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District-Wide Incorporation of Green and Sustainable Remediation (GSR) into Formerly Used Defense Site (FUDS) Program Projects in the USACE Louisville District

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Background/Objectives. The USACE manages the Formerly Used Defense Site (FUDS) program for the Department of Defense (DoD). As part of this management, the USACE follows DoD environmental remediation policy, which includes consideration and implementation of GSR opportunities when feasible and use of GSR remediation practices where practicable based on cost, social benefits, and economic impact. The Louisville District incorporated GSR into two ongoing Louisville District Remedial Investigation/Feasibility Study (RI/FS) projects in 2012 and 2013, including GSR contract language that was used as examples in the 2012 Army GSR Study, *Evaluation of Consideration and Incorporation of Green and Sustainable Remediation (GSR) Practices in Army Environmental Remediation"*. Recently, the Louisville District expanded GSR inclusion into all future Louisville District FUDS project actions as part of a FUDS GSR pilot conducted jointly with the USACE Environmental and Munitions Center of Expertise (EM CX). The objectives of this presentation are 1) to describe the results of the ongoing GSR incorporation in Louisville District FUDS projects and 2) describe the pilot results to date, including GSR contract language inclusion across the suite of Louisville District FUDS projects.

Approach/Activities. The Louisville District USACE has been proactive in incorporating GSR into its FUDS projects, starting with development and introduction of GSR contract language into RI/FS contracts for the former Lockbourne Air Force Base and the former Raco Army Airfield in 2012 and 2013. This language was also used to develop example FUDS GSR contract language across the contract vehicles used in the FUDS program for the 2012 Army GSR Study. The two RI/FS projects have utilized the approach developed as part of the 2012 Army GSR Study to incorporate GSR, with GSR inclusion complete in the RI and FS phases in one project and the RI phase in the other project. In 2016, the EM CX initiated a pilot study with the Louisville District to further expand GSR inclusion in FUDS projects. As part of the pilot, contract language was revised to reference use of a fillable Excel-based spreadsheet version of the 2012 Army Study list of GSR best management practices (BMPs) developed by the EM CX to provide a standard and effective method to consider, implement, and document inclusion of a GSR BMP evaluation. Starting in 2016, this revised contract language has been used to incorporate GSR and use of the BMP spreadsheet into all future Louisville District FUDS contract actions. The pilot also includes supply of the BMP spreadsheets as completed to the EM CX for review and entry into a GSR database maintained by the EM CX where summary information and statistics for the GSR pilot will be developed

Results/Lessons Learned. The presentation will describe 1) the results of GSR inclusion in the two RI/FS projects initiated in 2012 and 2013, including the number of GSR BMPs considered and implemented, as well as the cost impact of the BMPs implemented, 2) the results and use of the results of the quantitative footprinting for the project where GSR inclusion in the FS is completed, and 3) the initial results of the pilot extending GSR inclusion to all future Louisville District FUDS projects using the BMP spreadsheet. Lessons learned from application of the results and broad inclusion of GSR in FUDS contract actions will also be discussed.