



ADVISER: Automated Decision Visualization and Information System for Emergency Response/Recovery

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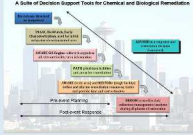
Homeland Security and Defense, Sandia National Laboratories


Comprehensive Protection from Chemical/Biological Threats

- Threat assessment
- Threat identification
- Threat characterization
- Threat detection
- Threat assessment & ConOps development
- Threat response
- Threat mitigation
- Threat recovery
- Threat prevention
- Threat intelligence
- Threat analysis
- Threat reporting
- Threat coordination
- Threat collaboration
- Threat communication
- Threat cooperation
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A Suite of Decision Support Tools for Chemical and Biological Remediation



The Use of AWARE, PATH, RESTORE, and ADVISER



AWARE, PATH, and ADVISER were developed with funding provided by the Interagency Biological Restoration Demonstration (IBRD) Project which is jointly sponsored and managed by the US Department of Homeland Security Science & Technology Directorate (CHS SAT) and the US Department of Defense, Defense Threat Reduction Agency (DTRA).

RESTORE was developed with funding provided by the Chemical Restoration Operations Technology Demonstration Project which is sponsored and managed by the US Department of Homeland Security Science & Technology Directorate (CHS SAT).

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BIO-ADVISE (BIOLOGICAL AUTOMATED DECISION VISUALIZATION AND INFORMATION SYSTEM FOR EMERGENCY RESPONSE/RECOVERY)

A Tool for Response/Recovery Decision-Makers

BIO-ADVISE is a comprehensive, interactive decision framework for decision-makers to use to determine response and recovery actions following a wide-area release of a biological agent or the release in a single facility. The framework is an expansion of previous work in various organizations that was focused primarily on response and recovery following a biological agent release in just a single facility or a localized area. The framework is fully automated and allows a user to:

- Navigate through the framework
- "Drill-down" into sub-logic below the top level diagram
- Access detailed information from plans, scientific references, websites, and other sources to help make decisions
- Log information on a site-by-site basis about the decision-making process for future reference

Response/Recovery Phases Addressed in BIO-ADVISE

- **Notification** – activities and required decisions for identification of an incident and notification of appropriate local, state, and federal agencies
- **First Response** – activities and required decisions for emergency management of an incident
- **Initial Characterization and Planning** – activities and required decisions to determine the overall nature and extent of contamination, the overall remediation strategy, and prioritization of facilities/focalized areas for remediation
- **Site-Specific Remediation/Restoration** – activities and required decisions for Characterization, Decontamination, Clearance, Refurbishment, Long-Term Monitoring, and Waste Handling at each specific site in a contaminated area

Features of BIO-ADVISE

Decision Framework for Response/Recovery – guidance in a flowchart format for all decisions/activities that need to be conducted for response and recovery

Access to Sub-level Detailed Logic – Decision-makers can "drill-down" into expanded logic which provides more detail for each activity in response and recovery

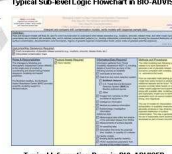
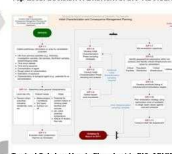
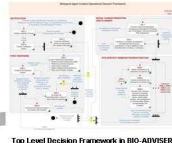
Access to Detailed Information to Support Decisions – Detailed information regarding each activity and decision is available with the click of a mouse including access to plans, scientific material, and websites

Decision Logging – Outcome of decisions can be logged in the system for future reference

Runs in a Web Browser – No special software is required

Sandia is a multi-program laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94-NA16500.

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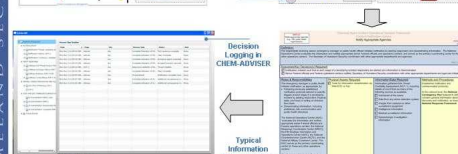
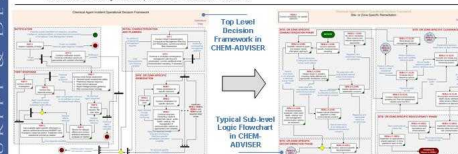


CHEM-ADVISE (CHEMICAL AUTOMATED DECISION VISUALIZATION AND INFORMATION SYSTEM FOR EMERGENCY RESPONSE/RECOVERY)

A Tool for Response/Recovery Decision-Makers

CHEM-ADVISE is an automated, interactive decision framework for decision-makers to use to determine response and recovery actions following the release of a highly toxic chemical in a wide area or a single facility. The framework is fully automated and allows a user to:

- Navigate through the framework
- "Drill-down" into sub-logic below the top level diagram
- Access detailed information from plans, scientific references, websites, and other sources for decisions
- Log information on a site-by-site basis about the decision-making process for future reference
- Addresses all response/recovery phases including:
 - **Notification** – threat credibility assessment and notification of local, state, and federal agencies
 - **First Response** – emergency management and critical investigation
 - **Initial Characterization and Planning** – overall nature and extent of contamination, the overall remediation strategy, and prioritization of facilities/focalized areas for remediation
 - **Site-Specific Remediation/Restoration** – Characterization, Decontamination, Clearance, Refurbishment, Long-Term Monitoring, and Waste Handling at each specific site in a contaminated area



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