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AN EVALUATION OF THE
DEPARTMENT OF DEFENSE
DRUG TESTING PROGRAM

by

M. Patricia Lieb

December 1986

Thesis Advisor L. Darbyshire

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An Evaluation of the Department of Defense Drug Testing Program

by

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This thesis investigates the approaches taken by the Department of Defense (DOD) and specific Military Services with regard to testing military and civilian personnel for drug abuse. Costs and results of programs are compared. Conclusions and recommendations concerning drug testing are provided.

TABLE OF CONTENTS

I. INTRODUCTION 7
A. RESEARCH OBJECTIVE 7
B. METHODOLOGY, SCOPE AND LIMITATIONS 7
C. OUTLINE OF REMAINDER OF STUDY 7

II. THE DOD DRUG ABUSE TESTING PROGRAM 9
A. BACKGROUND AND POLICY 9
B. CHAIN OF CUSTODY PROCEDURES 10
C. LABORATORY PROCEDURES 10
D. FIELD TESTING 12
E. CIVILIAN EMPLOYEES DRUG ABUSE TESTING PROGRAM 13

III. THE NAVY URINALYSIS DRUG SCREENING PROGRAM 15
A. POLICY 15
B. DISPOSITION OF MILITARY DRUG ABUSERS 16
C. NAVY DRUG SCREENING LABORATORIES 17
D. CIVILIAN DRUG TESTING 18

IV. THE AIR FORCE URINALYSIS TESTING PROGRAM 19
A. POLICY 19
B. DISPOSITION OF MILITARY DRUG ABUSERS 19
C. DRUG TESTING LABORATORIES 20
D. CIVILIAN DRUG TESTING 20

V. THE ARMY DRUG SCREENING PROGRAM 21
A. POLICY 21
B. DISPOSITION OF MILITARY DRUG ABUSERS 21
C. ARMY DRUG SCREENING LABORATORIES 21
D. CIVILIAN DRUG ABUSE TESTING 22

VI. RESULTS OF THE DOD DRUG TESTING PROGRAM 24
A. BOOZ-ALLEN & HAMILTON INC. STUDY 24
B. SURVEYS OF DRUG USE AMONG MILITARY PERSONNEL 25
C. FY 85 DOD REPORT 27
1. FY 1985 Financial Data 27
2. FY 1985 Drug Urinalysis Testing Data 27
3. Budget Analysis 28
4. Summary 30
D. DRUG CONVICTIONS AND SEPARATIONS 31
E. "THE LARGEST AND BEST DRUG SCREENING PROGRAM IN THE NATION" 31

VII. CONCLUSIONS AND RECOMMENDATIONS 33
A. CONCLUSIONS 33
B. RECOMMENDATIONS 33

LIST OF REFERENCES 35

INITIAL DISTRIBUTION LIST 37

LIST OF TABLES

1. 1985 SURVEY RESULTS (%) OF NONMEDICAL DRUG USE 26
2. FY 1985 DRUG ABUSE PROGRAM 28
3. FY 1985 DRUG URINALYSIS TESTING DATA 29
4. FY 1985 BUDGET ANALYSIS 30
5. DRUG CONVICTIONS 1985 31
6. ADMINISTRATIVE SEPARATIONS FOR DRUG ABUSE (FY 85) 32

I. INTRODUCTION

Drug abuse testing is receiving nationwide interest with talk of all federal employees potentially being required to submit to drug testing. In addition large private corporations are discussing plans to implement drug testing in the private sector. With congressional proposals of using the U. S. military to assist in the "war on drugs", this seems an appropriate time to examine what the Department of Defense (DOD) is doing with its Drug Abuse Testing Program. Since the Program has been in place for several years now, it is very likely that other agencies, especially in the public sector, will be looking to DOD for assistance and advice in establishing their programs. Although the various DOD services combine alcohol and drug abuse into a single program, the focus of this study is restricted to the abuse of all drugs except alcohol.

A. RESEARCH OBJECTIVE

The objective of this thesis is to determine whether the current DOD Drug Abuse Testing Program is a viable model for other agencies, public or private, to use in establishing their own programs. Cost data, testing procedures and test results will be examined. The cost data and test results might be especially useful for decision makers who must choose among alternative allocations of limited resources.

B. METHODOLOGY, SCOPE AND LIMITATIONS

Program information and cost data for the various DOD services (the Navy, Air Force and Army) are based on current procedures and 1985-86 financial data provided by the service-level program coordinators. However, even though all costs for drug screening and testing are not covered in the service-level figures (since the various services have different cost accounting systems for their programs), the majority of DOD program costs are accounted for in the available data.

C. OUTLINE OF REMAINDER OF STUDY

Chapter II of this study describes the administration of DOD's Drug Abuse Testing Program, including the policies and procedures governing the program. Military and civilian programs are described.

Chapter III describes the Navy policy and procedures in implementing the DOD Drug Abuse Testing Program. The disposition of military drug abusers is addressed, and efforts of the five Navy Drug Screening Laboratories is then described.

Chapter IV describes the Air Force policy and procedures in implementing the DOD Drug Abuse Testing Program. The disposition of military drug abusers is addressed, and all drug testing laboratories used by the Air Force are identified.

Chapter V describes the Army policy and procedures in implementing the DOD Drug Abuse Testing Program. The disposition of military drug abusers is addressed. All drug testing laboratories used by the Army are then identified. Finally, the Army's Civilian Drug Abuse Testing Program is discussed.

Chapter VI of this study compares the programs of each of the services in terms of procedures and costs of conducting drug abuse testing. Results of the programs are identified and discussed.

Chapter VII summarizes the conclusions and recommendations of this thesis relative to the evaluation of the current DOD Drug Testing Program.

II. THE DOD DRUG ABUSE TESTING PROGRAM

A. BACKGROUND AND POLICY

In 1980 the Court of Military Appeals determined that the taking of bodily fluids (i.e., urine) yields evidence that is not within the scope of either the Fifth Amendment of the Constitution or Article 31 of the Uniform Code of Military Justice (U.C.M.J.). At about the same time legally supportable scientific techniques for identifying chemical compounds, including marijuana, in urine were developed. In December 1981 DOD authorized the use of the results of compulsory urinalysis in disciplinary and administrative proceedings. [Ref. 1]

DOD Directive 1010.1 entitled *Drug Abuse Testing Program* provides detailed policy guidance on drug abuse testing, including the use and limitation of urinalysis results and laboratory procedures. The DOD policy for using the drug abuse testing program is stated in the following quote from this directive:

> It is DOD policy to use the drug abuse testing program to 1) preserve the health of members of the Military Services by identifying drug abusers in order to provide appropriate counseling, rehabilitation,or other medical treatment; and 2) permit commanders to assess the security, military fitness, and good order and discipline of their commands, and to take appropriate action based upon such an assessment.

DOD guidance assigns the Secretaries of the Military Departments the responsibility of operating or contracting for the operation of drug testing laboratories that can meet their testing requirements and any additional requirements established by the Assistant Secretary of Defense (Health Affairs) (ASD(HA)). Responsibilities for proficiency testing, quality assurance of the drug testing laboratories, and appropriate training of laboratory personnel are also assigned. DOD Directive 1010.1 states that mandatory urinalysis testing for drugs may be conducted in the following circumstances:

1. Inspection
2. Search or Seizure
3. As part of one of the following examinations:
    a. A command-directed examination or referral of a specific service member to determine competency for duty and the need for counseling, rehabilitation, or other medical treatment when there is a reasonable suspicion of drug abuse.

b. An examination as part of a service member's participation in a DOD drug treatment and rehabilitation program.

c. An examination authorized by DOD or a Military Department regarding a mishap or safety investigation.

4. Any other examination ordered by medical personnel for a valid medical purpose.

The results of urinalysis can be used in disciplinary or administrative proceedings, but DOD Directive 1010.1 explicitly states some of the limitations of using these results. These limitations include not allowing the results from field tests and not allowing information from a service member's voluntary disclosure of prior personal drug use disclosed as part of a course of treatment in a rehabilitation program.

B. CHAIN OF CUSTODY PROCEDURES

The chain of custody procedures for collecting, handling, and testing urine samples for drug detection urinalysis are an important part of the DOD Drug Abuse Testing Program. These procedures, specified in DOD Directive 1010.1, are designed to ensure that the use of urinalysis results for counseling, rehabilitation, military fitness or other proceedings will be based on reliable procedures. A responsible individual, such as an alcohol or drug coordinator for a command, is assigned to coordinate the urine collection. In regard to the preparation of the specimen bottles, this coordinator is to ensure, among other things, that each bottle has the proper identifying information attached, that a ledger with the identifying information is maintained, and that the service member who submits the urine sample initials the label on the bottle and signs the corresponding entry in the ledger. Concerning the collection of specimens, the coordinator must ensure, among other things, that the service member presents proof of identity and that each specimen is collected under the direct observation of a designated individual of the same sex as the service member providing the specimen. Finally, in regard to the transportation of specimens, the coordinator must ensure such things as attaching the appropriate chain of custody documentation and shipping the specimen containers expeditiously. [Ref. 2: pp.2-1 to 2-2]

C. LABORATORY PROCEDURES

Laboratory procedures are also specified in DOD Directive 1010.1. Drug testing laboratories cannot report a specimen as positive unless it has tested positive under two different methods. The ASD (HA) periodically issues a list of drugs for which the drug testing laboratories may report results, but each Military Department decides

which of the drugs on the list will be tested in its appropriate laboratories. The initial test performed usually utilizes a radioimmunoassay (RIA) process. If the result of an initial test is positive, the specimen must be tested by a second method, usually by gas chromatography/mass spectrometry (GC/MS). In any case, the initial test must use a different method of testing from the second (confirmation) test. The levels at which samples are determined to be positive on both tests are established by the ASD (HA) and will be addressed later in this chapter. Any specimen that does not test positive for both tests is reported as negative. The results are normally reported by message to the originating unit within 10 working days after the laboratory receives the specimen, indicating which specimens were positive and which were negative. A copy of the message results is also submitted to the Armed Forces Institute of Pathology (AFIP), which provides external proficiency testing of each laboratory. Each drug testing laboratory must retain copies of completed laboratory report forms required by the Military Department concerned, chain of custody documents, and records of initial tests, confirmation tests, and retests for positive specimens for at least two years after the laboratory reports results. After the two-year period, these records may be disposed of unless an appropriate authority has requested that the records be maintained. [Ref. 2: p.3-2]

Regarding the disposition of urine specimens, if the result of a test is negative the specimen is discarded unless it is kept for quality control purposes. If the result of a test is positive, the specimens are retained in a frozen state for at least 60 days after the report of results is issued. In cases where a test result is to be used in a court-martial or administrative proceeding, the specimen will be retained for 120 days after the report is issued. An extension to this time frame is also possible, if necessary. There are also provisions allowing retesting of specimens under certain circumstances. [Ref. 2: p.3-3]

All drug testing laboratories must be certified by the ASD (HA) to ensure that results of urinalysis tests are legally supportable and scientifically accurate. The specific requirements are outlined in Enclosure 4 to DOD Directive 1010.1 dated 28 December 1984. Two requirements regarded as particularly significant are: (1) an inspection of each drug testing laboratory under a Military Department's supervision by a quality assurance team at least four times a year; and (2) an additional inspection at least once annually by personnel external to the Military Departments. [Ref. 2: pp.4-1 to 4-3]

D. FIELD TESTING

Although the primary mode of testing urine samples is through a certified laboratory, either military or civilian contract drug testing laboratories, field tests of urine samples are also conducted. ASD (HA) is again the approving authority for a field testing program, and guidelines must be strictly adhered to. Any urine specimen identified as positive by a field test must be sent to a certified drug testing laboratory. Positive test results obtained by means of field testing are preliminary results until they are confirmed as positive by both initial and confirmation testing described earlier or by the service member's own admission. Before the report of the test results is received or before admission by the service member, the positive results of a field test may be used for such purposes as temporary referral to a treatment program, temporary transfer or suspension from duty of personnel who serve in sensitive positions, and for temporary suspension of access to classified information. If a positive field test result is not confirmed as positive by a certified laboratory or a service member's own admission. the result cannot be used to take any further adverse action against a service member, and any temporary action based on the field test result must be rescinded. [Ref. 2: pp.5-1 to 5-2]

The DOD Biochemical Testing Advisory Committee gives advice on technical matters relating to the DOD biochemical testing program for drug and alcohol abuse. The Committee is composed of one member each from the Army, Navy and Air Force staffs of the Surgeons General, one member from the DOD Office of Professional Affairs and Quality Assurance (the Committee chairman), one member from the AFIP, and any other members appropriately designated. Recommendations made by this Committee include: methods to be used for field tests and laboratory tests, new technology for identifying drug abusers, appropriate proficiency testing and internal quality assurance procedures for evaluating drug testing laboratories, and applied research projects to improve the effectiveness of the DOD drug abuse testing program. [Ref. 2: p.4-5]

The Military Services in DOD must submit the following five reports semi-annually, covering the six-month periods ending March 31 and September 30: (1) Report on Urinalysis Testing for Drug Abuse (DD Form 2396); (2) Report on Drug or Alcohol Abuse Awareness Programs (DD Form 2397); (3) Report on Civilian Employee Alcohol and Drug Abuse (DD Form 2398); (4) Report on Drug-Related Military Law Enforcement Activity (DD Form 2394); and (5) Report on Legal or

Administrative Disposition of Drug Abuse Offenders (DD Form 2395). The instructions for completing each of these reports are outlined in DOD Directive 1010.3 dated 23 September 1985. [Ref. 3: p.2]

DOD Directive 1010.1, *DOD Drug Abuse Testing Program*, addressed at length earlier in this study requires that testing levels for drug urinalysis be established. These levels establish the concentration of a drug or its metabolite(s) at or above which test results are evaluated as positive. The initial test levels and confirmation test levels established by ASD (HA) in April 1985 are required during the original testing of urine specimens. When there is a retest using Gas Chromatography/Mass Spectrometry (GC/MS), the testing level is established by the lowest concentration that can be measured by the drug testing laboratory to verify the presence of the drug or metabolite(s). [Ref. 4]

Based on the recommendations of the Biochemical Testing Advisory Committee, the confirmatory test levels established above for two of the drugs were lowered and became effective 1 October 1986. The two drugs, cocaine and marijuana, are two of the most widely abused drugs; and it appears that an additional 10 to 20 percent of the specimens tested positive by radioimmunoassay (RIA) would be reported positive using these lower confirmatory levels. All other test levels established in 1985 remain the same. [Ref. 5]

E. CIVILIAN EMPLOYEES DRUG ABUSE TESTING PROGRAM

Department of Defense Directive 1010.9, *DOD Civilian Employees Drug Abuse Testing Program*, identifies policies and procedures for drug abuse urinalysis testing for DOD civilian employees. It gives DOD Components the option to establish a drug abuse testing program for civilian employees in critical jobs (i.e., "those jobs or classes of jobs sufficiently critical to the DOD mission or protection of public safety that screening to detect the presence of drugs is warranted as a job-related requirement"). Any DOD Component desiring to establish civilian employee drug abuse testing must submit proposed implementing documents to the ASD (HA) at least 45 days before the date on which the Component plans to initiate the program. The DOD directive states that the purpose of the testing is to:

1. Assist in determining fitness for appointment or assignment to, or retention in, a critical job.
2. Identify drug abusers and notify them of the availability of appropriate counseling, referral rehabilitation, or other medical treatment.

3. Assist in maintaining the national security and the internal security of the Department of Defense by identifying persons whose drug abuse could cause disruption of operations, destruction of property, threats to the safety of themselves and others, or the potential for unwarranted disclosure of classified information through drug related blackmail.

The ASD (HA) is responsible for administering this program, as well as the program for military personnel addressed earlier. The Assistant Secretary of Defense (Manpower, Installations, and Logistics) (ASD(MI&L)) is responsible for the concurrence in designating jobs as "critical". Any DOD Component which desires a program must submit requests for designating jobs as "critical jobs", specifying the job, the justification for drug abuse testing of the job, the locations in which the testing is likely to be conducted, and the appropriate number of persons within the job or class of jobs. Current employees or applicants for positions in these critical jobs may be required to participate in urinalysis testing before appointment or selection; periodically after appointment or selection on the basis of neutral criteria; when there is probable cause to believe that an employee is under the influence of a controlled substance while on duty; and in regard to a mishap or safety investigation. Before conducting the initial urinalysis test, each employee in a critical job must be informed in writing of the reasons for the urinalysis test; the consequences of a positive result or refusal to cooperate; the opportunity to submit supplemental medical documentation to support a legitimate use of a specified drug; and the availability of drug abuse counseling and referral services (for current employees only). [Ref. 6: p.3]

Urine samples are to be processed under strict chain of custody procedures and must be tested at a certified laboratory, as described earlier. As with military personnel, field tests of urine samples may be conducted on civilian personnel, but positive test results are preliminary results until confirmed as positive (by both initial and confirmatory testing) or by an employee's admission. Positive results of field tests may be used for temporary referral to a civilian employee assistance program, temporary detail to other duties or administrative leave, or temporary suspension of access to classified information. As before, if a positive field test is not reported as positive by a certified laboratory or an admission of an employee, no further action may be taken against the employee and any temporary action based upon the field test must be rescinded. [Ref. 6: p.4]

III. THE NAVY URINALYSIS DRUG SCREENING PROGRAM

A. POLICY

Department of the Navy, Office of the Secretary of the Navy Instruction 5300.28A (SECNAV INSTRUCTION 5300.28A), entitled *Alcohol and drug abuse prevention and control*, states the policies and regulations of the Department of the Navy (DON) concerning alcohol and drug abuse within DON. It also establishes responsibilities for executing these policies in accordance with directives from higher authorities, especially DOD. The Chief of Naval Operations (CNO) and the Commandant of the Marine Corps (CMC) are responsible for establishing and conducting alcohol and drug abuse prevention programs, giving specific attention to the areas of detection and deterrence, treatment and rehabilitation, education and training, enforcement and discipline. The CNO is responsible for establishing and operating drug testing laboratories to provide urinalysis testing services to the Navy and Marine Corps. [Ref. 7: pp. 6-7]. Specifically in regard to detection and deterrence, this directive calls for a comprehensive urinalysis program to disclose drug abuse among military personnel. Mandatory urinalysis testing of all officers and enlisted personnel for controlled substances is authorized under the conditions specified earlier regarding the DOD program: inspection (including unit sweeps and random sampling), search or seizure, medical examination, and fitness for duty. Subject to some limitation regarding the fitness for duty category, the results of mandatory urinalysis can be used to refer a military member to a treatment or rehabilitation program, to take appropriate disciplinary action, and to establish the basis for separation and characterization of discharge in separation procedures. [Ref. 7: p.2-3 of Enclosure 3]

Department of the Navy, Office of the Chief of Naval Operations Instruction 5350.4 (OPNAVINST 5350.4), entitled *Substance Abuse Prevention and Control*, consolidates all drug and alcohol policy guidance into one program. This directive states: "'Zero Tolerance' recognizes that drug and alcohol abuse is incompatible with the maintenance of high standards of performance, military discipline and readiness and is destructive of Navy efforts to instill pride and promote professionalism" [Ref. 8: p.1].

Enhanced detection and deterrence at all levels are major elements in the Navy's program. In regard to urinalysis testing, OPNAVINST 5350.4 states that the main policy objective of urinalysis testing programs is to:

> detect and deter abuse at a level that ensures the continued visibility of command drug abuse detection efforts, lessens the need to conduct broad scope random samples or unit sweeps, and does not impact negatively on Naval Regional Medical Center drug screening labs or other testing assets such as equipment, reagents, staff personnel, etc.

All members of the Navy regardless of rank or age are subject to participation in the urinalysis testing program.

The Marine Corps has the goal of testing each member three times a year. They use portakit test equipment in the field to do preliminary urine screenings in order to make the best use of their 468,000 quotas to the Navy laboratories. [Ref. 9: p.145]

B. DISPOSITION OF MILITARY DRUG ABUSERS

The Navy has specific guidelines to follow when a service member is identified as a drug abuser, either by drug urinalysis testing or by other means. The Navy specifically states that leaders must set the example. Except in those cases where they have been accepted for treatment through self-referral procedures, commissioned officers, warrant officers and chief petty officers (E-7 through E-9) who are identified as drug abusers are disciplined as appropriate and processed for separation. When one of these individuals is accepted for treatment through self-referral, he/she is evaluated to determine potential for future useful service. If a service member is determined to have little or no potential for future useful service, the service member is processed for separation. [Ref. 8: p.4 of Enclosure 7]

Active duty personnel E-6 and below who are identified by urinalysis or otherwise as drug abusers are classified in different categories depending on the number of drug incidents. Members involved in their first drug incident are disciplined as appropriate. If considered to have potential for further useful service, they are referred to counseling/rehabilitation. If determined to have no potential for further service, they are processed for separation. Personnel involved in a second drug incident are disciplined as appropriate and processed for separation, unless the commanding officer determines that the member has exceptional potential for further useful service, in which case the individual may be retained. Any service member involved in a third

drug incident is to be disciplined as appropriate and processed for separation. [Ref. 8: p.6 of Enclosure 7]

Before reaching a decision on dispositions of individual service members, a commanding officer will usually consult with authorities such as medical personnel, Counseling and Assistance Center professionals, and immediate supervisors. After considering all of the circumstances of the drug incident, the commanding officer makes decisions regarding treatment/rehabilitation, non-judicial punishment (NJP), court-martial and/or processing the individual for separation from the Navy.

C. NAVY DRUG SCREENING LABORATORIES

Currently there are five Navy Drug Screening Laboratories which conduct all urinalysis screening for Navy and Marine Corps personnel. Although used minimally in the past, no contractor screening laboratories are utilized at this time. The five laboratories are located in San Diego, California; Oakland, California; Portsmouth, Virginia; Great Lakes, Illinois; and Jacksonville, Florida. Each laboratory is assigned a specific geographical area of responsibility in accordance with OPNAVINST 5350.4, and the five laboratories operate under the cognizance of the Navy Medical Command in Washington, D. C.

The Navy's laboratory system has 10 GS-13 and 10 GS-11 chemists and between 10 and 15 military chemists. The military chemists' ranks vary from lieutenant junior grade to commander. The total of military personnel for each laboratory include one Commanding Officer, two chemists, a Senior Chief Petty Officer and one biochemist repairman. In addition there are between 64 and 74 civilians at each laboratory. The following classes of drug are tested: amphetamines, barbituates, cocaine, opiates, PCP, and THC (marijuana). The initial test levels and the confirmation test levels for each of these drugs is in accordance with DOD guidelines. [Ref. 10]

The five laboratories collectively have the capacity to test between 1.9 and two million urine samples per year. In FY-85 1.8 million samples were tested, indicating that the laboratories are operating at close to capacity. These tests are almost exclusively for Navy and Marine Corps personnel, with minimal PCP confirmation tests being conducted for the Air Force. [Ref. 11]

The cost for the laboratory system operation is approximately $23.5 million per year, which covers all costs except for 25 military salaries. Since 1983, there has been a consistent decline in the percentage of confirmed positive samples tested by the

laboratories, from 7.2 percent in 1983 to 2.9 percent in 1986. With improvements in the Navy's quality assurance program during this time period, this decline seems to indicate decreased drug abuse among Navy personnel. [Ref. 10]

D. CIVILIAN DRUG TESTING

The Navy is currently conducting limited civilian drug testing. The only civilians subject to testing at this time are approximately 500 civilian mariners in the Personal Reliability Program aboard ships attached to the Military Sealift Command. They are tested on the date of annual physicals and when assigned to a ship (if that date is other that the annual physical date). Samples are tested at one of the five Navy laboratories under the same procedures as used for military personnel. Since initiation of the program in December 1982, approximately 2500 tests have been conducted on these personnel with less than one per cent of the samples yielding positive results. In almost all positive cases, personnel were disciplined and reassigned to other jobs. [Ref. 12]

The Navy has submitted a list to DOD of categories of civilian jobs to be labelled "critical", and DOD has approved twelve categories of jobs. However, the civilian drug testing program submitted by the Navy to DOD has not been approved as of 14 October 1986. On 15 September 1986 an executive order was issued requiring all executive agencies, including DOD, to establish mandatory drug testing for employees in "sensitive positions". Pending approval of DOD and the Department of Justice, the Navy program is expected to affect approximately 50,000 civilian employees, including the Military Sealift Command personnel mentioned earlier. [Ref. 12]

IV. THE AIR FORCE URINALYSIS TESTING PROGRAM

A. POLICY

Chapter Three of Air Force Regulation 30-2, *Personnel: Social Actions Programs*, states that:

> The illegal or improper use of drugs by Air Force members is a serious breach of discipline: is not compatible with service in the Air Force; and automatically places the member's continued service in jeopardy. Such conduct will not be tolerated and can lead to criminal prosecution and to discharge under other than honorable conditions.

Chapter Five of the same regulation specifies policies, responsibilities, and procedures to be followed in implementing the Air Force urinalysis testing program. Deterrence is cited as the primary purpose of the Air Force urinalysis testing program. Other purposes include identifying military persons for rehabilitation or discipline and to obtain data on the prevalence of drug use. All Air Force military personnel can be tested. Of the four testing methods used (inspections, a probable cause search and seizure, a command-directed examination, and tests for medical purposes), the Air Force believes that the testing method that best achieves the deterrent goal is inspection testing. Commanders have flexibility to select the most appropriate testing procedure, but inspection testing should be the predominant method used. Probable cause and command-directed tests should be used to supplement inspection testing. [Ref. 13: p.38]

B. DISPOSITION OF MILITARY DRUG ABUSERS

Military members who fail to comply with an order to provide a urine sample under the allowable testing methods are subject to punitive action under Article 92, UCMJ for "failure to obey a lawful order". Results from a consensual test may be used to refer a member to the Drug Abuse Rehabilitation Program, to use as evidence in a disciplinary action under the UCMJ or administrative discharge action, including the characterization of discharge in separation proceedings. Anyone who is identified as a result of urine testing is individually evaluated to determine appropriate administrative or disciplinary action. Before a final course of action is determined, such factors as the following are considered: 1) the number and nature of the

member's offenses and the category of the abuse; 2) the member's age, rank and background; 3) the member's attitude, motivation, and potential for further military service; 4) the extent to which a member's drug abuse has affected or may affect duty performance; and 5) the recommendations of the Rehabilitation Committee. "Generally, the more senior the military member, the greater the gravity of the offense." Thus, officers and non-commissioned officers (NCOs) are viewed as those who must lead by example and enforce rules and regulations. [Ref. 13: p.20]

Officers and NCOs identified as drug abusers are not usually retained. Airmen identified as first-time drug abusers are usually retained and complete the Air Force drug rehabilitation program. Although the number of drug offenses is one of the factors considered in the disposition of a drug abuser, rehabilitation and/or separation are not based on a certain number of positive results. Rather, rehabilitation and/or separation are based on the commander's substantiation of drug abuse and election to take action. [Ref. 14]

C. DRUG TESTING LABORATORIES

The Brooks Air Force Base (AFB) laboratory in San Antonio, Texas supports all continental United States (CONUS) Air Force bases. Two Army laboratories, Tripler Army Medical Center in Hawaii and Wiesbaden Laboratory in West Germany, support overseas Air Force installations and test approximately 6,000 samples per month for the Air Force. [Ref. 15]

Although the Air Force laboratory has the capability of screening for all drugs, every sample is screened for marijuana and cocaine only. No contractor laboratories are used for initial screening; however, one contractor laboratory in Utah is utilized to confirm any samples that are screened as positive. In FY-85 the Air Force spent $3.249 million for its drug screening program. Of that amount $991,000 was spent for confirmation tests by the contractor laboratory. Approximately 195,000 samples were tested in FY-85 and involved approximately 411,000 individual tests of drugs. [Ref. 14]

The Air Force's drug testing program has the target of an average of one urinalysis test per individual every two years. [Ref. 9]

D. CIVILIAN DRUG TESTING

The Air Force is currently not testing any civilian employees for drugs. A program is currently being established that will be in conformance with the executive order of September 1986 which requires testing civilian employees in sensitive positions. [Ref. 15]

V. THE ARMY DRUG SCREENING PROGRAM

A. POLICY

Army Regulation 600-85, *Alcohol and Drug Abuse Prevention and Control Program*, defines the Army policy on alcohol and other drug abuse and assigns responsibilities for implementing the program. Chapter 10 of that directive specifically addresses biochemical testing to screen for drug abuse of detectable drugs, and it states that it is Army policy to use biochemical testing to:

> 1) Preserve the health of soldiers of the U.S. Army by identifying alcohol or drug abusers in order to provide appropriate counseling, rehabilitation, or other medical treatment. 2) Permit commanders to assess the security, military fitness, good order, and discipline of their commands and to take appropriate action based upon such an assessment.

Objectives of the testing include early identification and deterrence of drug abuse, monitoring of rehabilitation progress, and developing data on the prevalence of drug abuse in the Army. [Ref. 16]

B. DISPOSITION OF MILITARY DRUG ABUSERS

Soldiers who are identified as illegal drug abusers may receive disciplinary action under the UCMJ and separation actions depending on the circumstances. Officers, warrant officers, and noncommissioned officers (E5-E9) identified as drug abusers are processed for separation in accordance with appropriate Army regulations. Any soldier identified as a drug abuser in two separate instances occurring since 1 July 1983 is required to be processed for separation. Soldiers diagnosed as physically dependent are usually processed for separation. After detoxification and medical treatment, they are given the opportunity to receive rehabilitation through the Veterans Administration or a civilian program. Finally, soldiers who are identified as nondependent drug abusers and who warrant retention (as determined by the commander) should be enrolled in an appropriate program and can be retained. [Ref. 16: p.7]

C. ARMY DRUG SCREENING LABORATORIES

The Army currently has three drug screening laboratories, located at Tripler Army Medical Center, Hawaii; Ft. Mead, Maryland; and Wiesbaden, West Germany.

The Brooks Air Force Base (AFB) laboratory in San Antonio, Texas helps support CONUS Army bases by testing 6,000 samples per month. In addition, the Army uses a contractor drug screening laboratory in Triangle Park, North Carolina. The Army is currently soliciting for two additional contractors in order to expand testing. Both the initial screening tests and the confirmation tests are conducted at each of these laboratories, with the exception of Brooks AFB which contracts for confirmation tests. All laboratories screen for marijuana and cocaine, and the contractor laboratory conducts additional spot checks for six other drugs. [Ref. 17]

In FY-85 a total of approximately 800,000 samples were tested. Of that amount almost 280,000 were conducted by contractors. The budget for drug screening was $7.94 million, of which $5.4 million was spent for contractor services. [Ref. 17]

D. CIVILIAN DRUG ABUSE TESTING

The Army has established a drug abuse testing program for civilian employees in critical jobs. The objectives of the testing program, as outlined in Army Regulation 600-85, are:

1. To assist in determining fitness for, appointment to, or retention in a critical job.
2. To identify drug abusers and notify them of the availability of appropriate counseling, referral, rehabilitation services, or other medical treatment.
3. To assist in maintaining national security and the internal security of the Army by identifying those whose drug abuse could cause disruption in operations, destruction of property, threats to safety for themselves or others, or the potential for unwarranted disclosure of classified information through drug-related blackmail.

The Army has designated certain jobs or classes of jobs as "critical" for the purpose of drug abuse testing. The list includes some aviation positions, guard and police positions, personnel in a personal reliability program (i.e., chemical and nuclear surety positions), and personnel in the Alcohol and Drug Abuse Prevention and Control Program. Civilians employed in any of these jobs classified as critical are screened under the Civilian Drug Testing Program. Current and prospective employees being considered for critical positions are screened as well. By signing a form (DA Form 5019-R, Condition of Employment for Certain Civilian Positions Identified as Critical Under the Drug Abuse Testing Program), these individuals acknowledge that the Army has the right to require them to participate in urinalysis testing. If a prospective employee produces a confirmed positive urinalysis test or refuses to be tested, further consideration for appointment to a critical job is denied. Current

employees in critical jobs testing positive or refusing to be tested are either reassigned or demoted to a noncritical job; or, if there is no job available for which the employee is qualified, that employee is separated from the service. [Ref. 16: pp.25-26]

Guidelines to be followed in drug abuse testing for civilian employees are specified in Army Regulation 600-85 and include the following. Testing can be required before appointment or selection, periodically after appointment or selection on a random basis, when there is probable cause that an employee is under the influence while on duty, or in connection with a mishap or safety investigation. Current employees and applicants tentatively selected for a critical job must be informed in writing at least 90 days before the initial urinalysis test regarding reasons for the urinalysis test, consequences of a positive result or refusing to cooperate, and the opportunity to submit medical documentation to support the legitimate use of a specific drug. Other than the pre-accession test for civilian employees applying for critical positions, further drug testing is left to the commander's discretion. It is the commander's responsibility to decide how to allocate available test quotas for civilian as well as military personnel. [Ref. 16: pp.26-27]

Of particular note regarding labor relations, drug testing civilian employees is not negotiable with recognized labor organizations because it involves the Army's internal security practices within the meaning of 5 USC.7106(a)(1). [Ref. 16: pp.27]

The Army's testing program for civilian employees, which began in March 1986, is currently incorporating some modifications due to the executive order in September 1986 requiring all executive agencies to establish mandatory drug testing for employees in sensitive positions. One change of note is that direct observation of personnel submitting urine samples is precluded unless there is reasonable suspicion that an employee is adulterating a sample. Thus, civilian testing will take into consideration the individual's right to privacy. [Ref. 12]

Data are currently being collected regarding the number of civilian employees who have been tested since the program began in March 1986, as well as results of tests. In regard to the disposition of the employees, those testing positive during accession are not hired. Current employees testing positive are usually transferred to positions not requiring sensitivity; if unable to fill other positions, they are dismissed from the service. [Ref. 17]

VI. RESULTS OF THE DOD DRUG TESTING PROGRAM

A. BOOZ-ALLEN & HAMILTON INC. STUDY

In December 1982, OP-15/N-63, the program sponsor/program manager for drug and alcohol abuse control for the Navy, requested an evaluation of the effectiveness and impact of the various drug control initiatives it had established. Booz-Allen was selected to do the study, and the objective was to determine which initiatives were most effective in detection and deterrence and had the greatest impact relative to their costs. The eight initiatives evaluated were: 1) Urinalysis Testing; 2) Navy Drug Safety Action Program; 3) Drug Detection Dog Teams; 4) Discipline/Separation Policy; 5) Navy Drug and Alcohol Advisory Council; 6) Recruit Awareness of Drug Policy; 7) Other CO Identification Vehicles; and 8) Drug Policy Information Effort. A total of 273 different interviews were conducted with representatives from 72 different commands or agencies in Washington, D.C. and the field sites visited (Norfolk, San Diego, and Jacksonville). Personnel interviewed ranged from CO/XO to junior enlisted. [Ref. 18]

Urinalysis was identified by nearly all command leadership as the most effective method of identifying drug abusers. The majority of command junior personnel (65 percent) also selected urinalysis as the most effective identifier. Urinalysis was also viewed by both groups as the initiative having the greatest impact on deterring drug use. Many people at all levels stated that urinalysis is only a deterrent to the extent that people think they will be tested. Any relaxation in the level of intensity of the testing program is viewed as compromising its deterrent value. The discipline/separation initiative was the only other initiative perceived as being highly effective in detection and deterrence and as having the greatest impact. No other initiative even came close to the impact of urinalysis and discipline/separation policies. The key link between the two is the ability to use urinalysis results in disciplinary proceedings. Urinalysis has proved to be the primary method of drug detection, while the discipline/separation policies are the primary means of enforcement. Without the policies, the value of urinalysis testing is minimal. And without the "hammer", identification or detection is virtually a meaningless exercise. [Ref. 18: p.150]

Although the comparative cost-effectiveness of the eight initiatives could not be determined with any precision (due to the absence of a complete cost-benefit analysis),

Booz-Allen did make a general assessment of the relative cost-effectiveness. Urinalysis in general is an expensive tool, but it is worth the expense because it is a much more powerful identification tool than any other mechanism available. Costs associated with discipline/separation policies are not directly monetary but will be realized more in terms of manpower and morale. At the time of their report, the "costs" appeared worth the positive impact of the policies on reducing drug use in the Navy. [Ref. 18: p.152]

The Booz-Allen evaluation did not recommend any major changes to the Navy's drug control program. They close their report by stating that:

> This report is perhaps best concluded with the following statement made by a Commander serving as the Department Head of a large shore command: "What's being done is in balance. Anything more will be considered harassment. Anything less will be ineffective. We can't afford to let up."

B. SURVEYS OF DRUG USE AMONG MILITARY PERSONNEL

Four major studies of drug and alcohol use in the military have recently been conducted: the 1980, 1982 and 1985 Worldwide Surveys of Alcohol and Nonmedical Drug Use Among Military Personnel and the 1983 study of the Marine Corps. The 1980 Worldwide Survey involved over 15,000 military personnel in pay grades E1-O6 stationed at 81 installations. Overall, 36 percent of military personnel reported use of one or more drugs in the past year and 27 percent in the past month. Across all pay grades, reports of drug use during the past month were the highest in the Marine Corps (37 percent), followed by the Navy (33 percent), Army (29 percent), and Air Force (14 percent). Most of the drug use occurred among E1-E5s. The 1982 Worldwide Survey data was collected from nearly 22,000 active duty military personnel in pay grades E1-O6. Results showed a statistically significant decline in drug abuse from 1980 (27 percent) to 1982 (19 percent), and this decline was mainly attributed to the decline in use among E1-E5 personnel. The 1983 Marine Corps Survey indicated that about 17 percent of Marines used drugs compared with 21 percent in 1982 and 36 percent in 1980. [Ref. 19: pp.12-15]

The 1985 Worldwide Survey questioned over 17,000 active duty military personnel. Results indicated that the percentage of military personnel reporting any drug abuse within the past 30 days had declined to 9 percent; and, for the past 12 months, abuse was down to 13 percent. Table 1 indicates these results for each of the

Services, as well as the DOD total. Similar declines in any drug use during the previous 30 days were observed for personnel in each of the Services. Results indicate that drug use is almost exclusively concentrated among E1s-E4s, with high pay grades generally indicating one percent or lower drug use. For all substances, levels of use in the Air Force were substantially lower than in the other three Services. Levels of use among personnel in the Army, Navy and Marine Corps are very similar. The authors of the survey report attribute the differences to the sociodemographic composition of the Services, indicating that "Air Force personnel on the whole are more likely than personnel in the other Services to be older, better educated, and married, characteristics associated with a lower likelihood of substance use". [Ref. 19: pp.49-67]

TABLE 1

1985 SURVEY RESULTS (%) OF NONMEDICAL DRUG USE

Drug/Period of Use	*Army*	*Navy*	*M.C.*	*A.F.*	*Total DOD*
Any Drug					
Past 30 Days	11.5	10.3	9.9	4.5	8.9
Past 12 Months	16.6	15.9	14.7	7.2	13.4
Any Drug Except Marijuana					
Past 30 Days	6.4	8.0	6.6	3.1	5.8
Past 12 Months	9.2	11.9	10.6	4.2	8.5

Source: Ref. 19:p.66.

The significant declines in drug use over the past five years are often attributed to the deterrent effects of the urinalysis testing system which was instituted in 1981. The Worldwide Survey indicates that, overall, military personnel agree that urinalysis has reduced drug use in the military and that the urinalysis program has not hurt morale. However, in regard to the reliability of tests, only 36 percent believe that the tests are reliable. Nearly one-fourth of the military personnel questioned indicate that the urinalysis testing program has kept them from using drugs. Since the worldwide

surveys began in 1980, there has been a dramatic decline in drug use among military personnel. The authors of the 1985 Survey suggest that this decline is "partially as a function of societal changes in drug use but also as a function of the effectiveness of military policies and programs on drug use". [Ref. 19: pp.49-67]

C. FY 85 DOD REPORT

1. FY 1985 Financial Data

Table 2 presents the actual Service expenditures for the areas of biochemical testing, education, treatment and rehabilitation, training, evaluation, and research for their drug programs. The total expenditure for the Military Departments was $81.5 million, of which 58 percent was spent on biochemical testing. The manpower allocations indicate that the Army, Navy, and Air Force spent a total of 758, 1193, and 290 manyears, respectively, for their programs. [Ref. 9]

2. FY 1985 Drug Urinalysis Testing Data

The Services submit drug urinalysis data in accordance with DOD Directive 1010.3. Table 3 summarizes these data for FY 1985, indicating that over 2.3 million specimens were tested by the nine military drug testing laboratories and two contract laboratories addressed earlier in this study. The figures do not include approximately 400,000 specimens field tested by the Army and Navy, as these are tested at the individual command level and at the command's expense. [Ref. 9]

During FY 85 the Army tested all specimens for at least marijuana and cocaine; the Navy tested each specimen for marijuana, cocaine, amphetamines, barbiturates, phencyclidine and opiates; and the Air Force tested all specimens for at least marijuana and additional drugs on a pulse basis or by request. Based on the data, marijuana continues to be the most abused drug, followed by cocaine. Specimens that are collected for probable cause, command-directed, or medical (PC/CD/M) have significantly higher abuse rates than specimens collected at random. Although only about 13 percent of the total specimens collected were for PC/CD/M reasons, almost the same number of positives were identified as with the 87 percent of samples that were collected at random. The positive rate for marijuana per 1000 specimens tested was 91 (or 9.1%) for PC/CD/M specimens and 16 (or 1.6%) for random sampling. Since the number of specimens tested for each drug is not available, the total positive rate for all drugs and specimens cannot be calculated. [Ref. 9]

TABLE 2

FY 1985 DRUG ABUSE PROGRAM

FINANCIAL DATA (*Dollars in Thousands*)

	ARMY	NAVY	AIR FORCE
Biochemical Testing	11,149	33,856	2,670
Education	1,787	3,885	1,908
Treatment	4,605	8,458	5,383
Training	1,144	700	584
Evaluation	1,873	2,567	732
Research	160	0	0
TOTAL	20,718	49,466	11,277

MANPOWER ALLOCATION (*Manyears*)

	ARMY	NAVY	AIR FORCE
Military	298	769	204
Civilian	460	424	86
TOTAL	758	1,193	290

Note: Navy figures include the Marine Corps

Source: Ref. 9.

3. Budget Analysis

Table 4 presents an analysis of the budget figures as related to the drug urinalysis testing program. The cost per specimen is calculated by dividing the cost figures for biochemical testing (as provided by the Services) by the total number of specimens tested. The Navy's cost ($23.13) is the highest, but it includes screening all specimens for six drugs. The Army cost is $16.11 per specimen and involves normally testing for two drugs (marijuana and cocaine). The Air Force cost of $14.51 per specimen involves testing all specimens for generally one drug, marijuana. It is

TABLE 3

FY 1985 DRUG URINALYSIS TESTING DATA

Total Number of Specimens Tested

Service	*Random*	*PC/CD/M*	*Total*
Army	591,421	100,728	692,149
Navy	1,313,620	149,860	1,463,480
Air Force	139,268	44,716	183,984

RANDOM TESTING

Laboratory Positives (Number)

Service	*THC*	*Cocaine*	*Opiates*	*Amp*	*Barb*	*PCP*
Army	13191	581		22	2	
Navy	15494	2045	1212	499	367	94
Air Force	3305	33	2	1		

PC/CD/M

Laboratory Positives (Number)

Service	*THC*	*Cocaine*	*Opiates*	*Amp*	*Barb*	*PCP*
Army	12776	178	1	633		
Navy	8624	768	160	332	56	44
Air Force	5487	89	1	21	4	

Note:

PC is Probable Cause

CD is Command-Directed

M is Medical

Source: Ref. 9.

assumed that the Army figure includes the higher cost of testing nearly 25 percent of its specimens by a contract laboratory. The Air Force cost per specimen was also high due to a contract laboratory performing the confirmatory tests on its specimens.

Although the Air Force cost per specimen is high, it spent only five percent of its total drug and alcohol abuse program dollars on urinalysis testing. The Army spent 26 percent of its dollars on testing, whereas the Navy spent 44 percent. [Ref. 9]

TABLE 4

FY 1985 BUDGET ANALYSIS

DRUG URINALYSIS TESTING

	ARMY	*NAVY*	*AIR FORCE*
Biochemical Testing (SM)	11,149	33,856	2,670
Specimens tested	692,149	1,463,480	183,984
Cost/specimen	$16.11	$23.13	$14.51
Cost/specimen/drug	$ 8.06	$ 3.86	$14.51
Percent of Total Service Drug and Alcohol Program Dollars	26.4%	43.5%	5.2%

Source: Ref. 9.

4. **Summary**

The Office of the ASD(HA) indicates that the allocation of resources to the various drug abuse program elements appears to be greatly disparate from one Service to the next. This is seen as partly due to philosophical and programmatic differences among the Services but also as a function of the services having various ways of determining what is counted in each classification. The report by the Office of the ASD(HA) concludes by stating that there is "no uniform method for determining, with any degree of scientific validity, whether each program initiative is producing a result that is economically and programmatically effective". There is an effort underway to standardize the assignment of various expenditures to specific cost elements, and the Services will be providing results regarding their field testing programs. Hopefully, these changes will permit a more meaningful comparison among the Services. [Ref. 9]

D. DRUG CONVICTIONS AND SEPARATIONS

Table 5 indicates numbers of drug convictions by Service and DOD total for 1985. [Ref. 20]

TABLE 5
DRUG CONVICTIONS 1985

	ARMY	NAVY	AIR FORCE	MARINES	DOD TOTALS
GEN	644	128	184	71	1,027
SPCM	448	807	273	283	1,811
SCM	166	385	0	336	887
TOTAL	1,258	1,320	457	690	3,725
NJP	23,126	13,916	1,259	3,877	42,178

Note:
GEN - General Court-Martial
SPCM - Special Court-Martial
SCM - Summary Court-Martial
NJP - Non-Judicial Punishment

Source: Enclosure to Ref. 20.

Table 6 indicates numbers of administrative separations from the service for drug abuse by service and DOD total in FY 85. [Ref. 20]

These last two tables indicate that the Military Services are actively enforcing the policies which they have designed for dealing with drug abusers and that these policies are not simply symbols of how things "ought" to be.

E. "THE LARGEST AND BEST DRUG SCREENING PROGRAM IN THE NATION"

According to one report, "the largest and best drug screening program in the nation is that run by the Pentagon - and the Navy, in particular, according to most

TABLE 6

ADMINISTRATIVE SEPARATIONS FOR DRUG ABUSE (FY 85)

Army	*Navy*	*Marine Corps*	*Air Force*	*DOD Total*
5,122	5,580	1,542	4,033	16,277

Source: Enclosure to Ref. 20.

testing experts". It goes on to state that "the Navy's program . . . now is considered a model because of its rigorous laboratory procedures and the many built-in safeguards to ensure reliable results". Despite the initial difficulties experienced by the Navy in its first year of testing (1981) in which disciplinary actions against 1034 persons had to be reversed, only 11 disciplinary actions were reversed in 1985 due to laboratory errors or a problem in the chain of custody. [Ref. 21]

In 1981 the Navy's drug screening program was just getting underway. Individual commands were establishing their own programs to comply with guidelines from the Chief of Naval Operations. Laboratory errors resulted when massive numbers of urine specimens were suddenly being delivered to Naval Regional Medical Centers. Cross contamination of samples and other laboratory procedures were sources of errors. In addition, chain of custody procedures were new and not well established, and many errors resulted from improper handling of specimens.

Since 1981 policies and procedures for collecting and testing samples have been clearly delineated. Laboratory procedures have been greatly improved, especially as a result of quality assurance programs within the Services and externally by the AFIP.

VII. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

DOD and each of the Military Services (Army, Navy, and Air Force) have well-established policies and procedures for identifying and dealing with military drug abusers.

At least one Service, the Army, has a well-established policy for identifying civilian drug abusers in critical jobs; the other Services (as well as all other federal agencies) are in the process of establishing such a policy.

Most testing experts believe that DOD and the Navy, in particular, have the largest and best drug screening program in the nation.

Drug use in DOD and in each of the Military Services has continued to decline since 1980, as measured by urinalysis samples, anonymous self-report survey questionnaires, and interviews.

Urinalysis testing is viewed by most junior and senior (Navy) personnel as the most effective method of identifying drug abusers, as well as having the greatest impact on deterring drug use. Nearly one-fourth of the military personnel questioned by survey indicate that the urinalysis testing program has kept them from using drugs.

The various Services have very similar policies regarding drug abuse and the disposition of drug abusers; but the number of personnel tested for drug abuse in each of the Services differs significantly.

Over 2.3 million specimens were tested in certified laboratories for drug abuse within DOD in FY 1985. Of this amount nearly 43 percent of the specimens were for Navy personnel, significantly more than the other services.

DOD Military Departments spent $81.5 million on drug abuse programs in FY 1985, with 58 percent of this amount ($47 million) being spent on biochemical (urinalysis) testing. Of that $47 million, more than 71 percent was spent by the Navy.

A major study indicates that urinalysis is worth its expense because it is a much more powerful identification tool than any other mechanism available.

B. RECOMMENDATIONS

It is recommended that DOD establish a standardized system of costing drug programs as soon as possible, in order that the effectiveness of each of the Service's programs can be more meaningfully evaluated and compared to one another.

It is recommended that each of the Military Services conduct cost studies to determine whether the in-house or contractor method of urinalysis testing is the most cost-effective. The least cost alternative, whether in-house or private source, should be employed by the Services.

It is recommended that each of the Services conduct cost studies to determine whether random testing should continue to be the method used for the majority of tests. The most cost-effective method, whether random or PC/CD/M, should be employed by the Services.

It is recommended that the Navy conduct a cost study indicating the possible cost savings resulting from testing all samples for fewer than six drugs, e.g., stop testing for those drugs with the least incidence.

Although not addressed by this research, the author offers the following additional recommendations for future consideration:

1. A comparative study of the DOD drug testing program and private sector drug testing programs;
2. An evaluation of the possible intimidation effect on military personnel resulting from DOD's massive drug screening program.
3. A study of the relationship between decreased drug abuse and increased alcohol abuse in the military.

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