test indicating an alcohol concentration ≥ 0.04. Employers reported that there were 17 such accidents recorded during the reporting period. Furthermore, employers were required to report the results of their post-accident alcohol testing. Eighteen tests indicated alcohol levels ≥ 0.04 from the 13,482 tests conducted, as shown in Table 4-2.

4.8 Violation Rate

The FTA alcohol testing rule defines the violation rate as the number of random alcohol test results ≥ 0.04 plus the number of FTA-covered employees who refused a random test, divided by the total number of random tests plus the number of FTA-covered employees who refused a random test.

The formula below presents the violation rate for all operators (transit systems and contractors):

$$\frac{\textit{Random alcohol test results} \geq 0.04\% + \textit{number refused random testing}}{\textit{Total random tests + number refused random testing}} = \frac{(85+36)}{(62{,}161+36)} = \frac{121}{62{,}197} = 0.19\%$$

4.9 Comparison of Transit System and Contractor Random Alcohol Test Results ≥ 0.04

Table 4-5 presents a comparison of the random alcohol test results ≥ 0.04 for transit systems and contractors. In general, there is a close correlation for each employee category between transit systems and contractors. Of the 12,966 revenue vehicle and equipment maintenance employees tested, 90.75 percent were transit system personnel. Of the 29 test results ≥ 0.04, 28 or 96.55% were transit system personnel. Therefore, the ratio of transit system personnel in this category (90.75%) corresponds closely with the number of test results ≥ 0.04 (96.55%). The group of employees having the lowest number of tests was CDL/non-revenue vehicle personnel, with 1,238 tests administered. Contractors showed no random test results ≥ 0.04 in the CDL/non-revenue vehicle personnel category. Revenue vehicle and equipment maintenance had the highest percent of test results ≥ 0.04 (0.22%). In addition, transit systems administered 84.07 percent of all the random tests conducted. Of the 85 random test results ≥ 0.04 (for all employee categories), 76 out of 85 or 89.41% were for transit system employees. For transit systems, revenue vehicle equipment personnel had the highest percent of test results ≥ 0.04 (0.24%). For contractors, revenue vehicle control/dispatch personnel had the highest percent of test results ≥ 0.04 (0.28%).

Table 4-5. Comparison of Random Alcohol Test Results ≥ 0.04 by Employer Type and Employee Category for 1997

	Transit Systems			Contractors			Totals		
Employee Category	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
Revenue Vehicle Operations	35,161	44	0.13	7,570	6	0.08	42,731	50	0.12
Revenue Vehicle and Equipment Maintenance	11,767	28	0.24	1,199	1	0.08	12,966	29	0.22
Revenue Vehicle Control/Dispatch	3,210	3	0.09	711	2	0.28	3,921	5	0.13
CDL/Non-Revenue Vehicle	1,128	1	0.09	110	0	0.00	1,238	1	0.08
Armed Security Personnel	994	0	0.00	311	0	0.00	1,305	0	0.00
Totals	**52,260**	**76**	**0.15**	**9,901**	**9**	**0.09**	**62,161**	**85**	**0.14**

4.10 Comparison of Large Operator and Small Operator Random Alcohol Test Results ≥ 0.04

A comparison of large operator and small operator random test results shows that large operators had a higher percentage of alcohol test results ≥ 0.04 (0.14%) than did small operators (0.10%). Large operators had a higher percentage of random test results ≥ 0.04 in the revenue vehicle operation, revenue vehicle and equipment maintenance, revenue vehicle control/dispatch and CDL/non-revenue vehicle categories. Both types of operators recorded no test results ≥ 0.04 for armed security personnel. Table 4-6 compares the random test results ≥ 0.04 for large and small operators by employee category.

Table 4-6. Random Alcohol Test Results ≥ 0.04 for Large and Small Operators by Employee Category for 1997

	Large Operators			Small Operators		
Employee Category	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Screening Tests	Number of Results ≥ 0.04	Percent ≥ 0.04
Revenue Vehicle Operations	32,871	40	0.12	9,860	10	0.10
Revenue Vehicle and Equipment Maintenance	11,755	27	0.23	1,211	2	0.17
Revenue Vehicle Control/Dispatch	2,785	4	0.14	1,136	1	0.09
CDL Non-Revenue Vehicle	995	1	0.10	243	0	0.00
Armed Security Personnel	1,262	0	0.00	43	0	0.00
Totals	**49,668**	**72**	**0.14**	**12,493**	**13**	**0.10**

Figure 4-4 provides the random test results for large and small operators and their combined total at both the lower level (0.02 to < 0.04) and at the higher level (≥ 0.04) alcohol concentrations. Large operators had a higher percentage of random test results ≥ 0.04 for both levels of alcohol concentrations.

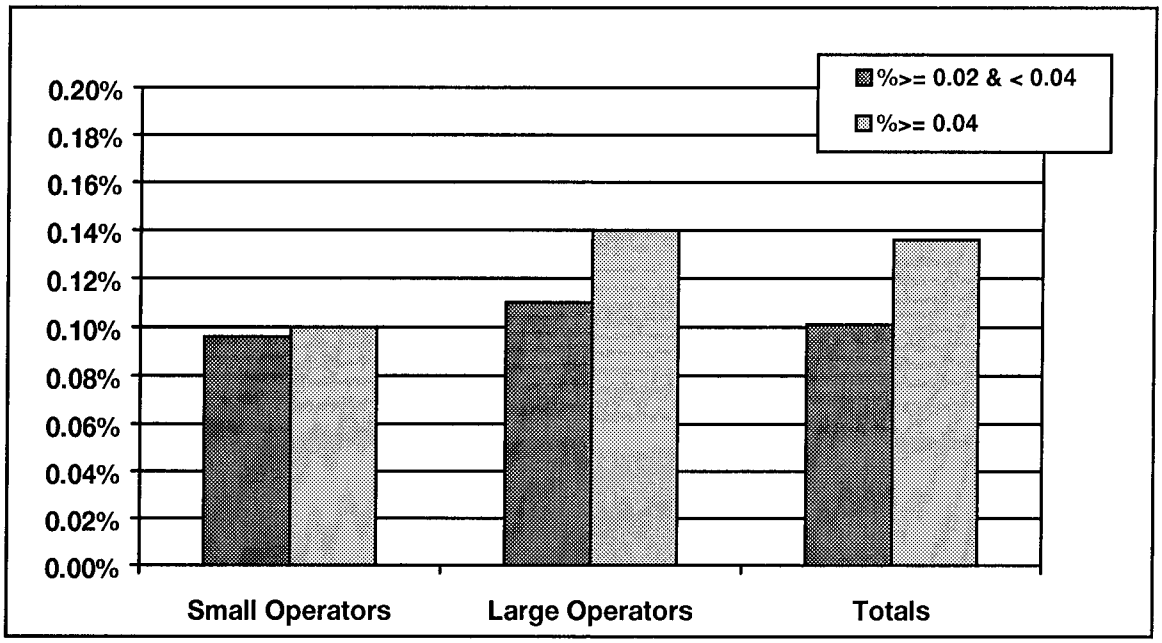

Figure 4-4. Comparison of Percent of Random Alcohol Test Results at Both Levels in 1997 for Large and Small Operators

5. COMPARISON OF DRUG AND ALCOHOL TEST RESULTS

This section compares the results of drug and alcohol testing conducted by transit systems and contractors. The comparisons provide information on the overall misuse of these substances by employee category, operator size, selected testing category, and information about how many individuals tested positive for drugs and had an alcohol test result ≥ 0.04 at the same time.

5.1 Random Drug and Alcohol Test Results

For both 1996 and 1997, the total number of random tests conducted must have equaled at least 50 percent for drugs and 25 percent for alcohol of the total number of employees performing safety-sensitive functions. Figure 5-1 presents random testing results for drugs and alcohol. The results are given separately for transit systems and contractors and as a combined total. The rate of positive random drug tests in transit systems was 1.06 percent, while the rate of random alcohol tests ≥ 0.04 was 0.15 percent. The percentages of random drug positives were slightly higher for contractors (1.92%) than for transit systems, while the random alcohol test results ≥ 0.04 were slightly lower (0.09%).

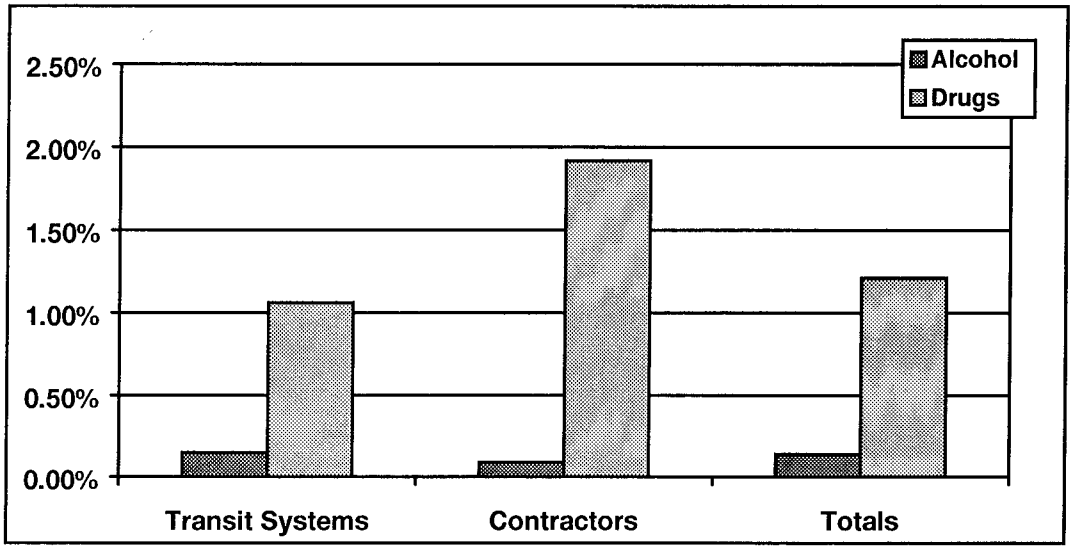

Figure 5-1. Comparison of 1997 Positive Random Drug and Alcohol Test Results by Employer Type

5.2 Results of Random Drug and Alcohol Tests by Employee Category

The percent of random positive drug test results for each employee category was higher than the percent of random alcohol test results ≥ 0.04, as shown in Table 5-1. Exactly 1.21 percent of all random drug specimens collected were positive and 0.14 percent of random alcohol test results were ≥ 0.04. CDL/non-revenue vehicle employers had the highest percentage of drug positives (1.56%) and vehicle and equipment maintenance had the highest percentage of alcohol test results ≥ 0.04 (0.22%). In addition, armed security personnel had the lowest positive percentages for both drug tests and for alcohol tests ≥ 0.04.

Table 5-1. Comparison of 1997 Random Drug and Alcohol Test Results by Employee Category						
	Alcohol			Drugs		
Employee Category	Number of Screens	Number of Results ≥ 0.04	Percent ≥ 0.04	Number of Specimens	Number Positive	Percent Positive
Revenue Vehicle Operations	42,731	50	0.12	73,860	959	1.30
Vehicle and Equipment Maintenance	12,966	29	0.22	22,023	247	1.12
Revenue Vehicle Control/Dispatch	3,921	5	0.13	7,190	53	0.74
CDL/Non-Revenue Vehicle	1,238	1	0.08	2,112	33	1.56
Armed Security Personnel	1,305	0	0.00	1,862	3	0.16
Totals	**62,161**	**85**	**0.14**	**107,047**	**1,295**	**1.21**

As shown in Table 5-2, contractors had a slightly higher percentage of random drug test positives in four of the five employee categories. The one exception was for the CDL/non-revenue vehicle category, where the percent positive for transit system specimens was 1.68 percent; for contractors the rate was 0.49 percent. This employee category had the highest percentage of positives for transit systems, while the highest percentage of positive specimens for contractors was revenue vehicle operators at 2.07 percent. The percentage of alcohol test results ≥ 0.04 was lower for contractors and transit systems. Both had less than 0.20 percent ≥ 0.04 out of the total number of tests. The highest percentage of alcohol test results ≥ 0.04 for transit systems was revenue vehicle and equipment maintenance personnel at 0.24 percent. The highest percentage of alcohol test results ≥ 0.04 for contractors was 0.28 percent for revenue vehicle control/dispatch personnel, although there were only two test results out of 711 tests.

Table 5-2. Comparison of 1997 Random Drug and Alcohol Test Results by Employer Type						
	Alcohol					
	Transit Systems			Contractors		
Employee Category	Number of Screens	Number ≥ 0.04	Percent ≥ 0.04	Number of Screens	Number ≥ 0.04	Percent ≥ 0.04
Revenue Vehicle Operations	35,161	44	0.13	7,570	6	0.08
Revenue Vehicle and Equipment Maintenance	11,767	28	0.24	1,199	1	0.08
Revenue Vehicle Control and Dispatch	3,210	3	0.09	711	2	0.28
CDL/Non-Revenue Vehicle	1,128	1	0.09	110	0	0.00
Armed Security Personnel	994	0	0.00	311	0	0.00
Totals	**52,260**	**76**	**0.15**	**9,901**	**9**	**0.09**
	Drugs					
	Transit Systems			Contractors		
Employee Category	Number of Specimens	Number Positive	Percent Positive	Number of Specimens	Number Positive	Percent Positive
Revenue Vehicle Operations	59,759	667	1.12	14,101	292	2.07
Revenue Vehicle and Equipment Maintenance	19,826	211	1.06	2,197	36	1.64
Revenue Vehicle Control/Dispatch	5,861	35	0.60	1,329	18	1.35
CDL/Non-Revenue Vehicle	1,910	32	1.68	202	1	0.49
Armed Security Personnel	1,443	0	0.00	419	3	0.72
Totals	**88,799**	**945**	**1.06**	**18,248**	**350**	**1.92**

5.3 Results of Random Drug and Alcohol Tests by Operator Size

Large and small operators combined averaged about 1.21 percent positive for all of the random specimens collected for drugs, as presented in Table 5-3. Revenue vehicle and equipment maintenance personnel accounted for the highest percentage of random drug positives for small operators (1.57%), while CDL/non-revenue vehicle personnel had the highest percentage of random positive drug tests for large operators (1.60%). The percentage of the total alcohol test results ≥ 0.04 for large operators was only slightly higher (0.14%) than for small operators (0.10%). Four of the five employee categories recorded alcohol test results ≥ 0.04 for large operators and three of five for small operators. Only revenue vehicle and equipment maintenance (0.17%), revenue vehicle operations (0.10%), and revenue vehicle control/dispatch reported alcohol test results ≥ 0.04 for small operators. Large operators reported alcohol test results ≥ 0.04 for revenue vehicle and equipment maintenance (0.23%), revenue vehicle

control/dispatch (0.14%), revenue vehicle operations (0.12%), and CDL/non-revenue vehicle (0.10%).

Table 5-3. Comparison of 1997 Random Drug and Alcohol Test Results by Operator Size

	Alcohol					
	Large Operator			Small Operator		
Employee Category	Number of Screens	Number ≥ 0.04	Percent ≥ 0.04	Number of Screens	Number ≥ 0.04	Percent ≥ 0.04
Revenue Vehicle Operations	32,871	40	0.12	9,860	10	0.10
Revenue Vehicle and Equipment Maintenance	11,755	27	0.23	1,211	2	0.17
Revenue Vehicle Control/Dispatch	2,785	4	0.14	1,136	1	0.09
CDL/Non-Revenue Vehicle	995	1	0.10	243	0	0.00
Armed Security Personnel	1,262	0	0.00	43	0	0.00
Totals	**49,668**	**72**	**0.14**	**12,493**	**13**	**0.10**
	Drugs					
	Large Operator			Small Operator		
Employee Category	Number of Specimens	Number Positive	Percent Positive	Number of Specimens	Number Positive	Percent Positive
Revenue Vehicle Operations	55,635	713	1.28	18,225	246	1.35
Revenue Vehicle and Equipment Maintenance	19,609	209	1.07	2,414	38	1.57
Revenue Vehicle Control/Dispatch	5,079	33	0.65	2,111	20	0.95
CDL/Non-Revenue Vehicle	1,497	24	1.60	615	9	1.46
Armed Security Personnel	1,788	3	0.17	74	0	0.00
Totals	**83,608**	**982**	**1.17**	**23,439**	**313**	**1.34**

5.4 Accidents That Resulted in a Positive Post-Accident Drug Test or an Alcohol Test Result ≥ 0.04

Transit systems and contractors were required by the FTA to report the number of accidents that resulted in a positive post-accident drug test and/or an alcohol test result ≥ 0.04 and data on post-accident testing of employees involved in both fatal and non-fatal accidents. There were 249 accidents reported that resulted in positive post-accident drug tests. Two of these accidents were fatal and resulted in five fatalities. All of the 17 accidents resulting in post-accident alcohol tests with results ≥ 0.04 were non-fatal.

5.5 Pre-Employment Positions Denied

All FTA-covered employees are required to pass a pre-employment drug test before beginning employment. According to FTA regulations, employers were no longer required to administer

pre-employment alcohol tests as of May 10, 1995. However, some employers continued to conduct the tests in 1997 despite the repeal of the testing regulation. Because pre-employment alcohol testing was not a requirement in 1997, the data that were submitted voluntarily cannot be considered a dependable representation of the transit industry as a whole, and those results are not reported here.

The reported pre-employment drug testing results indicate that employers consistently denied prospective employees safety-sensitive positions when they tested positive for drugs as presented in Figure 5-2. Prospective employees testing positive for drugs were denied a position 97.61 percent of the time.

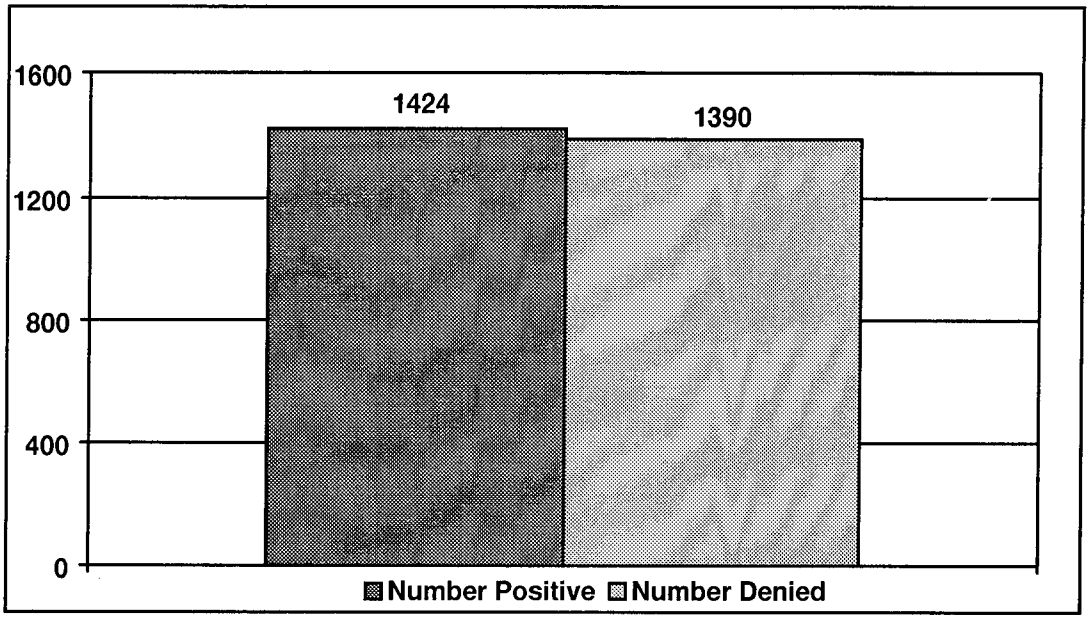

Figure 5-2. Applicants Denied Positions After a Positive Pre-Employment Drug Test in 1997

5.6 Employees Who Tested Positive for Drugs and Had an Alcohol Test Result ≥ 0.04

Employers were required to provide the FTA with the number of employees who tested positive for drugs and had an alcohol test result ≥ 0.04 at the same time. Seven employers (both transit systems and contractors) reported that they had a total of ten employees who tested positive for drugs and had an alcohol test result of ≥ 0.04 at the same time.

6. COMPARISON OF RESULTS FROM 1996 TO 1997

This chapter compares the results of drug and alcohol testing conducted by all of those employers who reported in 1996 and 1997. In 1996 a total of 2,287 individual employers submitted MIS forms; in 1997 the total was 2,317.

6.1 Random Drug and Alcohol Test Results (1996 - 1997)

For both 1996 and 1997, the total number of random tests conducted must have equaled at least 50 percent for drugs and 25 percent for alcohol of the total number of employees performing safety-sensitive functions. For drug testing, the overall percent of positive random test results was 1.50 percent in 1996, compared to 1.21 percent in 1997. This change reflects a decrease of 19 percent in the overall rate of positive random drug test results. For transit systems, the random rate in 1996 was 1.42 percent for positive drug test results and 0.17 percent for alcohol test results $\geq$ 0.04. In 1997, the random rate for transit systems was 1.06 percent for positive drug test results and 0.15 percent for alcohol test results $\geq$ 0.04. This change reflects a decrease of nearly 25 percent in the rate of positive random drug test results and a decrease of nearly 12 percent in the rate of random alcohol test results $\geq$ 0.04. In 1996, the random positive rate for contractors was 1.84 percent for drug testing and 0.11 percent for alcohol testing. In 1997, the random positive rate for contractors was 1.92 percent for drug testing and 0.09 percent for alcohol testing. This change reflects an increase of 4 percent in the rate of positive random drug test results, and a decrease of 18 percent in the rate of positive random alcohol test results. In analyzing these results, it must be noted that the individual contractors who report their results may change from year to year.

In 1996, the overall percent of random alcohol test results $\geq$ 0.04 was 0.16 percent. In 1997, the overall percent of random alcohol test results $\geq$ 0.04 was 0.14 percent. This change reflects a decrease of nearly 13 percent in the overall rate of random alcohol test results $\geq$ 0.04. In 1996, the violation rate was 0.21 percent. The violation rate is the number of random alcohol test results $\geq$ 0.04 plus the number of employees who refused a random test divided by the total number of random tests plus the number of employees who refused a random test. In 1997, the violation rate dropped to 0.19 percent, nearly a 10 percent decrease from 1996.

6.2 Random Drug Test Results by Employee Category (1996 - 1997)

In 1997, the positive random drug test result rate was within 0.41 percentage points of the 1996 rate for all five employee categories. The positive random drug test result rate decreased in all five of the employee categories. The percentage point difference (1996 vs. 1997) is greatest in the revenue vehicle and equipment maintenance and armed security personnel categories (-0.41%) and smallest in the revenue vehicle control/dispatch category (-0.16%), as illustrated in Table 6-1.

Table 6-1. Comparison of Positive Random Drug Test Results for 1996 and 1997			
Employee Category	Percent Positive		Percent Change
	1996	1997	1996-1997
Revenue Vehicle Operations	1.52	1.30	-14.47
Revenue Vehicle and Equipment Maintenance	1.63	1.22	-25.15
Revenue Vehicle Control/Dispatch	0.90	0.74	-17.78
CDL/Non-Revenue Vehicle	1.76	1.56	-11.36
Armed Security Personnel	0.57	0.16	-71.93

6.3 Random Alcohol Test Results by Employee Category (1996 - 1997)

For random alcohol testing, the change between the 1996 and 1997 rate of random alcohol test results ≥ 0.04 was less than 0.10 percentage points for all five employee categories. In three of the five employee categories, the rate of random alcohol test results ≥ 0.04 decreased, and in one category (armed security personnel) the rate of random alcohol tests ≥ 0.04 was unchanged. The one category which reflected an increase over the 1996 random alcohol test result rate, was the revenue vehicle control/dispatch category. This category reflected an increase of 0.05 percent. Of the remaining employee categories the percentage point difference (1996 vs. 1997) is highest in the CDL/non-revenue vehicle category (-0.06), as illustrated in Table 6-2.

Table 6-2. Comparison of Random Alcohol Test Results ≥ 0.04 for 1996 and 1997			
Employee Category	Percent Positive		Percent Change
	1996	1997	1996-1997
Revenue Vehicle Operations	0.14	0.12	-14.29
Revenue Vehicle and Equipment Maintenance	0.27	0.22	-18.52
Revenue Vehicle Control/Dispatch	0.08	0.13	62.50
CDL/Non-Revenue Vehicle	0.14	0.08	-42.86
Armed Security Personnel	0.00	0.00	0.00

6.4 Accidents that Resulted in a Positive Post-Accident Drug and/or Alcohol Test Result ≥ 0.04 (1996 - 1997)

In 1996, a total of 18 accidents were reported which resulted in a post-accident alcohol test result ≥ 0.04. Of these, 15 were reported by transit systems and 3 were reported by contractors, and accounted for 0.14 percent of all post-accident tests administered. In 1997, a total of 17 accidents were reported that resulted in a post-accident alcohol test result ≥ 0.04. Of these, 12 were reported by transit systems and contractors reported five. The total percent of post-accident alcohol tests with a result ≥ 0.04 in 1997 was 0.13 percent. This result indicates an overall decrease of 0.01 percent over 1996. In 1996, 239 accidents resulted in a positive post-accident drug test. Of those accidents, 166 were reported by transit systems, and contractors reported 73. The total percent positive for post-accident drug testing in 1996 was 2.09 percent. In 1997, 249 accidents were reported that resulted in a positive post-accident drug test. Of those, 164 were reported by transit systems and 83 were reported by contractors. The total percent positive for post-accident drug testing in 1997 was 1.87 percent. This result reflects an overall decrease of 0.22 percentage points over the 1996 results for post-accident drug tests.

6.5 Changes in the Rate of Positive Random Test Results by FTA Region (1996 -1997)

The rate of positive random drug tests decreased from 1996 to 1997 in nine of the ten FTA regions. In Region 7, the positive random drug test result rate increased by 0.13 percentage points. Of the nine regions to show a decrease, the greatest percentage point difference was in Region 8, which decreased by 1.16 percentage points in 1997. The smallest percentage point difference was in Region 9, which decreased by 0.04 percentage points in 1997. All of the remaining regions showed decreases of between 0.17 and 0.48 percentage points, as shown in Figure 6-1.

For random alcohol testing, four of the ten FTA regions showed an increase in the rate of test results ≥ 0.04. Five regions (Regions 2, 4, 5, 6, and 10) showed a decrease in the rate of random alcohol test results ≥ 0.04, and one (Region 9) showed no change. Of the five regions showing a decrease, the greatest percentage point difference was reported in Region 10, which decreased by 0.14 percentage points and had no random test results ≥ 0.04. The smallest percentage point difference was reported in Region 5, which decreased by 0.03 percentage points, as shown in Figure 6-2.

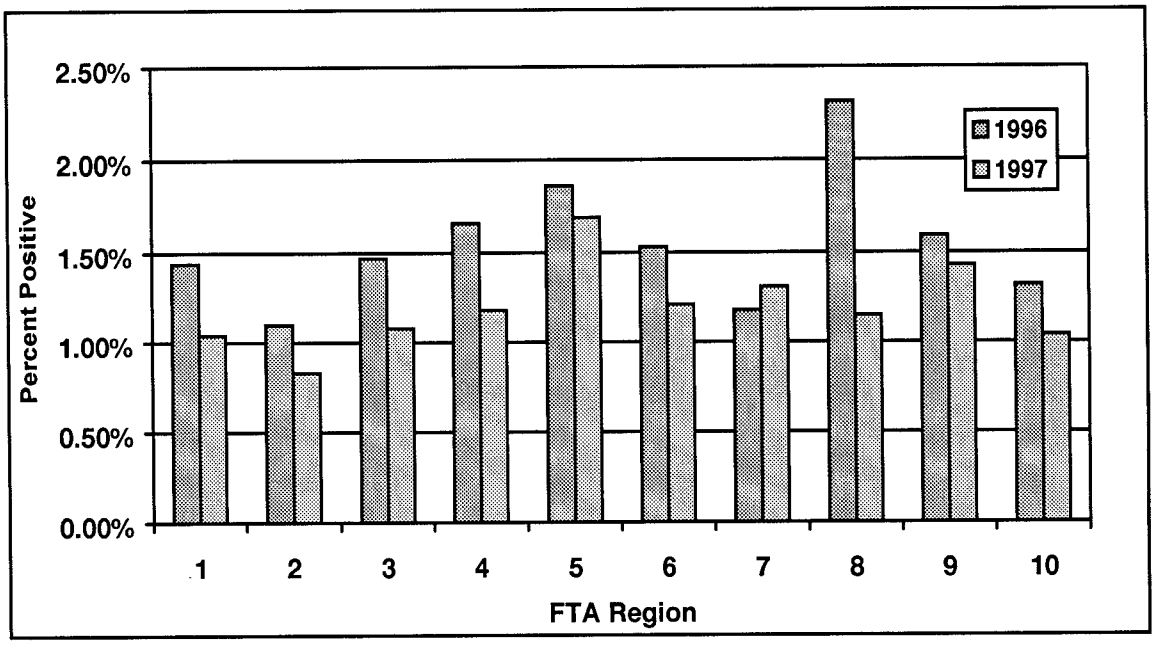

Figure 6-1. Comparison of Positive Random Drug Test Results by FTA Region for 1996 and 1997

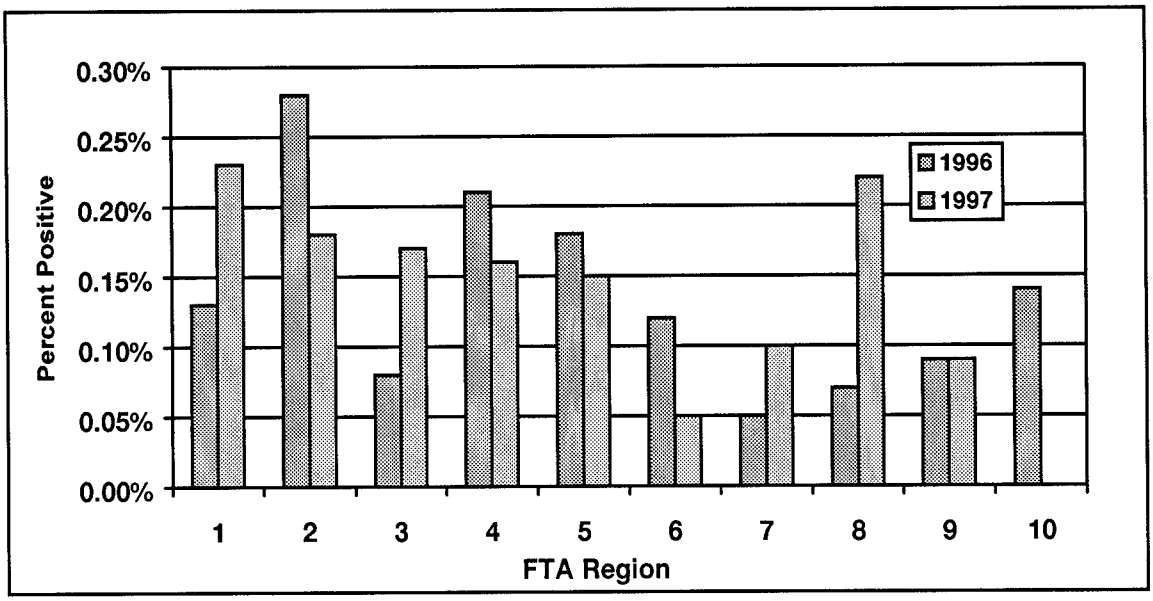

Figure 6-2. Comparison of Random Alcohol Test Results ≥ 0.04 by FTA Region for 1996 and 1997

APPENDIX A

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Accident: An occurrence associated with the operation of a vehicle, if as a result
(1) An individual dies;
(2) An individual suffers a bodily injury and immediately receives medical treatment away from the scene of the accident;
(3) With respect to an occurrence in which the mass transit vehicle involved is a bus, electric bus, van, or automobile, one or more vehicles incurs disabling damage as the result of the occurrence and is transported away from the scene by a tow truck or other vehicle; or
(4) With respect to an occurrence in which the mass transit vehicle involved is a rail car, trolley car, trolley bus, or vessel, the mass transit vehicle is removed from revenue service.

Alcohol: The intoxicating agent in beverage alcohol, ethyl alcohol or other low molecular weight alcohols including methyl or isopropyl alcohol.

Alcohol Concentration: The alcohol in a volume of breath expressed in terms of grams of alcohol per 210 liters of breath as indicated by a breath test.

Alcohol Use: The consumption of any beverage, mixture or preparation, including any medication containing alcohol.

Anti-Drug Program: A program to detect and deter the use of prohibited drugs as required by FTA regulations.

Armed Security Personnel: Function including any person who provides security to protect persons or property and who carries a firearm.

Canceled or Invalid Test: In drug testing, a drug test that has been declared invalid by a Medical Review Officer (MRO). In alcohol testing, a test that is deemed to be invalid. It is neither a positive nor a negative test.

CDL/Non-Revenue Vehicle: Job category including any transit employee who holds a Commercial Driver's License (CDL), performs a function requiring a CDL, and is not included in any other job category.

Confirmation (or Confirmatory) Test: In drug testing, a second analytical procedure to identify the presence of a specific drug or metabolite that is independent of the screening test and that uses a different technique and chemical principle from that of the screening test in order to ensure reliability and accuracy. In alcohol testing, a second test, following a screening test with a result of 0.02 or greater that provides quantitative data of alcohol concentration.

Consortium: An entity, including a group or association of employers, operators, recipients, subrecipients, or contractors, which provides drug testing services and acts on behalf of the employer.

Contractor: A person or organization that provides a service for a recipient, subrecipient, employer, or operator consistent with a specific understanding or arrangement. The understanding can be a written contract or an informal arrangement that reflects an ongoing relationship between the parties.

Covered Employee: A person, including an applicant, transferee, and certain volunteers, who performs a safety-sensitive function for a recipient, subrecipient, employer, or operator.

DOT: The United States Department of Transportation.

DOT Agency: An agency (or "operating administration") of the United States Department of Transportation administering regulations requiring drug testing.

Drug Metabolite: The specific substance produced when the human body metabolizes a given prohibited drug as it passes through the body and is excreted in urine.

Drug Test: The laboratory analysis of a urine specimen collected in accordance with 49 CFR part 40 and analyzed in a DHHS-approved laboratory.

Education: Efforts that include the display and distribution of informational materials, a community service hotline telephone number for employee assistance, and the transit entity policy regarding drug use and alcohol misuse in the workplace.

Employee: An individual designated in a DOT agency regulation as subject to drug testing and/or alcohol testing. "Employee" includes an applicant for employment.

Employer: A recipient or other entity that provides mass transportation services or which performs a safety-sensitive function for such recipient or other entity. This term includes subrecipients, operators, and contractors.

Follow-up Test: Required of employees who returned to duty in a safety-sensitive position following a positive drug test result or an alcohol test result of ≥ 0.04. A minimum of six tests must be performed during the first 12 months after the employee returned to duty.

FTA: The Federal Transit Administration, an agency of the U.S. Department of Transportation.

Large Operator: A recipient or subrecipient primarily operating in an area of 200,000 or more in population.

Medical Review Officer (MRO): A licensed physician (medical doctor or doctor of osteopathy) responsible for receiving laboratory results generated by an employer's drug testing program who has knowledge of substance abuse disorders and has appropriate medical training to interpret and evaluate an individual's confirmed positive test result together with appropriate medical history and any other relevant biomedical information.

Post-Accident Testing: Required testing for prohibited drugs and alcohol, following certain mass transit accidents. These accidents include those in which a death occurs, medical treatment away from the scene is required, or one or more of the vehicles involved incurs disabling damage.

Pre-Employment Testing: Testing that is designed to identify applicants who have consumed a prohibited drug in the recent past. Employers are prohibited from hiring an applicant for a safety-sensitive function unless they have a verified negative drug test.

Prohibited Drugs: Include marijuana (THC), cocaine, phencyclidine (PCP), opiates, or amphetamines.

Random Testing: Identifies employees who are using drugs or misusing alcohol by using an unpredictable and unannounced testing pattern.

Random Testing Rate: Drug tests equal to at least 50 percent of the total number of safety-sensitive employees and alcohol tests equal to at least 25 percent of the total number of safety-sensitive employees must be conducted each year by this method. As of 1998 the random testing rate for alcohol will be reduced to 10 percent.

Reasonable Suspicion Testing: Required when an employer has reasonable suspicion that an employee has used a prohibited drug or has misused alcohol as defined in the regulations. Reasonable suspicion testing must be based on specific, contemporaneous, articulable observations made by a trained supervisor concerning the appearance, behavior, speech, or body odor of a safety-sensitive employee.

Recipient: An entity receiving Federal financial assistance under Section 5307, 5309, or 5311 of the Federal Transit Act or under sections 103(e)(4) of Title 23 of the U.S. Code.

Refuse to Submit (to an alcohol test)**:** A covered employee fails to provide adequate breath for testing without a valid medical explanation.

Refuse to Submit (to a drug test)**:** A covered employee fails to provide a urine sample as required by 49 CFR Part 40, without a valid medical explanation, after the employee has received notice of the requirement to be tested or engages in conduct that clearly obstructs the testing process.

Return-to-Duty Testing: Required before any employee is allowed to return to duty to perform a safety-sensitive function following a verified positive drug test, an alcohol result of 0.04 or greater, a refusal to submit to a test, or any other activity that violates the regulation.

Revenue Vehicle Control/Dispatch: Job function including any person who controls the dispatch or movement of revenue service vehicles.

Revenue Vehicle Operations: Function including any person who operates or works as a crewman on revenue service vehicles at any time.

Safety-Sensitive Function: Any of the following duties:

- Operating a revenue service vehicle, including when not in revenue service;
- Operating a non-revenue service vehicle, when required to be operated by a holder of Commercial Driver's License;
- Controlling dispatch or movement of a revenue service vehicle;
- Maintaining a revenue service vehicle or equipment used in revenue service, unless the recipient receives section 5311 funding and contracts out such services; and/or
- Providing security and carrying a firearm.

Screening Test (or Initial Test): In drug testing, an immunoassay screen to eliminate "negative" urine specimens from further analysis. In alcohol testing, an analytic procedure to determine whether an employee may have a prohibited concentration of alcohol in a breath specimen.

Small Operator: A recipient or subrecipient primarily operating in an area of less than 200,000 in population.

Substance Abuse Professional (SAP): A licensed physician (Medical Doctor or Doctor of Osteopathy), or a licensed or certified psychologist, social worker, employee assistance professional, or addiction counselor (certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission), with knowledge of and clinical experience in the diagnosis and treatment of drug and alcohol-related disorders.

Transit System: The public entity that receives the Federal grant (direct grant recipient), whether or not that recipient provides mass transit services directly.

Vehicle and Equipment Maintenance: Function including any person repairing or maintaining revenue service vehicles or other equipment used in revenue service.

Verified Negative (drug test result): A drug test result reviewed by a medical review officer and determined to have no evidence of prohibited drug use.

Verified Positive (drug test result): A drug test result reviewed by a medical review officer and determined to have evidence of prohibited drug use.

APPENDIX B

FTA REGIONS

The Federal Transit Administration comprises the 10 regions identified below. The data provided by these regions has facilitated the comparison of drug and alcohol test results and the identification of regional trends and patterns.

U.S. States and Territories Reporting to the 10 FTA Regions

Region 1	Region 2	Region 3	Region 4	Region 5
Connecticut	New Jersey	Delaware	Alabama	Illinois
Maine	New York	District of Columbia	Florida	Indiana
Massachusetts	Puerto Rico	Maryland	Georgia	Michigan
New Hampshire	Virgin Islands	Pennsylvania	Kentucky	Minnesota
Rhode Island		Virginia	Mississippi	Ohio
Vermont		West Virginia	North Carolina	Wisconsin
			South Carolina	
			Tennessee	

Region 6	Region 7	Region 8	Region 9	Region 10
Arkansas	Iowa	Colorado	American Samoa	Alaska
Louisiana	Kansas	Montana	Arizona	Idaho
New Mexico	Missouri	North Dakota	California	Oregon
Oklahoma	Nebraska	South Dakota	Guam	Washington
Texas		Utah	Hawaii	
		Wyoming	Nevada	
			Northern Mariana Islands	