

LACBWR Action Plan**Problem Statement:**

During FSS of the Waste Treatment Building (WTB) excavated areas, Final Status Survey (FSS) Techs performed surface scans of the soil which showed detectable contamination levels that were within the Operational DCGLs. An NRC Inspector performing confirmatory surveys also saw detectable levels and requested that a soil sample be taken in a particular location. The results of the soil sample were at the Operational DCGLs which prompted the FSS Supervisor to direct Operations personnel to begin removing the soil. As the excavation progressed higher levels of contamination were detected and subsequently remediated.

An analysis of the issue was performed by the EnergySolutions (ES) Director of Radiological Site Closure which was presented to the Chief Nuclear Officer (CNO). Based on the results of the analysis the CNO directed that all remediation, excavation and FSS activities be suspended until LaCrosseSolutions (*Solutions*) could demonstrate that the project could perform below grade work without similar results.

Following the analysis by the EnergySolutions (ES) Director of Radiological Site Closure and the CNO's suspension of remediation, excavation and FSS activities, the LACBWR General Manager and project team members looked at areas which required improvement. The Project Team concluded that the following areas required improvement:

- Work Planning
- Work Flow/ Field Operations
- Equipment Utilization/ Proper Equipment

**Action Plan**

In order to ensure that below grade structures and commodities are not left in the excavations or below grade prior to FSS the LACBWR Site Restoration Project (SRP) Team has developed the following plan to improve areas requiring improvement.

Work Planning

The LACBWR team will complete the following:

- Contractor Project Manager, Superintendent and field leads will walk through the work process and sequencing of remaining work with the LACBWR Project Team.
- Identify each component or commodity to be removed and at what depth the component or commodity is located.
- Utilizing the information obtained from the work process and sequencing discussions the LACBWR work planner will revise Decommissioning Work Packages (i.e. Work Instructions, JHAs, Component/ Commodity List, etc.) to include the additional level of detail.

### Pre-job Briefings

- Pre-job Briefings need to include an additional level of detail so that field personnel are better informed. During initial briefings and as needed the pre-job briefs should include story boarding or use of drawings and or pictures to clarify activities and objectives for the day and moving forward.
- A member of the FSS staff shall be in attendance for briefings requiring remediation and/or excavation work.

### Operations

Fine-tuning field operations is imperative to ensure that no components or commodities remain when a survey unit is turned over to the FSS crew for surveys. As a result the project has committed to do the following:

- Operations crews will have continuous oversight by either Contractor supervision or Solutions' oversight personnel. If oversight is not present then remediation or excavation activities will not occur.
- Oversight personnel will document start and stop points such as elevations and locations in the event that work is interrupted. Start and stop points will be documented shiftly via activity logs and or pictures as feasible.
- Operations crews will have a Radiation Protection Technician (RP) to perform remedial action progress survey embedded within the crew continuously. If an RP Technician is not present then remediation or excavation activities will not occur. The RP Technician will perform walk over surveys and guidance during remediation and excavation activities.
- RP Technicians performing remedial action progress surveys will work closely with and receive guidance from FSS technicians to ensure that remedial action progress surveys are performed within guidelines set forth by the FSS program.
- If field work is to be performed on a scheduled off day the FSS Supervisor or his designated FSS technician must be present to ensure that remediation and excavations are performed in accordance with FSS guidelines.
- Remedial Action Support Surveys(RASS) will be performed by FSS Technicians in Class 1 areas as determined by the /RP FSS Manager prior to FSS surveys.
- Work Flow – If feasible field operations will work in a manner from lower radiological activity to higher radiological activity. By working in this manner, it will limit the potential for cross-contaminating “clean” areas or tracking materials beneath the excavation surface.
- To the greatest extent possible foundations and commodities will be exposed and laid back at the proper sloping to ensure that slumping material does not cover foundations and commodities. In the event that it is not feasible to slope back foundations and commodities trench boxes or shoring will be utilized on a case-by-case basis.

- Contractor will demarcate final planned elevations utilizing GPS or transit to identify excavation limits and to limit the amount of over excavation.
- Utilizing the hammer attachment on the excavator to fracture and down size the WTB slab was noted as a likely contributor to material being left below the excavation surface. While fracturing and down sizing concrete the hammer conceivably could push material below the excavation surface beyond the range detectable by field instrumentation. In addition to the use of the hammer attachment, not having a sifting bucket also contributed to materials remaining below the excavation surface. Moving forward when the hammer is used on slab on grade and below grade concrete the operator will sift soil utilizing a sifting bucket to a minimum depth equal to the hammer pin length (Approximately 2' to 3') to ensure that material below the excavation surface is removed.