TECHNICAL OPERATIONS DIVISION

After almost 50 years of service, the Technical Operations Division at McClellan AFB, Calif., closed its doors and inactivated on 9 April. 1999

LINEAGE

STATIONS

ASSIGNMENTS

COMMANDERS

HONORS
Service Streamers

Campaign Streamers

Armed Forces Expeditionary Streamers

Decorations

EMBLEM

EMBLEM SIGNIFICANCE

MOTTO

NICKNAME

OPERATIONS
The Technical Operations Division is the second largest associate unit on McClellan Air Force Base, Calif., and the largest subordinate unit of the Air Force Technical Applications Center at Patrick Air Force Base, Fla.

TOD's vision is to be the lead global organization performing nuclear and environmental trace

minerals analysis and systems support while conducting an effective transition.

Their mission is to provide timely, accurate products and services for nuclear and environmental materials collection and analysis to enhance U.S. military preparedness, national policy making and treaty monitoring while planning and implementing transition activities.
The unit also supports all material collection functions of the U.S. Atomic Energy Detection System.

TOD is comprised of three directorates:
McClellan Central Laboratory
Mission Resources and Systems
Logistics and Engineering

The McClellan Central Laboratory provides trace-level analyses of nuclear and environmental samples.

The Mission Resources and Systems Directorate manages the communication and computer operations, contracting, facilities, budget management, security and information management support functions.

In the Logistics and Engineering Directorate, personnel conduct engineering, maintenance and supply operations for the laboratory systems and the sampling equipment in the worldwide U.S. Atomic Energy Detection System. They also manage the base closure-related transition planning team.

The unit's support functions include environmental protection, radiation safety, ground safety, training, manpower, personnel, information and facilities management and first sergeant involvement to ensure successful operations and compliance with regulations.

Although TOD's main customer is AFTAC, other customers include the worldwide detachments, Department of Energy laboratories, the Department of Commerce National Institute of Standards and Technology, the Office of the Secretary of Defense, the International Atomic Energy Agency, the United Nations and Great Britian's Atomic Weapons Establishment.

The unit will be transformed by the July 1995 Base Realignment and Closure Commission decision to close McClellan Air Force Base by July 2001.

Although timetables and transition details are still being developed, TOD will continue to provide quality products and services while effectively transitioning the process and equipment that AFTAC needs to continue its treaty monitoring missions.

TOD mission operations began in 1948 with the 1009th Special Weapons Squadron and established to detect nuclear weapon tests worldwide. Between 1948 and 1950, the 1009th sent personnel on temporary duty to McClellan Air Force Base to work with the 55th Weather Reconnaissance Squadron on airborne sampling missions using WB29 and WB-50 aircraft.

This was the beginning of TOD's worldwide aerial sampling operations.

In 1950, the Western Field Office, a permanent branch of the 1009th SES, was created at McClellan Air Force Base to conduct laboratory analysis of airborne debris. During the 1960's, the growing worldwide mission of the 1009th was transferred to the 1035th U.S. Air Force Field Activities Group.

The Limited Test Ban Treaty in 1963 resulted in an enormous expansion of workload, and WFO, renamed the 1155th Technical Operations Squadron in 1960, reached its peak strength of 1,500 people.

By the late 1970's, technology and a reduced workload enabled the 1155th to streamline operations and eliminate redundant systems; manpower decreased to approximately 500 personnel. Major modernization programs were undertaken to exploit modern, sophisticated instrumentation and lab techniques. Recognizing the increasing complexity and importance of the unit's mission, the Air Force upgraded the unit to a division in 1984 and named it the Technical Operations Division.

In 1988, the Russell Building was dedicated as a modern facility to house the McClellan Central Laboratory and the Operations, Computer-Communications Systems, Logistics and Executive Support directorates. The $18 million building won an award for architectural design for building aesthetics in the Air Force's annual new building facility design competition.

For nearly half a century, TOD has sustained a reputation for producing world class results. Notable among its many accomplishments was the division's participation in sampling and analysis of debris from the Chernobyl Nuclear Reactor accident.

Today, the 309-member unit continues to provide logistics support for complex systems around the world, laboratory analysis to support treaty monitoring commitments and worldwide atmospheric sampling support.

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HISTORY

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COMMUNITY

The division has been a dedicated member of McClellan Air Force Base and the Sacramento community. For over 28 years, TOD people have sponsored Child- A- Smile, a program which helps physically and mentally challenged children in Sacramento schools. TOD's blood drives have received awards form Sacramento county officials and the Adopt- A- School mentoring program enables the unit's highly trained and educated members to share their knowledge and enthusiasm with community youth. Acknowledging these efforts, Sacramento civic leaders presented TOD with the Sacramento Volunteer Activist Award, the first time the award was given to an Air Force unit.

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DETACHMENT 452

VISION

Leading the way in providing a full spectrum of information utilizing state- of- the- art systems with the high-est capability, reliability, and main-tainability in the world. Benchmark-ing the resources necessary to accom-plish the mission while providing the highest quality of life for our people.

MISSION

The mission of Detachment 452 is to provide the highest quality data collection and reporting for monitoring nuclear treaties on a continuous basis to the Air Force Technical Applications Center and the Korea Institute of Geology, Mining and Materials through commitment to excellence and teamwork.

Det. 452 operates the U. S. Air Force's second- largest seismic array as part of a world- wide seismic monitoring network. The detachment as-sists AFTAC in monitoring compliance with the 1963 Safequard (d) Limited Test Ban Treaty, 1974 Threshold Test Ban Treaty and the 1976 Peaceful Nuclear Explosions Treaty. To perform the detachment's mission, two seismic arrays are laid out over a 600- square- mile area in north central South Korea. A short period array consisting of 19 instruments detects vertical particle motion used for wave energy measurements. It also provides the azimuthal direction to the seismic wavefront's source. A long period array made up of six seismic instruments measures both vertical and horizontal earth particle motions, and provides data for event discrimination and wave energy measurements. Both systems are used to refine seismic magnitude calculations.

In addition to the arrays, the unit operates one broadband instrument to measure vertical and horizontal ground motion through a wider frequency range. Currently, the detachment is operated by a commander, superintendent, maintenance chief with five technicians, and one-deep positions for supply, vehicle maintenance, and information/ personnel management. Manning is expected to decrease in the future. Assignments average one year and are unaccompanied.

HISTORY

The detachment was established in 1966 near Chunchon, about 40 miles north of today's location.

The "array," three surface instru-ments, was operated from make- shift trailers and data was recorded by pen and ink helicorders. When a more permanent installation was required in 1968, land was purchased near Wonju, adjoining Camp Long. The short period array was in-stalled in 1972, the long period array in 1977. The detachment operated 24 hours per day with 35 Air Force personnel. Data was recorded on 16 millimeter film from develocorders and analyzed using a metric rule. In 1991, with seismic technological advances, data analysis responsi-bility shifted from the detachment to the AFTAC headquarters. In July 1995, this trend towards automation continued with the installation of the AFTAC Distributed Subsurface Net-work at detachments worldwide.

Data is now transmitted directly into the AFTAC Operations Center, where AFTAC operators analyze it using state-of- the- art workstations.

Detachment 452's contributions to nuclear explosion monitoring include the following:

- 1984 - Last large Russian under-ground explosion
- 1988 - Great Russian earthquake in Armenia
- 1989 - San Fransisco earthquake
- 1994 - Los Angeles earthquake
- 1994 - Undersea earthquakes near Japan
- 1995 - Chinese underground nuclear explosion

Additionally, the detachment has served as a test bed for new systems development, from TRIAX long period instruments in the 1970's to today's ADSN. Ten major system modifications were installed, refined, and proven at Det. 452 prior to implementation worldwide.

UNIT LOGO

The detachment unit logo was founded many years ago by the detachment personnel. The radio tower and mountain top are indicative of the work they do every day. The atom symbol represents their ties to the US Atomic Energy Detection Sys-tem. The red and blue background (the Yin/ Yang- type symbol) represents Korea itself. "Wizards" was a name bestowed upon them by their old headquarters, because they were always able to com-plete the mission, as if by magic, no matter the problems encountered. The waves on the sides represent seis-mic signals.

Air Force Order of Battle
Created: 19 Sep 2010
Updated:

Sources
AFHRA