

An Adaptive Approach to Integrating RCRA Corrective Action with Facility Demolition

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Background/Objectives. The former Agrium Advanced Technologies Facility in Fairbury, Nebraska produced dry micronutrient fertilizer products until production was ceased in 2014 when current owner Loveland Products/Crop Production Services (CPS) acquired the property. The Facility has been under regulatory oversight since the 1980s due to metals contamination. RCRA Corrective Action (RCA) moved slowly as SWMUs outside of the buildings were effectively remediated. Forward progress stalled as SWMUs within the buildings had not been investigated or remediated. In the spring of 2016, CPS' goals for the site became: redevelopment of the property; minimization of risk; reduction of regulatory oversight; and minimization of long-term environmental management needs. CPS, with Burns & McDonnell, developed an adaptive site management approach to integrate soil remediation under the RCA process simultaneous with facility demolition. The proposed timeline for completion of all demolition and remediation activities was the end of 2016.

Approach/Activities. Meeting with the regulatory agencies to conceptualize how soil at the site could be rapidly remediated within the framework of the RCA was crucial to project success. CPS and Burns & McDonnell with regulator input prepared a Work Plan that included decision trees and detailed directions on potential field iterations. Pre-characterization of the materials and soil present at the site allowed for effective planning of excavation, handling, and disposal. A Waste Management Plan, including a pilot study for treatment of the waste, was developed and approved by the regulatory agencies prior to the start of the remediation phase.

Open communication was promoted between team members and the regulators, which allowed the project team to address concerns as they arose. A construction manager with remediation expertise was on site throughout the project and directed excavation per the pre-characterization results. Approximately 9000 tons of soil were excavated, treated, and disposed off-site as nonhazardous waste. Pre-characterization of the concrete allowed reuse of the concrete as fill with no additional import of soil needed for backfilling excavations.

Results/Lessons Learned. The Facility was successfully decommissioned and vadose zone soil was remediated to established cleanup levels on schedule and within budget. Lessons learned from this project included: 1) develop a Work Plan with clear decision trees that are accepted by all stakeholders, and authorize the project team to execute those decisions accordingly; 2) keep open lines of communication between the project team and the regulatory agencies, be responsive to each other, and be willing to address concerns in a timely manner; 3) have an on-site construction manager with environmental expertise who can recognize unexpected conditions that will likely be encountered when demolishing a contaminated facility.