

# Exsys Case Study



## Interactive Technology Distribution System, ITDS Materials and Process Characterization Questionnaire, MPC

*Sandia National Laboratories*

The ITDS/MPC is an expert system designed to perform environment, safety and health (ES&H) regulatory compliance assessments of manufacturing processes. Users respond to series of questions posed by the knowledgebase. Based on user input, the MPC result is a listing of applicable regulatory references, some brief explanation, and a relative priority ranking of issues identified. This output may be general to very specific depending on the user input. The MPC is distributed to users on disk, and upon completion, users return data files for uploading into the Interactive Technology Distribution System, ITDS database. The ITDS contains more detailed information about materials and processes. The



interaction of the MPC (containing the user profile) and the ITDS results in a far more comprehensive analysis of the users' compliance condition including references and resources to correct compliance deficits. Solutions currently offered by the ITDS include process and material alternatives, compliance program templates, pollution prevention and waste minimization strategies, safe operating procedures, and material attributes such as physical properties. The ITDS is used to monitor user profiles over time to report the impact of changing and new ES&H regulations.

The expert system differs from commercially available regulatory databases in several important ways. It is designed for users not familiar with ES&H regulatory compliance issues linked to materials and processes. The user is not asked to make any determination of "hazard". Individuals not familiar with ES&H regulations very often use subjective criteria when making a "hazard" determination. The MPC/ITDS makes hazard determinations for the user based on expert regulatory criteria. These features help ensure that relevant regulatory compliance issues are considered and addressed by each individual user. Getting from materials and processes to regulatory compliance issues frequently requires some professional judgment and interpretation. This expertise and analysis ability is contained in the system.

The ITDS/MPC is both a Performance System and a Model. As a Performance System, the ITDS/MPC teaches the user about regulatory compliance issues. The MPC may be used to model changes in regulatory compliance issues with changes or additions of new materials and processes. The ITDS/MPC is a tool to assist the user in determining compliance requirements, prioritizing those issues and solving compliance problems. It is a training tool, which teaches the user to think in terms of their regulatory compliance obligations. This tool may not address all detailed facility or process specific compliance issues, but will train the user on when and how to seek more information as appropriate. This tool will be most useful to organizations without access to Environmental, Safety and Health professionals.



© Exsys, Inc. All rights reserved. Product names and trademarks may be trademarks and/or registered trademarks of their respective companies. [www.exsys.com](http://www.exsys.com)