



2020 Secretary of Defense

# Environmental Awards

Environmental Quality, Individual/Team

Vandenberg Air Force Base Environmental Quality Team

## Background

The Vandenberg Air Force Base (AFB) Environmental Quality Team (Team) consists of 13 full-time program managers supporting the 30th Space Wing working in the Installation Management Flight of the 30th Civil Engineer Squadron. The Team has extensive experience in all environmental compliance media including solid waste, waste reduction, air quality, water quality, wastewater, stormwater, hazardous waste, hazardous materials, Environmental Management System (EMS), and the National Environmental Policy Act (NEPA).

The Team includes:

- Daniel Carson, B.S., Solid/Hazardous Waste
- Tracy Curry-Bumpass, B.S., NEPA Planner
- William Delgadillo, Compliance Specialist
- Andrew Edwards, B.S., Environmental Compliance Chief
- Kimberly Harding, Air Quality
- Samantha Kaisersatt, B.S., NEPA Planner
- Michael Kalata, Water Quality/Tanks
- Joseph Naputi, B.S., Hazardous Materials/Tanks
- Danilo Narciso, B.S., Hazardous Materials
- J. Doug Newberry, EMS/Toxics
- Dayle Russell, Qualified Recycling Program (QRP)
- Lauren Sanders, Recycling Center Manager
- Tara Wiskowski, B.S., Industrial/Municipal Stormwater



### **Vandenberg AFB Environmental Quality Team**

Vandenberg AFB's Environmental Quality Team are environmental professionals working in the 30th Civil Engineer Squadron. The Team oversees Vandenberg's diverse environmental programs to maintain compliance with California's stringent regulations.

### **Position Description**

At Vandenberg AFB, the Team provides environmental compliance support to a wide array of activities including West Coast launch, landing, and range activities for the Air Force, Department of Defense, National Aeronautics and Space Administration, commercial space programs, and various private industry contractors. The 30th Space Wing supports processing and launch of a variety of expendable vehicles, including Atlas V, Delta IV, Delta II, Pegasus, Minotaur, Taurus, and Falcon rockets. Additionally, the Team supports Force Development and Evaluation of all intercontinental ballistic missiles, Missile Defense Agency test and operations, as well various programs from entities such as the Navy, Marine Corps, Defense Advanced Research Projects Agency, and a growing list of commercial space launch companies. Finally, the Team is responsible for environmental compliance at Pillar Point Air Force Station, a 55-acre installation located 20 miles south of

San Francisco, where the Air Force operates telemetry and equipment that tracks launches and operations.



### **Ensuring Environmental Compliance to Assure Mission Success**

Whether it be a test launch of a Minuteman III missile, lofting critical spacecraft to orbit, or supporting a Marine Corps amphibious exercise, mission success is the Team's focus. The Team routinely resolves environmental challenges to guarantee compliance for the Air Force and its mission partners.

### **Summary of Accomplishments**

The Team is committed to ensuring environmental compliance for extensive, complex, and unique space launch, test range, and support operations on Vandenberg AFB. The highest levels of environmental protection are maintained in one of the most challenging regulatory environments in the United States. The Team oversees programs that steadfastly manage protection of the land, air, and water resources of the Air Force's third largest installation. Responsibilities require astute knowledge of Federal environmental laws and more stringent California and local regulations in three separate counties—Santa Barbara, San Mateo, and Ventura. When interacting with any number of the 18 Federal, state, and local agencies with regulatory responsibility at the base, the Team demonstrates first class professionalism to be able to navigate the numerous requirements. This includes inspections, reporting, tracking, and

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maintaining compliance with all permits and regulations.

### **Waste Reduction Efforts**

During the accomplishment period, the Team implemented extensive stormwater monitoring programs to meet requirements for National Pollutant Discharge Elimination System permits for the municipal, industrial, and construction stormwater permits. Thirty-two stormwater outfalls were surveyed ensuring all regulatory parameters were met. Municipal operations activities such as concrete work, sewer line and water line maintenance, and grounds maintenance were monitored for proper stormwater protection practices. The Team developed and provided stormwater protection guidance to prevent pollution and erosion for over 1,000 construction projects accomplished in-house or via contract. Critical decision making was used to implement stormwater regulations in construction projects and decipher between required and exempt post-construction stormwater controls. The Team implemented monthly visual inspections and required stormwater sampling at the five facilities enrolled in the industrial stormwater permit. The Team collaborated with facility operators to correct any deficiencies.

The collection and disposition of out-of-service surplus hand-held, dry chemical fire extinguishers presents a management challenge across the Department of Defense. After exhaustive research, the Team was unable to find any cohesive guidance for managing these fire extinguishers and found individual installations were limited to hazardous waste disposal. The Team identified an opportunity to reuse the fire extinguishers, which avoided costly disposal fees while supporting a useful purpose. A simple turn-in process was established at Vandenberg AFB's hazardous waste accumulation point and installation personnel were provided a one-stop drop-off/disposal service for surplus fire extinguishers. All 1,297 reusable fire

extinguishers were then transferred to other Federal agencies and a local community college with a Fire Training Academy. This reuse strategy realized a hazardous waste disposal savings of \$83,000 and a pollution prevention win-win.



### **Capturing Dollars from Demolition**

Air Force construction and demolition projects generate many tons of debris annually. The Vandenberg AFB Recycling Center strives to identify valuable materials coming from projects, segregates them, and finds markets that generate the best return for the Air Force while diverting waste from landfills.

The Team operates the Vandenberg Recycling Center, the center for the base's successful QRP, along with two innovative furniture reuse and wood reuse programs. In 2018 and 2019, these multi-faceted recycling and reuse programs achieved the following:

- Recycled a total of 1,998 tons of scrap metals, lead-acid batteries, and toner cartridges.
- Diverted over 1,295 tons of wood from landfills, including office furniture, treated wood poles, un-treated wood, shipping crates, pallets, cable reels, and tree rounds.
- Generated \$298,000 in sales proceeds used to offset QRP program expenses and support the mission by providing additional funds for Morale, Welfare, and Recreation activities.

- Effort avoided \$193,000 in disposal costs and saved \$2.5 million in new-purchase costs.

### **Environmental Management**

Vandenberg AFB's highly effective EMS is the backbone of the Team's compliance program. The EMS encompasses the Installation's environmental programs and provides a framework to organize environmental requirements and information. The Team uses eDASH to facilitate its EMS; eDASH is an Air Force online tool that helps effectively manage its EMS requirements by providing personnel easy access to environmental policy, procedures, guidance, operational controls, and required environmental training. Additionally, the Team routinely presents "Newcomers" and "Facility Managers" briefings to help personnel understand how to support environmental requirements, and how doing so directly supports the Wing's mission.

The Team is hands-on when evaluating the successful implementation of environmental requirements across work areas. Training effectiveness is reviewed annually through the three-step Environmental Inspections Process.

- Step 1: Supervisors assess processes and evaluate possible environmental impacts or areas of concern across Vandenberg AFB. Any discrepancies are methodically addressed.
- Step 2: The Team completes checklists specific to their program and performs in-depth field visits to assess environmental practices in individual work areas. Any findings noted during field visits are documented in an eDASH tracking tool. The Team investigates the root cause and works with shop personnel to correct issues, ensuring regulatory compliance.
- Step 3: An external EMS audit is conducted by the Air Force Civil Engineer Center (AFCEC). In June

2019, this audit was performed as part of the base wide Unit Effectiveness Inspection which found the base's EMS to be conformant with Air Force requirements.



### **Environmental Awareness for All**

Having an effective EMS starts at the grass-roots level. The EMS Manager provides the basics of Vandenberg's environmental program at one of the monthly Newcomer's briefings to promote environmental awareness to personnel new to Vandenberg AFB or new to the Air Force.

Vandenberg AFB's EMS excellence hinges on the Team's interaction with all Installation personnel, especially the Cross Functional Team (CFT). Quarterly CFT meetings disseminate vital environmental information to the EMS Chair, EMS Coordinator, and 52 Unit Environmental Coordinators (UECs). The UEC community is the integral link between environmental regulatory requirements, implementation, and mission success. Additionally, the CFT reviews emerging environmental issues applicable to Vandenberg AFB's mission. Any decisions or issues that need higher leadership attention are forwarded to the Environment, Safety and Occupational Health Council for final endorsement. Through the EMS, all personnel recognize their responsibilities to conduct the mission sustainably, reduce pollution, maintain regulatory compliance, avoid adverse environmental impact, and continually improve performance.

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The Team works tirelessly to hone their understanding of the complex web of environmental regulations while fostering cooperative relationships with its many regulators. This breadth of knowledge and interactive teamwork with the regulatory community fosters a low rate of enforcement actions across all environmental programs, and leaves avenues for open dialogue when issues arise. These values were put to the test when strict emergency generator permit limits threatened to derail Vandenberg AFB's ability to conduct its first ever Congressionally mandated Department of Defense Energy Resiliency Readiness Exercise. The exercise required an installation-wide power outage that would call on generators to run an extended length of time. Complex air quality regulations were reviewed, and regulators were consulted to ascertain a way forward that would avoid a violation of Vandenberg AFB's Title V Air Operating Permit. When a viable regulatory solution was unavailable, the approach to the exercise was reengineered with an intricate grid-power switching plan to ensure none of the nearly 100 generators exceeded their allotted run-time limits. With the power system closely monitored, this critical exercise successfully accomplished the goal of identifying vulnerabilities within the installation-wide power infrastructure without violating the permit.

The Team works diligently with regulators and Vandenberg AFB personnel to identify and remedy issues promptly with minimal facility and equipment downtime. During spring 2019, an issue was identified with the leak detection system at the retail gas station. The Team worked closely with Santa Barbara County regulators to initiate a \$325,000 project to repair and replace the station's deteriorating leak detection and monitoring system fittings, which serve 12 gasoline pump dispensers with 24 pumps. The project required extensive and meticulous coordination with contractors, state regulatory agencies, and the base populace to

ensure all requirements were completed with the least possible impact to the installation. These improvements ensured the gas station meets environmental requirements and is safe.

### **Effective Use of Funds**



### **Capping Over 70 Years of Trash**

With considerable amounts of engineering and regulatory negotiations, Vandenberg AFB successfully implemented plans to close its landfill. The Team tenaciously pushed innovations to use on-site materials as well as streamlined the construction schedule to save the Air Force over \$15 million.

When Vandenberg AFB leadership decided to close the installation landfill that was open for more than 70 years, the decision was met with many regulatory and engineering challenges. Faced with the staggering costs of purchasing material from off-site to construct the landfill closure cap the Team looked inward to find an innovative solution to meet tough regulatory closure standards. The solution was utilizing on-site diatomaceous Monterey-shale material as the final cover, which was mined from within the landfill boundary, processed, and placed for construction of the landfill cap. The use of on-site material saved the Air Force over \$6 million in costs versus suitable off-site cover soil. Additionally, the landfill closure schedule was purposely condensed to a two-year phased implementation. The aggressive and compressed construction schedule saved the Air Force \$9.3 million by eliminating third year project costs. The Team persevered through numerous obstacles and propelled the project from inception through the design phase past all regulatory approval milestones and into

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construction mode. The final closure is on target for fall 2020.

The Team successfully negotiated cost sharing with regulators for operation of an off-site ambient air monitoring station to satisfy the South Vandenberg Power Plant air monitoring requirement in the Title V Air Operating Permit. The Team identified and proposed use of a local downwind off-site monitoring station to fulfill permit requirements. The Team showed that emissions from the downwind stream were nearly identical to readings from the Vandenberg AFB site. Regulators agreed that use of the off-site data would satisfy the permit requirement and modified the permit allowing Vandenberg AFB to remove an existing on-site station and cost share for the use of the off-site station. This effort reduced permit related monitoring and maintenance costs by over \$46,000 annually.

When Vandenberg AFB's Explosive Ordinance Disposal Range Open-Detonation Treatment permit came up for its 10-year renewal, the California Department of Toxic Substances Control (DTSC) estimated renewal costs to be \$525,000. This dramatic increase from previous permit cost of \$46,000 was due to state legislation passed in 2018 that significantly altered hazardous waste facility permit renewal application assessments. The Team shrewdly negotiated with the DTSC to rein in the onerous permit renewal costs, which ultimately was reduced to \$225,000, a cost avoidance of \$300,000. This achievement is attributed to the Team's long-time positive working relationship with DTSC staff.

Crucial guidance was provided by the Team during re-competition of their installation-wide environmental support contract. The Team collaborated with AFCEC to tailor contract language to provide the best value for available funds. Ultimately, the cost for the contract decreased from \$2.3 to \$1.7 million. The contract included flexibility to provide continuous emissions air monitoring equipment

at the mission critical South Vandenberg Power Plant, which supports all space launch.

### **Community Relations**

On- and off-base public involvement is paramount to Vandenberg's environmental program. One very successful community engagement activity involves Science Discovery, a local stormwater education provider. The partnership allows for the Team to present classroom education to 140 fifth grade students at two local schools. This education emphasizes the importance of protecting our waterways from pollution locally and globally. This stormwater pollution prevention education was also presented to installation personnel at Earth Day events and made accessible online on eDASH. Training on Best Management Practices is provided to the offices who accomplish projects that may impact stormwater, such as construction and maintenance.

When hazardous waste issues threatened to close the doors at the Vandenberg AFB Auto Hobby Shop, the fast-acting, full-spectrum Team worked to ensure continued operation of this popular asset. Multiple in-house inspections revealed a shortage of dedicated resources to adequately implement proper compliance and housekeeping practices. Budget and staffing cuts for the facility threatened complete closure. An aggressive hazardous waste and water quality training and support program were implemented to ensure streamlined operations and full compliance of the staff and facility. Implementation of these measures ensured the Auto Hobby Shop would continue to be open to installation personnel three days a week.

Annually, the Environmental Quality and Natural Resources teams collaborate to enlist volunteers to participate in a beach clean-up event. A recent call for volunteers garnered an enormous response from not only Air Force units, but also families residing on Vandenberg AFB. The Team developed a strategy for the

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clean-up and divided individuals into teams guided by environmental personnel. Volunteers were then dispersed to Vandenberg AFB's 14 miles of beaches, ultimately removing 2.5 tons of trash and serving as a valuable educational opportunity on the impact of trash and pollution on this fragile ecosystem.



### **Volunteering for a Cleaner Environment**

The Team routinely organizes annual beach clean-up events and volunteers eagerly respond. Annual events net tons of trash washed onto Vandenberg AFB beaches and at the same time educate base personnel about environmental issues that impact everyone.

### **NEPA Planning, Analysis, and Implementation**

Over the past two years, Vandenberg AFB's NEPA planners generated an outstanding record of conservation accomplishments, as well as agreements with regulators to streamline project implementations. They led over 40 NEPA processes while navigating 18 regulatory agency requirements to prevent any project delays, which saved more than \$130 million. Of note, is the work the NEPA planners performed to identify all environmental impact requirements. This information mitigated any project delays for several overhead power line projects providing power upgrades to Space Launch Complexes supporting SpaceX and United Launch Alliance for National Reconnaissance Organization launches. The value of these launch programs exceeded \$4 billion.

As Vandenberg AFB maps out plans to become the "Spaceport of the Future," NEPA planners are proactively navigating this fast-moving mission transition by creating a groundbreaking Small Rockets Programmatic Environmental Assessment (PEA). The PEA will cover all regulatory requirements for up to nine new small rocket launch facilities throughout south Vandenberg with a flexible course of action to accommodate a variety of launch vehicles. Ultimately, the PEA will set the stage for 100 satellite launches into polar orbit per year from Vandenberg AFB.

NEPA Planners orchestrated a dynamic 18-month environmental impact analysis process facilitating the first ever SpaceX boostback (a booster rocket returning to launch site) event on the west coast. Eight regulatory consultations were fast tracked utilizing all available environmental personnel for a total of 2,800 manhours of effort. This "all hands-on deck" approach resulted in two successful boostbacks, and associated launches, in full compliance with all Federal, state, and county regulations while maintaining full mission capabilities.

In order to enhance public safety, the Vandenberg AFB NEPA planners closely coordinated with the Union Pacific Railroad to replace a 110-year-old railroad bridge on a critical transportation corridor through the base, which carries hundreds of Amtrak passengers daily. The planners worked diligently with the regulatory community and railroad engineers to ensure this transportation link was replaced in a timely manner while guaranteeing that significant archaeological resources and seven Federally endangered species were protected during construction.