APTIM

Improving Safety and Support for Remote Field Sites Through Digital Innovation
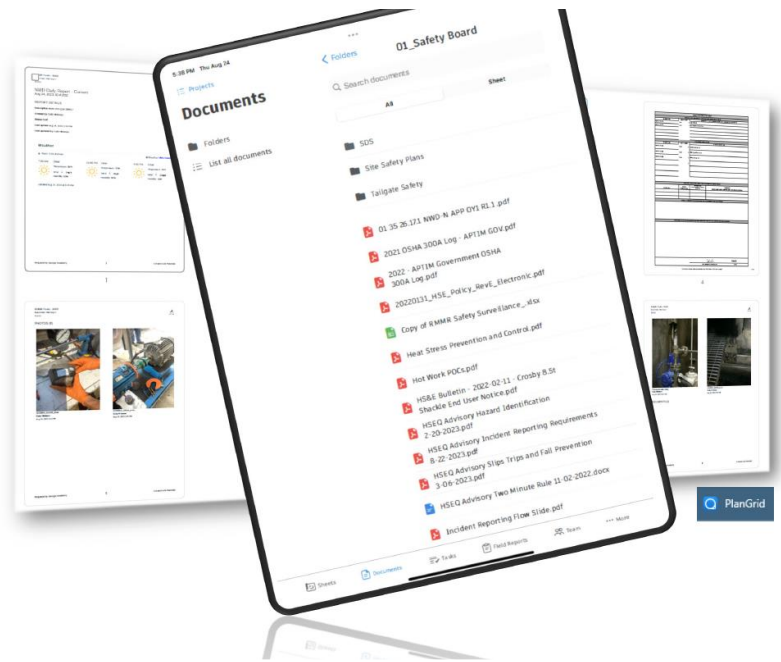
APTIM is responsible for the repair and maintenance of more than 90,000 fuel infrastructure assets for the U.S. Department of Defense in dozens of remote locations throughout the U.S., including isolated Pacific Islands such as Kwajalein Atoll, Wake Island and Diego Garcia, as well as U.S. military facilities in Japan and Korea. It soon realized the potential for safety to be compromised due to gaps in safety planning, processes, communication and documentation.

APTIM's challenge was the limitation on safety planning and communication between field crews and home-based engineers and managers, thousands of miles and many time zones away. Determined to deliver extraordinary results by merging inspired innovation with its empowered workforce, it sought to combine best-in-class tools and safety processes to make these remote locations the absolute safest workplaces.

The program team identified a suite of digital construction management and 3D graphic tools (Maintenance Connection, PlanGrid and Matterport) to integrate with its safety program needs. The customized tool provides safety managers and project managers immediate access to current, 3D images of field locations, so safety managers and project managers can understand site conditions and conduct virtual site walks and surveys before deploying field teams. Engineers, safety managers and project managers can immediately review photographs from the site that may not have been captured in the initial hazard assessment. This gives safety managers clarity on the safety conditions when off site and preparing safety reports.

The tool provides up-to-date information on work tasks, supporting documents, schedules, notes and information, such as weather conditions, for field crews to access from any location and view the activity scheduled for the day. Plus, safety managers and field crews receive real-time reporting of activity hazard analyses and immediate access to safety communications. This allows them to view notes on current conditions; be better prepared for safety issues, updates and high-risk activities; and receive reminders for personal protective equipment required.

In addition, the tool makes Daily Reports available, including the basic jobs and steps the site safety officer is to review with the workforce. A daily High-Risk Activities checklist identifies required plans, competent person checklists and sign-off, work permits and a template for submitting near miss/good catch reports. A Virtual Bulletin Board ensures requirements are met, and an SDS Digital folder holds all hazardous materials with digital acknowledgment for the field crew. Plus, the tool customizes safety packages for every project and tracks and stores required safety trainings and certifications. These critical resources ensure the entire field team has the information and resources they need to complete their work safely every day.

A recent example of the positive impact of this digital innovation on remote project safety was APTIM's ability to efficiently disseminate information from its client, the U.S. Army Corps of Engineers, about heat advisories this summer. Its home-based safety managers were able to immediately post these notices to the field sites' virtual safety bulletin board and notify them of their responsibility to communicate this safety information, as well as electronically gather the signatures of the participants in the briefings. Use of this digital communication and central collaboration tool has increased: participation and quality of site safety meetings, standard and better adherence of site safety audits performed, and hazard identification in the field. It has resulted in an average of below .01 for all leading indicators that helped drive down incident rates for the past three years of this program.

APTIM's customized safety tool was intended and has proved to provide an electronic means of group communication, real-time engagement and seamless field interaction with safety and engineering support teams. It ensures the safest measures are being implemented at the site and the regulatory documentation required by its customers is maintained, all while the safety of the field staff has increased. These outcomes are aligned with APTIM's commitment to the safety and security of its people. APTIM leads and empowers its workforce to be incident-free by involving all teammates in identifying and managing risks, as well as by providing programs, training and tools like this one to promote and enhance its safety culture.