

ually, hyperlink and formatting errors would be common.

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### **Database for Safety-Oriented Tracking of Chemicals**

SafetyChem is a computer program that maintains a relational database for tracking chemicals and associated hazards at Johnson Space Center (JSC) by use of a Web-based graphical user interface. The SafetyChem database is accessible to authorized users via a JSC intranet.

All new chemicals pass through a safety office, where information on hazards, required personal protective equipment (PPE), fire-protection warnings, and target organ effects (TOEs) is extracted from material safety data sheets (MSDSs) and recorded in the database.

The database facilitates real-time management of inventory with attention to such issues as stability, shelf life, reduction of waste through transfer of unused chemicals to laboratories that need them, quantification of chemical wastes, and identification of chemicals for which disposal is required. Upon searching the database for a chemical, the user receives information on physical properties of the chemical, hazard warnings, required PPE, a link to the MSDS, and references

to the applicable International Standards Organization (ISO) 9000 standard work instructions and the applicable job hazard analysis. Also, to reduce the labor hours needed to comply with reporting requirements of the Occupational Safety and Health Administration, the data can be directly exported into the JSC hazardous-materials database.

*This program was written by Jacob Stump, Sandra Carr, Debrah Plumlee, Andy Slater, Thomas M. Samson, and Toby L. Holowaty of Wyle Laboratories and Darren Skeete, Mary Alice Haenz, Scot Hershman, and Pushpa Raviprakash of Science Applications International Corp. for Johnson Space Center. For further information, contact the Johnson Commercial Technology Office at (281) 483-3809. MSC-23627-1*