



COMMAND HISTORY FOR THE NAVY DRUG SCREENING LABORATORY SAN DIEGO, CA

The Navy Drug Screening Laboratory, San Diego CA (NDSL, SD) is one of three Navy drug screening laboratories and one of six Department of Defense (DoD) drug screening laboratories authorized to perform urine drug testing on active duty and reserve military members. The Laboratory was established in 1971. From a small operation, the Laboratory has grown to a 68 staff (4 military and 64 civilian) who work together as a highly efficient, precise, world class team processing over 800,000 samples annually using sophisticated testing equipment including Gas Chromatography/Mass Spectrometry (GC/MS) and procedures helping to ensure a safe and ready military.

During the late 1960's to the early 1970's illicit drug use was steadily increasing in the United States population. The United States Armed Forces were deployed in Southeast Asia a region where illicit drugs were readily available and inexpensive. The result was the widespread use of illicit drugs of abuse by military personnel during the Vietnam conflict. In 1970, to combat this epidemic, the United States Congress mandated that the United States Armed Forces develop and fund programs to identify, treat, and rehabilitate returning service members with illicit drug or alcohol addiction and abuse problems.

The three Services formed programs to address the rampant drug abuse problem that was compromising the combat effectiveness of the United States Armed Forces. The United States Navy responded in 1971 by standing up drug testing laboratories in various Naval Hospitals across the country to test for drugs of abuse. LT L. L. Pitts, MSC, USN, a clinical chemist became the first Division Officer of the newly formed NDSL, SD. The Laboratory was staffed with a small military contingent and was a division of the Department of Laboratory Medicine at the Naval Hospital, San Diego (NHSD).

In 1972, LT R. Porter, MSC, USN became the Division Officer and the staff was increased to 11 civilians and 24 military. The drug groups tested then were amphetamines, barbiturates, and morphine. This was the beginning of the testing protocol where all specimens are screened. Presumptive positive results are then confirmed with a different confirmation procedure. Amphetamines and barbiturates were screened with Thin Layer Chromatography (TLC) and morphine was screened with a Free Radical Assay technique. Gas Liquid Chromatography (GLC) was used to confirm the presence of amphetamines and barbiturates while spectrofluorometry was used to confirm presumptive positive morphine results. Morphine confirmations were soon converted to GLC and codeine was added to the confirmation protocol for morphine.

The drugs of abuse testing workload was divided among the Department of Defense (DoD) laboratories along geographic lines as illustrated in Figure 1. In the early stages of the program, NDSL, SD received specimens from Army, Air Force, Marine Corps, and Navy commands in southern California as well as Navy ships deployed in the Command In Chief, Pacific (CINCPAC) Area of Responsibility (AOR) and military installations in Hawaii and the Philippines.

In 1973, the Laboratory was relocated from building 14 to building 10 on the Naval Hospital campus at Balboa. During this transition, specimens were diverted to the NDSL, Oakland for testing. LCDR J. Callies, MSC, USN arrived in July 1974 and assumed the position of Officer in Charge/Division Head for the Laboratory.

From July 1974 to March 1975, the DoD drug-testing program was suspended while awaiting the ruling by the Court of Military Appeals (CMA) on the admissibility of laboratory data in an Army case. As a result of this suspension of testing the civilian staff at the laboratories underwent a reduction in force (RIF). The drug-testing program was re-established in 1975 upon the ruling of admissibility of laboratory data as legal evidence of use of illegal drugs in violation of the Uniform Code of Military Justice

Technological advances emerged during this time and Radioimmunoassay (RIA) had been introduced into the marketplace. DoD mandated the use of RIA for the screening of specimens for drugs of abuse in late 1975 due to the enhanced sensitivity and selectivity of the technique.

Historical Regional Distribution of DoD Drug Testing Laboratories Areas of Responsibility

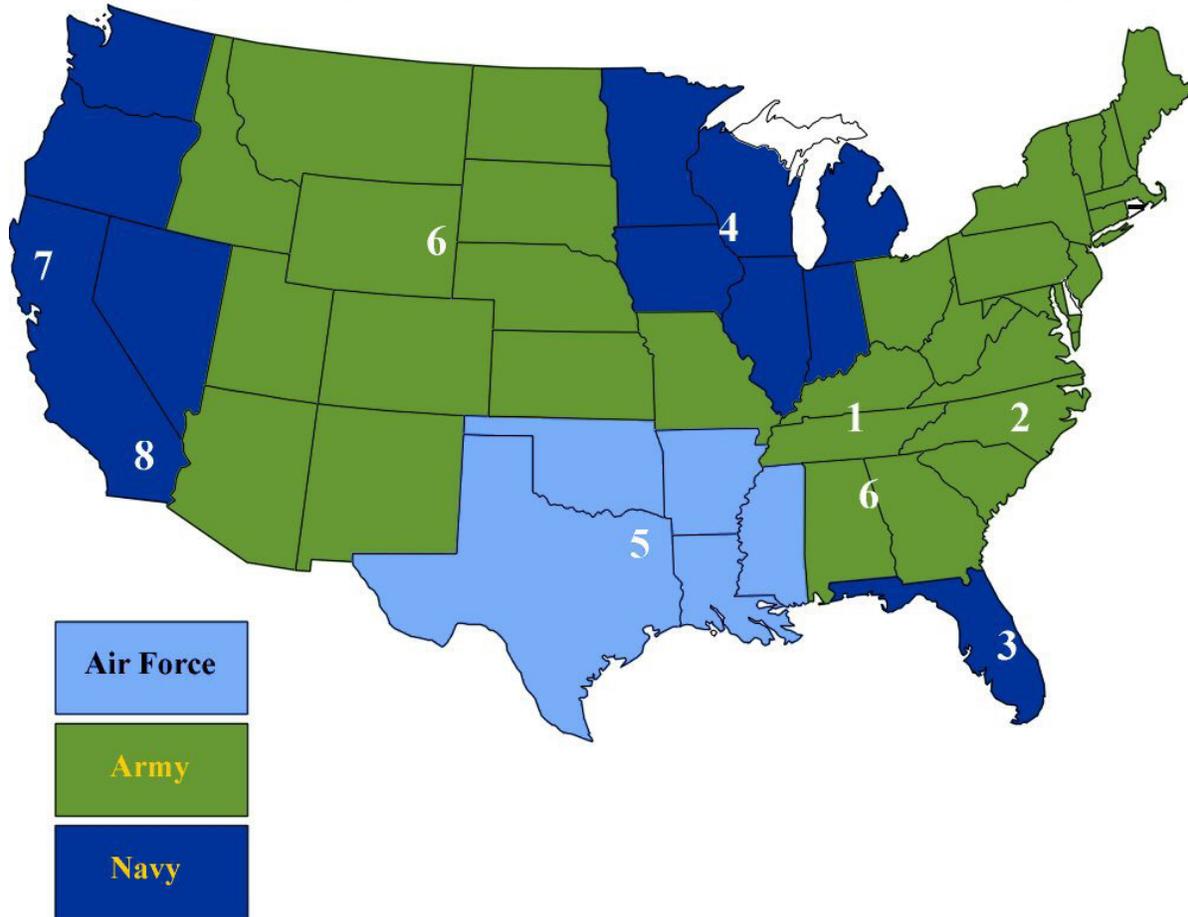


Figure 1. Historical Regional Distribution of DoD Drug Testing Laboratories Areas of Responsibility

The drug groups screened in 1977 were methaqualone (Quaalude, Sopor added 1976), opiates, barbiturates, and amphetamines. Cocaine screening began in January 1977 on a trial basis and was halted in April 1977. By 1978, the drug panel was increased with the addition of phencyclidine (PCP).

The DoD conducted a Worldwide Survey of military personnel in 1980. The survey responses revealed that 47% of Navy and Marine Corps junior enlisted used marijuana during the previous 30 days and that 26% of these reported being under the influence of drugs while at work. Overall use of drugs of abuse in the Navy was estimated to be at 33%. By July 1980 methaqualone was dropped and cocaine was added to the test panel.

One of a series of events which highlighted the seriousness of the drug abuse problem was the crash of an EA-6B Prowler on the deck of the USS Nimitz in 1981. The post accident investigation revealed that six of the fourteen dead aircrew and sailors had traces of tetrahydrocannabinol (THC) in their blood, evidence of marijuana use. Congressional response was implementing a requirement for widespread detection of the use of drug of abuse and that action be taken against drug users. The Secretary of Defense (SECDEF) allowed disciplinary action to be taken from urinalysis results demonstrating the DoD response. Admiral Haywood, then Chief of Naval Operations (CNO), issued a “War on Drugs” directive, and a “Zero Tolerance” policy expressing the Navy’s position on the drug abuse problem.

With this directive came a great increase in the number of samples submitted to the Navy drug testing labs resulting in a huge backlog. The drug panel had changed by the fall of 1981 to PCP, morphine, amphetamines, barbiturates, cocaine, and cannabinoid (THC). There were several major developments that effected the Navy Drug Testing

Program occurred in 1981. The first was the development of the ability to analyze for THC testing by screening with immunoassay followed by confirmation by liquid-liquid extraction and detection with gas chromatography (GC). The second was the ruling in favor of the urinalysis drug screening program setting the precedent that drug testing results constitute legal evidence. At the same time, the labs implemented forensic drug testing processes with the added requirements of laboratory security, chain-of-custody procedures, method validation, and documentation of training.

By the end of 1982 the staff of NDSL, SD consisted of 28 permanent civilians, 24 military on temporary addition duty (TAD) assignment, and 6 reservists. In June 1982, the morphine drug compound designation changed to Opiate (OPI). Technological advances resulted in the replacement of liquid-liquid extraction with solid phase extractions technology using the PREP I Autoextractors for THC and cocaine significantly reducing turn-around-time (TAT). A double antibody procedure for RIA screening protocols was also introduced resulting in improved sensitivity. By August 1982 there was a 30,000 specimen backlog and the TAT was three months. In response, the number of civilian billets was increased and instrumentation was purchased in the fall of 1982 leading to the reduction of the TAT to less than 5 days with no backlog by the end of the year. Another factor that helped reduce TAT was the change in workload distribution by geographic regional distribution by branch of service.

Four major changes were implemented in the DoD Drug Testing Laboratories in 1983. First, most billets were converted to civilian positions so a massive civilian recruitment effort was begun to bring civilian staffing to 68 billets. The Office of Civilian Personnel Management (OCPM), Washington Office, conducted audits of all Navy drug labs with the objective of standardizing the civilian technical position descriptions (PDs) in all the labs. The second significant change was the introduction of a word processor system for Optical Character Reader (OCR) message generation greatly reducing manual typing of result messages. Third, to ensure the technical competency of the laboratory staff was maintained, a massive training program was implemented for new employees. Finally, technological innovations allowed the introduction of mass spectrometry to confirm all THC positives. TAT had been reduced to four days with a testing panel consisting of PCP, opiates, amphetamines, THC, barbiturates, and cocaine.

On 8 June 1984, the NDSL, SD was established as an Echelon 4 Command with a Commanding Officer (CO) under the Geographic Commander (GEOCOM) Southwest Region. CDR G. R. Koehn, MSC, USN became the first Commanding Officer of NDSL, SD.

On 28 August 1987, CDR D. F. Snook, MSC, USN relieved CDR Koehn.

On 20 June 1988, NDSL, SD relocated to building 26-2B (figure 2) from building 10. These new spaces were previously used as the NHSD Emergency Room, Pharmacy, and Morgue.

NDSL, SD received a DoD Inspector General's (IG) "Commendatory" report for the inspection held October 10-13, 1989. A report of this type was the first to be awarded to a DoD Drug Testing Laboratory and only one of two awarded by the IG Team in the prior 4 years. The commendation was for NDSL, SD developing and obtaining DoD level approval to implement, a new methamphetamine (METH) specific antibody for use in conducting initial Radioimmunoassay (RIA) screening of specimens.

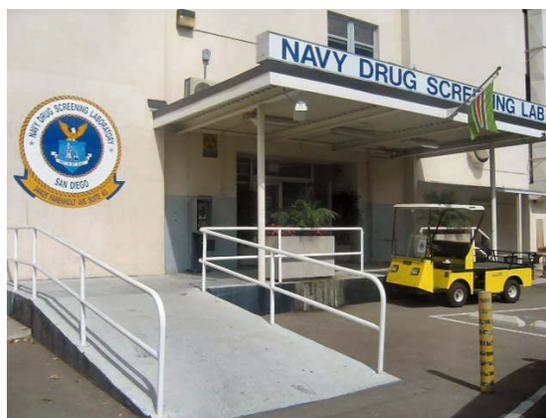


Figure 2. NDSL in Bldg 26-2B

On 22 December 1989, the reporting chain of command was changed from GEOCOM, Southwest Region to the Navy Environmental Health Center (NEHC), Norfolk, VA. During the same year, Executive Order 12564 established the Drug-Free Federal Workplace Program. OPNAVINST 5355.4, mandated that all positions in NDSLs be Test Designated Positions (TSPs), meaning all civilians must be drug tested. A Drug Program Coordinator was established that would provide oversight to random testing of the civilian staff.

On 5 November 1990, the Command received the first National Institute on Drug Abuse (NIDA) Certificate of Appreciation presented to a DoD Drug Testing Laboratory. NIDA chose NDSL, SD to assist with their Laboratory Inspector Training Courses. The DoD Drug Testing Program and the Navy Drug Testing Program had been the model used for the development of the civilian inspection criteria during our 2 ½ years of assistance. NIDA based their Quality Standards on DoD and the Navy Drug Testing Program, using them while inspecting and certifying 57 civilian drug-testing laboratories.

On 31 May 1991, CAPT Snook was relieved by CAPT J. P. Christopher, MSC, USN. During that year, authorized civilian staffing was increased from 60 to 93 in November 1994 in anticipation of an increase in workload from the Base Realignment and Closure (BRAC) of NDSL, Oakland. Five civilian staff members, frozen positive specimens, and legal documentation were transferred to NDSL, SD from the closed Oakland facility. Figure 3 shows the current distribution of Navy Drug Screening Laboratories areas of responsibility. Since the combined monthly total of specimens processed by NDSL's, San Diego and Oakland was approximately 58,000, the Laboratory was built up to handle an increased capacity of up to 70,000-80,000 specimens a month. NDSL, SD was certified by the Armed Forces Institute of Pathology (AFIP) to perform Lysergic Acid Diethylamide (LSD) confirmation in 1994 and this was added to the test panel performed by the laboratory.

Regional Distribution of Navy Drug Screening Laboratories Areas of Responsibility
(as of August 2003)

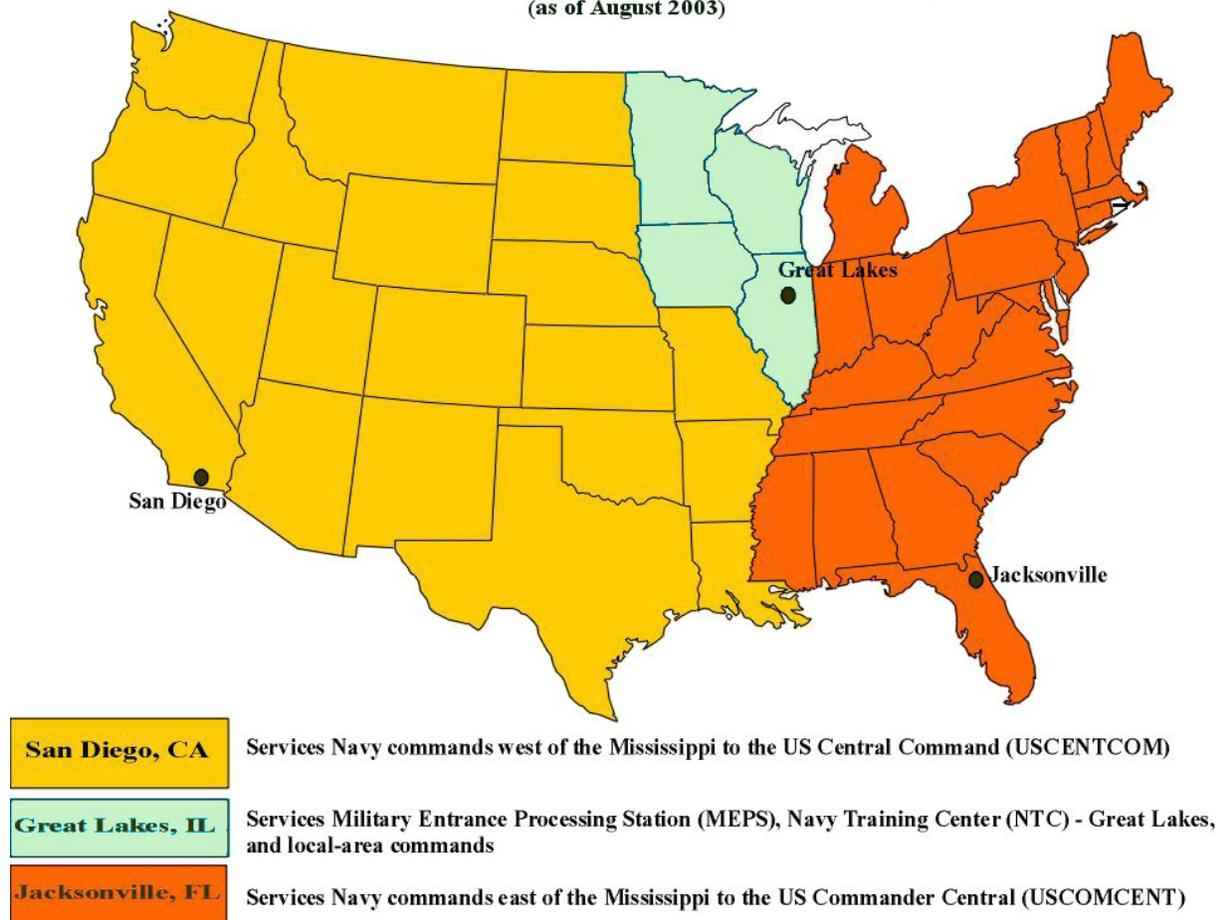


Figure 3. Regional Distribution of Navy Drug Screening Laboratories Areas of Responsibility as of Aug 2003

On 27 October 1995, LCDR E. C. Vias, MSC, USN relieved CAPT Christopher. In September 1995, the Laboratory began phasing out the RIA screening procedures and began using an automated immunoassay procedure run on the Olympus AU800 Chemistry Analyzer. The AU800 Chemistry Analyzer did not require radioactive material as part of the screening process. The immunoassay kits used consisted of KIMS immunoassay kits for all drug classes except LSD and methamphetamine. Also in 1995, the laboratory spaces were renovated to construct research and methods development to develop and evaluate new testing protocols for the detection and confirmation of drugs of abuse and their metabolites. The research laboratory was fully operational by 1996 with the hiring of a Ph.D. level civilian research scientist and the assignment of two research technicians. In that same year, the DoD implemented a Forensic Toxicology Drug Testing Laboratory (FTDTL) Laboratory Information Management System (LIMS) to enhance the forensic integrity of specimen tracking and reporting results.

On 27 September 1998, LCDR L. K. McWhorter, MSC, USN relieved CDR Vias.

CAPT M. E. Moynihan, MSC, USN relieved LCDR McWhorter on 29 September 1999 and LCDR McWhorter assumed the position of overall program manager for the Navy Drug Testing Program.

During 2000, there were many technological developments. The Laboratory participated in the development of a new extraction and derivatization procedure for 6-acetylmorphine (6-MAM), the heroin metabolite. The previous procedure produced artificially high results when large amounts of free morphine were present. The new procedure, which employs a trimethylsilyl derivative, eliminated this interference. The Laboratory also participated in the modification and validation of a more efficient GC/MS barbiturate confirmation procedure. The new procedure was faster and more sensitive because of a single step extraction combined with a more polar solvent that resulted in greater sensitivity for phenobarbital. Recovery studies showed that the recovery of phenobarbital was improved from approximately 15% to 80% after implementation of the new procedure. New immunoassays for THC and COC were also introduced in the Screening Department. These new assays exhibited greater specificity than the previous ones so fewer negative specimens were being sent for confirmatory analysis and the THC confirmation positive rate went from 80% to 95%.

In 2001, a new immunoassay analyzer, the Roche-Hitachi Modular, was installed to perform initial screening tests. The modular design of the new analyzer allows for the processing of approximately 400 specimens per hour.

During 2002, new solid phase extraction technology was introduced which uses SPE cartridges with a positive pressure manifold (PPM). The introduction of this new technology significantly reduced confirmation analysis times and the amount of chemical waste generated by the Laboratory. Also that year, the billet structure of NDSL, SD was revised reducing civilian billets by six. The billets were transferred to the Homeland Defense Department as a result of the terrorist attacks of 11 September 2001.

On 27 March 2003, CDR M. L. Finch, MSC, USN relieved CAPT Moynihan in a change of command and retirement ceremony.