



Y-12 Lithium Manufacturing Modernization

Pro2Serve is providing technical expertise to BWXT Y-12 to develop modernization plans for lithium manufacturing processes to assure that stockpile refurbishment requirements are met while minimizing the hazards faced by manufacturing workers. Pro2Serve's effort focuses on evaluation of existing strategies and implementation plans, identification of technology gaps and deficiencies, evaluation of alternative technical approaches, and development of lithium process optimization and modernization plans.

Pro2Serve performed an evaluation of existing technology strategies to address Y-12 mission needs. This effort included integration of Y-12's mission requirements and mission strategies and analysis of current corresponding technology deployment plans (including Plant Directed Research and Development) for adequacy against the integrated requirements. Gaps and deficiencies identified in this evaluation were then documented.

Working with Y-12 professional staff, Pro2Serve facilitated identification and evaluation of additional technical alternatives for accomplishing lithium manufacturing objectives. Process flow sheets were prepared to support evaluation of alternatives and to facilitate stakeholder interaction. Process flow sheets integrated technology insertion with a lean

manufacturing approach to ensure optimized process flows and factory layouts.

In support of Y-12 Plans to replace current antiquated manufacturing facilities with a consolidated manufacturing complex, Pro2Serve reviewed and analyzed existing technology development plans, improvements, lean manufacturing concepts, and customer/technical requirements, then documented the footprint requirements needed in the new modernized Li Manufacturing facility. The final deliverable for this task was a documented modernization plan for the period through 2030 that summarizes the tasks required for the full implementation of the plan. Included were task plans, an implementation schedule, and the approximate square footage of floor space and number machines/equipment required.

Pro2Serve continues to work with Y-12 to facilitate the development of integrated technology upgrade plans for lithium manufacturing operations areas at Y-12 to meet near-term production requirements. These plans address specific actions to be taken to further develop and qualify new technologies required for implementation of selected alternative processes.

