

PERFORMANCE MEASURES FOR USE IN EVALUATING THE ADEQUACY OF A CHEMICAL MANAGEMENT PROGRAM

The following is a sample set of performance measures that could be utilized to evaluate or measure the adequacy of a chemical management program. Although the emphasis is on ensuring that safety, health, and environmental concerns are properly addressed, this will happen most effectively when chemical management is accomplished in a disciplined, documented, and systematic fashion in accordance with established standards and measurable attributes. The measures are divided into three distinct categories as follows: Category 1- Performance measure which are in use at DOE sites, Category 2- Suggested performance measures, Category 3- Management System or general assessment guidance.

Category 1

- **Chemical Procurement Cycle Time.** The cycle time will be tracked from the time of submission of a field chemical request to the placement of a chemical order. (The reduction in cycle time will increase the confidence that the required chemicals can be obtained in a timely manner, thereby reducing the field tendency to over buy and stockpile chemicals.)

- **Chemical Use and Storage Trends.** Annually, evaluate the chemical inventory for changes in quantities and severity of chemical hazards. Review the actual number of chemical line items and the poundage of those chemicals that are captured in the Emergency and Hazardous Chemical Inventory Report (40 CFR 370, Tier II). (The Tier II reports tracks chemicals that have a threshold planning quantity (TPQ) and those chemicals in excess of 10,000 pounds and is a good indicator to use for chemical use and storage trending.)

-Chemical Excess Program Measures

Monthly, provide a calculation of the dollars of chemicals brought in to the excess chemical program.

Monthly, provide a calculation of the pounds of chemicals brought in to the excess chemical program.

Monthly, provide the cost savings generated through chemical reutilization on-site, and off-site sales and donations.

Monthly, determine the waste avoidance costs for those chemicals that were dispositioned without generating a waste.

Monthly, determine the amount in pounds for those chemicals that were dispositioned without generating a waste.

(Tracking the flow of chemicals through the excess chemical program helps identify fluctuations and areas that require concentrate efforts to disposition and highlights pollution prevention.)

Category 2

-Substitutions for Less Hazard Chemicals. Monthly, determine how many toxic or environmentally hazardous chemicals have been eliminated from use or replaced with less toxic or environmentally hazardous chemicals. (This can work in conjunction with the site's waste minimization and pollution prevention programs.)

-Chemical Transportation Trends. Identify the number of violations of on-site transportation requirements.

Category 3

-Provide an annual assessment of a site's overall chemical management program. This review, to be conducted by the organization responsible for the chemical management program which the line organization are responsible to implement, will include a review of all site assessments (Facility Evaluation Board, Defense Nuclear Safety Board, DOE, lesson learned, self assessments, etc.) that impact chemical management. This assessment will be used to point out strengths and weaknesses within the chemical management program.

- Identify and track special chemical hazards. Include those chemicals that pose additional hazards (reactive, light sensitive, pyrophoric, etc.) and require greater levels of maintenance and care. A letter will be sent to the organization owning those chemicals requesting a physical verification of the chemical integrity. A response will be required to document any action taken during the process or the acceptance of the chemical's condition and continued storage and use.

-Annually evaluate the completeness of the site's MSDS database. Determine the Percentage of successfully completed follow-up actions that have been taken on Non-receipt, updates, incompletions and inaccuracies that have been identified in MSDSs for chemicals in the site's inventory.

- Determine the accuracy in reporting of chemical inventories.

- Determine the percentage of subcontractors managing chemicals in accordance with prime contractor flowdown requirements.

-Annually, determine the percentage of MSDSs received compared with the new chemicals received.