The Eastern Processing Facility (EPF) located at Cape Canaveral Air Force Station is utilized to prepare unmanned spacecraft for launch. During the facility conception and design phase, Lockheed Martin was tasked to develop specifications and review designs. Lockheed Martin chose to implement the principles of RCM, Precision and Predictive techniques from construction through commissioning. This has proven to be most advantageous with regard to failure mode consequence reduction. One of the first things we accomplished was to educate the management and workforce in RCM philosophy and identify analysis leads, who obtained additional training in RCM.

Asset prioritization was performed to identify all systems and subsystems in the EPF, and was built on a hierarchy list based on Safety, Environmental, Mission Impacts and Probability of Failure. RCM analyses were then executed based on the hierarchy list, availability of drawings, O&M manuals, submittals and the building’s schedule. As RCM analyses are completed the findings are directly used in the development of the maintenance procedures.

During the RCM analysis, we identified Predictive Maintenance Technologies (PDM) that would best fit our particular requirements. This was done in an effort to reduce the impacts of the failure modes that were identified. Attending IMC conferences was most beneficial in that it allowed us to evaluate many different tools in a short period of time.

Having identified these technologies, our next step was to purchase equipment and applications and train specific work groups in data collection and analysis/interpretation. The decision was made to train key technicians in data collection and the responsible system engineer’s in data analysis/interpretation. We currently have implemented the use of these technologies in all areas of facility maintenance under our control. This has significantly raised the proficiency of our Technicians while improving the predictive maintenance modeling. Additional benefits were obtained using these technologies in helping trouble shoot problems that arose during the construction of the EPF.

Currently we are in the process of asset verification/validation and data collection. This information will be reviewed, once approved we will, be loaded into our Computerized Maintenance Management System (CMMS). This analysis based approach, allows us to more effectively and efficiently maintain and operate our facility with minimal schedule impacts and avoids costs associated with reactive maintenance.