

USAG Fort Johnson, Louisiana



Environmental Restoration, Installation

INTRODUCTION

Situated in the dense woodlands of west central Louisiana, Fort Johnson (formerly Fort Polk) is the home of the Joint Readiness Training Center (JRTC), the Army's premier combat training center (CTC) and the only CTC that also serves as a power projection platform for deploying combat units. The mission is "to train Soldiers, and when ordered, deploy those Soldiers worldwide." Fort Johnson is 241,126 acres in size. The JRTC and Fort Johnson is home station for one brigade combat team and four separate, deployable combat battalions, with additional support units and organizations.

Approximately 32,351 soldiers, civilians, and family members live and work at the JRTC and Fort Johnson. The daily transient population from CTC rotational training units averages 5,776. There is a retiree/veteran population of 61,594. Altogether, the installation contributes almost \$1.5 billion annually to Louisiana's economy. Fort Johnson, regional municipalities, and the State of Louisiana are partners in their commitment to sustain the natural environment and improve the quality of life of Soldiers and family members on and off the installation. Fort Johnson is a resource resilient, self-sustaining installation that enables the readiness of its military units.

BACKGROUND

The JRTC and Fort Johnson is an active Army installation with two distinct restoration programs under DERP: the Installation Restoration Program (IRP) and the Military Munitions Response Program (MMRP). Both programs use a phased approach to identify, evaluate, and cleanup contamination caused by past military and industrial operations. The IRP focuses on investigations and remediation of chemical contamination of soil and water. While the MMRP focuses on evaluation and cleanup of explosives hazards on former training range lands.

Various military units have trained at the JRTC and Fort Johnson since the 1940's. Brief periods of inactivity occurred in 1947, 1954, 1955, 1959, and 1960. Typical military and industrial activities and practices resulted in the contamination of some areas of the installation. The storage and use of petroleum products have been the main source of subsurface contamination. Contamination assessments, site investigations, remedial designs, and corrective actions have been ongoing at the JRTC and Fort Johnson since 1983. In 1992, Fort Johnson applied for a Resource Conservation and Recovery Act (RCRA) Subpart X Permit at its Explosive Ordnance Disposal (EOD) Range. In response to the permit application, the Environmental Protection Agency (EPA) commissioned a RCRA Facility Assessment (RFA) in



Program Management



Orientation to Mission



Impact & Outcomes



Technical Merit



Stakeholder Interaction



Transferability



1993 to identify areas of potential releases from on-site Solid Waste Management Units (SWMUs) and to evaluate the need for further action under Section 3004(u) of RCRA, as amended by the 1984 Hazardous and Solid Waste Amendments. The RFA report identified 57 SWMUs and five Areas of Concern (AOCs). The RCRA Subpart X permit regulates the SWMUs identified in the RFA. The 1993 RFA report recommended further investigations at 39 SWMUs and two AOCs. An installation-wide Phase I RCRA Facility Investigation (RFI) began in 1995. Soil and groundwater samples were collected from each identified site and analyzed. The results led to further investigation in the form of a Phase II RFI, conducted between 1997 and 1999. The findings of the Phase II report led to a Phase III RFI investigation in 2000. The Phase III report included a Risk Evaluation/Corrective Action Program (RECAP) assessment of each site.

Today, the JRTC and Fort Johnson’s IRP continue to manage and execute remedial actions and monitoring activities at SWMUs and AOCs in accordance with applicable laws and regulations. Some sites, such as former fuel dispensing sites, are regulated under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements. The Louisiana Department of Environmental Quality (LDEQ) has provided regulatory oversight for all IRP investigations, assessments, and corrective actions.

MANAGEMENT APPROACH

Environmental management and execution are essential to the day-to-day operations of the installation and tenant organizations. Taking the diversified and team approach, several partnerships with neighboring Southwest Louisiana communities have given way to an expanded knowledge of environmental issues and cost avoidance. In keeping with efforts to ensure all can have an active part, Fort Johnson developed the *Environmental Management Performance Review* (EMPR). Since 2001, the EMPR has tracked and documented the JRTC and Fort Johnson training mission, environmental impacts, and long-term environmental and sustainability trends.

The EMPR report is published annually and provides performance metrics for each environmental program media area. It summarizes annual accomplishments by using tables, graphs, and charts which track the changes from year to year. The EMPR is a holistic

environmental reference resource for Fort Johnson leaders, planners, environmental staff, and tenant organization management who seek to analyze environmental and mission impacts and identify long-term environmental trends and performance.



The EMPR is a component of the installation’s annual management review to senior leadership, and a summary of quarterly management reviews conducted as Environmental Quality Control Committee (EQCC) meetings. Quarterly, EQCC members provide management oversight of the installation’s progress on environmental objectives and projects. It is an innovative tool for senior leadership to track program progress, identify environmental performance improvement opportunities, effectively manage risks, drive improvements, and enhance Fort Johnson’s mission accomplishment. The EMPR is available installation wide on the Fort Johnson Intranet.

MANAGEMENT APPROACH

The Fort Johnson Installation Restoration Program embodies the diversified and team approach by assembling a knowledgeable and experienced team of professionals:

- Fort Johnson’s Directorate of Public Works (DPW) Environmental Division Chief, Department of Army Civilians (DACs) – Ensures program implementation and briefs senior leaders of status of the program.
- Installation Restoration Program (IRP) Manager and Architect, DACs, Environmental Division of Public Works Compliance Branch – Oversee and



coordinates program implementation and compliance, reviews contract activities and deliverables as well as provides technical expertise.

- Hazardous Waste Program Manager, DACs, Environmental Division of Public Works Compliance Branch – subject matter expert
- Environmental Chemical Corporation (ECC) – Contractor performing the remediation, monitoring, and closure of each site.
- United States Army Environmental Command (USAEC), Midwest & Central America Division – Provides oversight and COR review of activities and deliverables on ongoing remediation efforts.

Fort Johnson current site remediation and monitoring efforts are being conducted under a five-year, approximately \$2 million firm fixed contract. The Fort Johnson IRP team relies strictly on contracts of this type to investigate and remediate sites. Due to limited government staffing, the contract dramatically accelerates the site cleanup timeline, leads to innovative and alternative remediation technologies, and provides cost savings for the cleanup lifecycle of each site. The firm fixed contract allows for in-depth knowledge and technical experience that would otherwise be near impossible to obtain. This contract gives way to a community of subject matter experts that come together to resolve remediation for Fort Johnson’s past, present, and future.

COMMUNITY INVOLVEMENT

As part of continual efforts to maintain transparency and integrate awareness of restoration/remediation practices for the local community, Fort Johnson’s Environmental team provides feedback through the following mechanisms:

Fort Johnson Community Involvement Plan – This plan is updated every two years and made available to the public electronically on the Army Environmental Headquarters’ website and locally at the Vernon Parish Library. It gives the surrounding community insight on all restoration sites listed on the installation and the cleanup strategy currently underway.

Restoration Advisory Board solicitation – This solicitation is placed in the neighboring parishes’ local publications every two years for community interest in a Fort Johnson environmental panel to discuss current and future restoration projects. It is

open to the community with no financial obligation and is voluntary for those interested.

Informational Documents – The Fort Johnson IRP Team created a “Installation Restoration Program information Paper” to give an overview of the program to all new and senior management. When additional visual details are needed to help describe examples of the IRP, a PowerPoint brief, “IRP Overview” was developed to do just that. These documents are updated quarterly as needed.

Environmental Office Library – The Environmental main office library can be found at the Fort Johnson’s DPW Environmental headquarters’ building office library on the installation. The historical restoration reports completed in prior years for previous phases gives a full picture of what and how contaminants were found and characterized and the way ahead. Any current sites with active phases, you will find draft and pending reports in the IRP office library for reference.

Fort Johnson Restoration Sites Status Review Meetings – Occurs monthly to maintain information flow between the project stakeholders and state regulators. This ensures any pending actions are accounted for and cleanup processes are on track with path forward ideas and exit strategies maintained.



The JRTC & Fort Johnson IRP stakeholders at Chaffee Road Landfill for a maintenance inspection and review.



ACCOMPLISHMENTS

ENHANCED ENVIRONMENTAL CLEANUP

Restoration efforts continue to move forward in phases and the goal is to reach the closure process efficiently and effectively. Of the 39 SWMUs and two AOCs requiring further investigation as specified in the RCRA Facility Assessment and the 2000 Phase III Risk Evaluation/Corrective Action Program assessment report, only nine sites remain and are currently under ongoing remediation efforts. Through the efforts of the IRP manager working together with the state regulator in FY21, Fort Johnson was recorded as to having 30 pending sites now closed by the end of FY22 and meet state and federal requirements of Unlimited Use (UU)/Unrestricted Exposure (UE) standards (clean). Outstanding collaboration occurred between the two agencies to meet their goals.

MMRP Sites

Munitions debris and munitions constituents were found at three former training sites in the early 2000s. A Remedial Investigation and soon after a Feasibility Study were developed and approved by LDEQ but included additional reports to submit due to the presence of munitions and explosives of concern. Though approval was granted for the previous reports, additional closing procedures had to be met to officially call the sites closed. Starting in FY20, the IRP manager and the LDEQ regulator worked together to find the outstanding documents and procedures needed to close these two MMRP sites. The IRP manager ensured the subsurface clearance reports and all other closing documents were submitted to the state and approved. The state provided confirmation documents on previous approved reports so the IRP manager would be able to close out the site for Army real property records. This effort not only supported local, state and federal requirements but legally validated the clean closure of Army real property holdings by the beginning of FY22. This effort by the two agencies working together to meet regulatory compliance and certifying the official closeout of three sites to Unlimited Use (UU)/Unrestricted Exposure (UE) standards (clean) was a job well done.



CCBldg 1725 Soil boring installation using Direct Pushing Technology (DPT) rig.

CCBldg1725 Petroleum-Contaminated Site

- CCBldg1725 operated from the 1950s to 2006 as an automotive service station/repair facility. The three 10,000-gallon USTs, the fuel dispensers, and the piping were removed in 2008. Petroleum hydrocarbon impacted soils were encountered below the dispensing islands during removal in 2008. In November 2010, approximately 5,338 tons of soil was excavated from an 80 feet by 90 feet area to a depth of 15 feet. A total of 975 pounds of an Oxygen Released Compound (ORC) were applied to the base of the excavation to enhance aerobic biodegradation of total xylenes in the subsurface soil. In 2013, LDEQ requested a subsurface soil sampling be completed to evaluate conditions in the soil. The 2016 results indicated that total xylenes remained above the Louisiana RECAP standards in samples 1725—SB19C (20 to 22 feet) and 1725-SB19C (22 to 24 feet). Fort Johnson recommended a Corrective Action Plan (CAP) Addendum to address these exceedances. Upon completion of the CAP Addendum and the Subsurface Soil Investigation, results found the exceedances no longer exist due to natural attenuation from cleanup action completed in 2010 and since the 2016 sampling report results. The JRTC and Fort Johnson submitted the CAP Addendum and the Subsurface Soil Investigation Report on 21 November 2019 and requested a NFA be granted. On 14 January 2020, LDEQ approved the Subsurface oil Investigation Report and closure of site complete. Due to the heightened security caused by the COVID-19 outbreak, LDEQ agreed that if the Fort Johnson IRP manager could provide a detail brief of the site depicting all necessary closure procedures and photo



validation of the site, a No Further Action At This Time (NFA-ATT) could be granted. The closure brief was submitted in April 2020 and the following year (FY21), LDEQ issued the NFA-ATT letter to official closeout the site to Unlimited Use (UU)/Unrestricted Exposure (UE) standards (clean).

Solid Waste Management Unit (SWMU) 26 Site

- Also known as Motor fuel Unit #3, is in the south cantonment area of Fort Johnson. A former fuel distribution network of USTs, underground pipes, and fuel dispensers, contaminates were discovered surrounding the left-in-place fuel lines. The primary contaminant is fuel. Possible sources of contamination at this site include leakage from the distribution lines and operational fuel spills. The LDEQ concurred on Sept. 30, 2014, with the Corrective Measures Study (CMS) submitted by Fort Johnson that In-Situ Chemical Oxidation (ISCO) is the preferred alternative for clean-up. Injections commenced in October 2016 and subsequent confirmation sampling depicted that the oxidant was performing as anticipated. In August 2019, a final remedial action report was submitted to LDEQ for review and approval, which included a request for no further action at this time (NFA-ATT). On Nov. 27, 2019, LDEQ provided approval for the remedial action report and tentative closure for the site, with contamination left in place at the industrial level as defined by RECAP Standards. However, LDEQ requested a report demonstrating all site closure requirements and well abandonment processes were completed along with a site inspection by the regulator prior to issuance of the NFA-ATT document. After the temporary wells were pulled and

abandoned and all required closure processes were complete, the state permit office provided a permit closure acceptance to submit to the remediation regulator. Site closure inspection was completed and accepted on 14 December 2021 and in March 2022 Fort Johnson received the NFA-ATT letter from LDEQ to close the site. The site was closed in the Army Environmental Command database (HQAES) system and Fort Johnson’s Environmental restoration library to industrial standards prior to 30 September 2022.



SWMU 26 Site showing the In-Situ Chemical Oxidation setup with temporary wells flagged in upper left prior to closure proceedings.



SWMU 26 Site closure inspection with the state regulator. Site returned to natural conditions at an industrial level RECAP standard.

CCBldg 7199 North Fort Fire Station Site

The site was formerly a convenience store/service station operated by the Army Air Force Exchange Service (AAFES) between 1950 and 1993. Three 10,000-gallon underground storage tanks (UST) containing fuel were removed in 1994. Soil from the excavation was analyzed and found to be contaminated with benzene, toluene, ethylbenzene, and xylene (BETX). A bioremediation treatment was performed, which entailed placing three six-inch layers of soil on plastic. Each six-inch lift was treated with LFS-1 nutrient. The post-treatment samples were collected, and lab results indicated that contamination was below LDEQ limits of industrial standards, and the soil was used as backfill material



and returned to its origin. A project to expand the capabilities of the Fire Station facility to meet new mission requirements led to a PA/SI being initiated in 2007. The SI found petroleum impacts above LDEQ RECAP standards in surface soil. To achieve unlimited use (UU)/unrestricted exposure (UE) to support the expanded mission requirements, a corrective measures implementation construction (CMI(C)) work plan was submitted and approved for work start in 2021. With the upgraded Fire Station now operating 24/7 under the expanded facility footprint, it made excavation near impossible without disturbing operations. During the pre-design investigation sampling, results show only two locations exceeded LDEQ RECAP standards. The results made remediation feasible on a smaller scale and disruption to the fire station minimum requiring only two areas needing direct treatment. At each treatment point, direct push technology will be used to drill a boring to approximately 12 feet below ground surface (ft bgs). The gravity fed system can be seen in the photo below and the first round of treatment was completed in April 2023. Monitoring and treatment are ongoing and expected to continue until the beginning of 2024. The site will be closed out to Unlimited Use (UU)/Unrestricted Exposure (UE) standards (clean).



Site inspection of vertical treatment wells around and proximal to exceedance locations installed to deliver material (wash soil) to treat the residual contamination.

PARTNERSHIPS

The IRP and MMRP enable the DoD to comply with applicable federal and state environmental regulations. Compliance allows the Army to continue its mission in support of national defense and as the JRTC and Fort Johnson’s IRP continue to progress and evolve, potential impacted sites are assessed for

negative environmental impacts. Remedial actions and cleanup measures are planned to maximize the protection of human health and the environment. Public safety and potential impacts to military communities are primary considerations in choosing appropriate remedial actions and cleanup measures at each site. The most feasible and cost-effective approach is sought to restore each site. Approval and input from State environmental regulators must be obtained before any action is taken at an IRP site.

CONCLUSION

The JRTC and Fort Johnson integrated approach has garnered many successful partnerships with other government agencies, neighboring communities, and the region that have led to significant infrastructure advances with significant cost savings. Through the efforts of the IRP manager working together with the state regulator in FY21, Fort Johnson was recorded having 30 pending sites now closed by the end of FY22 and meet state and federal requirements of Unlimited Use (UU)/Unrestricted Exposure (UE) standards (clean). This Army-led approach reflects agencies pulling together accomplishing innovative technologies while maintaining high life, health, and safety values. Fort Johnson Directorate of Public Works Environmental Installation Restoration Program reflects just that. The end goal for the Army and the JRTC and Fort Johnson Environmental IRP is to find smarter and better ways to protect and sustain the natural resources we manage and maintain compliance while integrating the enjoyment of those resources into the quality of life for its Soldiers, civilians, families, and surrounding communities.