

INTRODUCTION

Mannus Corporation (Mannus) is a professional, management, and technical services company providing technology and consulting in the environmental, health and safety field. Mannus was founded in 1999 to provide support in the following areas: Program Management; Logistics Support; Process Evaluation, Software Development and Systems Integration. The firm is headquartered in Dayton, Ohio and presently has access to a multi-disciplined staff of highly skilled engineers, scientists, and managers.

Mannus was founded to support commercial and governmental entities in improving business processes through process change and system development. The two founders have worked together in companies and on projects over the last ten years. Through this successful collaboration, the principals formed Mannus to provide innovative solutions to customer's business bottle necks. The principals of Mannus combined each of their unique talents to form a company dedicated to completing high quality, low maintenance solutions. Mannus believes that the strong customer commitment will strengthen customer relations and provide increased value over the long term.

The first product Mannus developed is Compliance EHS, an environmental, health and safety auditing/assessment tool. The tool was designed around the Environmental, Health and Safety Protocols developed by USACERL Protocols and has been purchased by the US Forest Service. Mannus has also completed projects for USACERL, Wright Patterson Air Force Base, Federal Aviation Administration and the U.S. Navy.

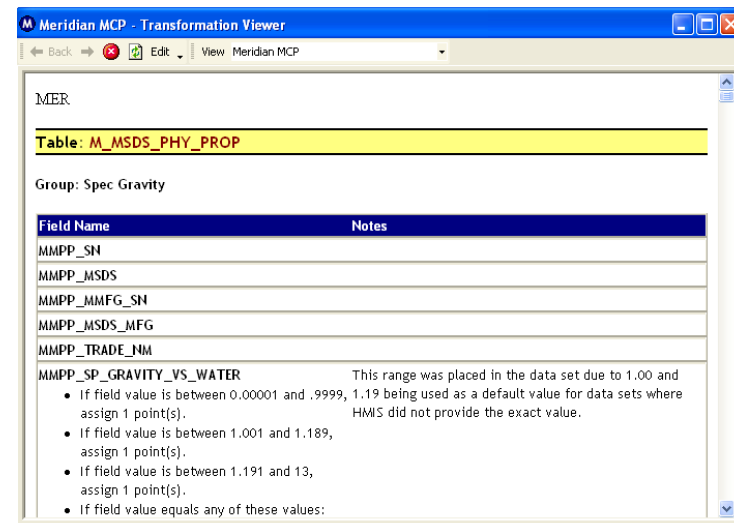
CORPORATE EXPERIENCE

Mannus Corporation has developed expertise in designing custom software for commercial and government clients. Mannus consistently delivers high quality, low maintenance solutions that are praised by users as well as management. The blend of talent, personality and attention to detail enable

Mannus to develop software rapidly as well as easy to use for the target user, while delivering high value reporting and management features.

PROJECT EXPERIENCE

Mannus, as a corporate entity, has developed one commercial product, several custom solutions and internal products designed to enhance project processes. The tools developed by Mannus include Compliance EHS, USACERL's Team Guide Import Program, WPAFB's EQ database, FAA's Compliance Audit software, HSMS ordering tool, HSMS authorized user list tool, Data Comparison Tool and a Data Transformation utility. In addition to the development of the programs, Mannus has utilized the tools to complete projects. Personnel have used these tools to perform environmental audits, load Navy databases, prepare management reports and provide additional reporting and consulting services. Our customer's are extremely satisfied and have been able to utilize our products and processes to increase internal efficiency and reduce sub contracting costs.



Compliance EHS

Compliance EHS is designed to conduct environmental, health and safety assessments/audits for government and corporate entities. The software fulfills the requirements for a periodic assessment required under the ISO 14000 standard for corporate customers. It also satisfies the requirement of establishing an Environmental Assessment program for government agencies as stipulated in EO 13148 - Greening the Government Through Leadership In Environmental Management. This product was purchased by the United States Forest Service and is being used nationwide to conduct the environmental assessments.

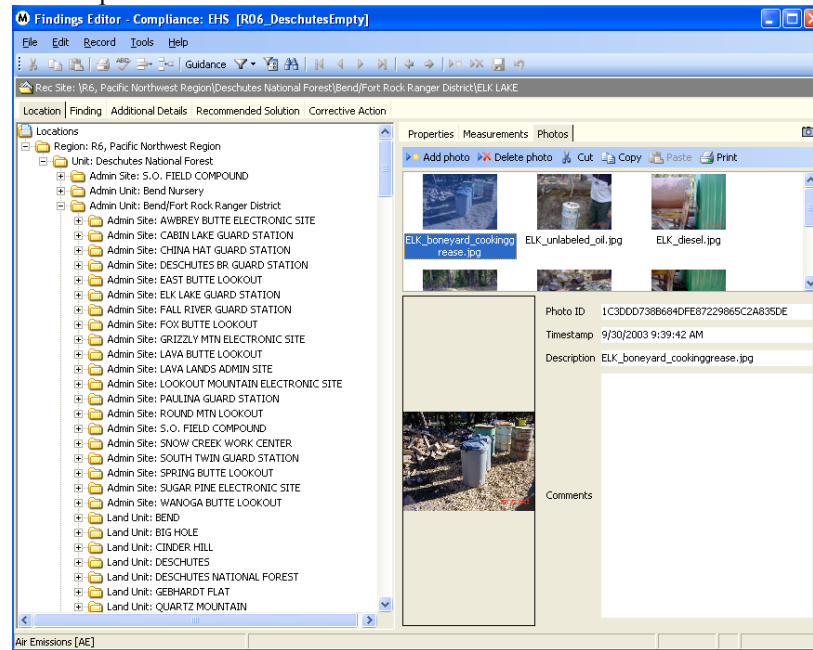
Compliance EHS is designed to work on a laptop for field use or in a networked environment, enabling the system to fit a variety of organizational requirements.

Compliance EHS is divided into two modules: Administration and Findings.

The Administration Module is used to customize the program, instead of forcing users into a predefined assessment model. The Administration Module is used to: create and modify protocols, define unique scoring for an assessment, build a hierarchal model of any organization and define security privilege profiles.

The Findings Module is used by assessment personnel to describe incidences of non-compliance and tie them to a location and a protocol. The Findings module (depending on user security privileges) has the following features:

- Create and modify your organizational structure
 - Create and modify findings
 - Enter solutions and cost estimates
 - Track corrective actions associated with responsible personnel
 - Print reports for planning and management
 - Search for regulations and findings
 - E-mail assessment data to management or other team members
- The search tool helps assessment personnel retrieve a specific finding or set of findings, and full-scale reporting functions allow for delivery of:
- Detailed finding sheets for quality review
 - Summarized and prioritized breakdowns of problem areas
 - Cost summaries for budgeting
 - Corrective action status to monitor the progress of projects
 - Provide feedback to upper management



protocols developed by the US Army Corps of Engineers Construction Engineering Research Laboratory (CERL). However, any protocol or policy may be entered into the system.

The software also enables users to track the corrective action progress associated with Findings. The Action Tracking screen allows the organization to note the costs and the steps taken to resolve the problem areas.

HSMS Services

Mannus and its personnel have been involved with the Hazardous Substance Management System (HSMS) since the program's introduction

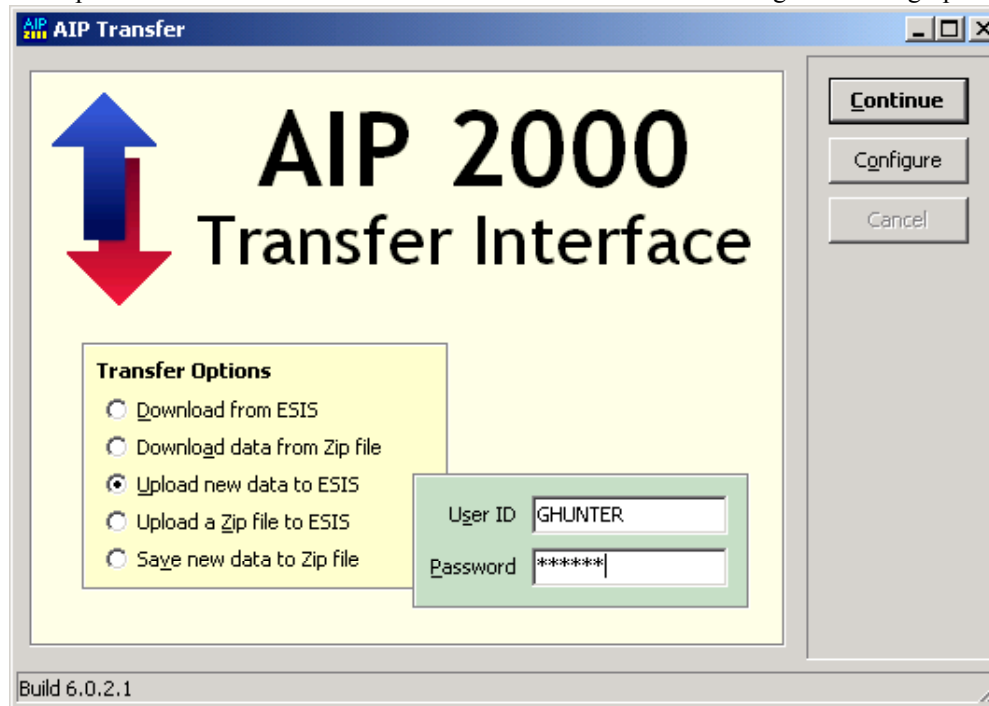
into the DOD. The HSMS system is used by DOD activities to manage their centralized “pharmacies” where Hazardous Materials on a military installation are tracked from “cradle to grave.” Mannus personnel are uniquely qualified to work with and improve the data manipulation and integrity of the system. The blend of computer and environmental expertise are mandatory in order maximize the potential of HSMS. Mannus has developed specialized capabilities to supplement HSMSs weaknesses in the areas of data entry and reporting. Mannus has developed tools to interface standard government data systems with HSMS. The two primary data sources that Mannus uses are the Fedlog and the Hazardous Materials Information System (HMIS). Additional sources include site specific Pollution Prevention Plans or any other electronic source of data that has information compatible with HSMS. The tool was designed to perform four tasks searching, comparing extracting and uploading. The search feature was designed to look for Manufacturer (CAGE), NSN, Part Number, MilSpec, CAS Number, HMIS MSDS number, and any searchable field in FedLog or HMIS. The results were compared to inventory data collected in the field or residing in other HM tracking systems (HICS, etc) to find matches. When a match was identified the tool extracted all of the data in the standard systems to populate the required fields in HSMS. The matches were stored in a Microsoft Access format and cross-checked by the environmental and logistics personnel to insure that

the correct data was identified. The tool was then used to upload the data from the Access data to the HSMS system. The link from Access to the Oracle was processed by developing table links through extensible markup language (XML). This process has enabled Mannus to load the Material, Manufacturer and MSDS tables accurately and in significantly less time than a hand searching and loading operation. Mannus’s goal for data entry

side of HSMS is to develop a tool to allow users to enter a NSN and a CAGE code and the system would automatically extract the information from Fedlog and populate HSMS. This same tool would be used to extract MSDS data from HMIS and populate HSMS.

Mannus has the knowledge of HSMS and software programming to develop Crystal Reports or develop custom reporting software. Mannus personnel have modified numerous Crystal Reports for various customers to meet site-specific reporting requirements. In addition, Mannus programmers have developed custom reporting tool to provide EPCRA and Pollution Prevention reports

from HSMS. The tool allows users to obtain inventory and usage information organized by location, chemical constituents and product name. The tool was developed for Fort Knox in the Delphi programming language and was distributed as shareware at the Tri Services Pollution Conference.



The newest Mannus product to support HSMS is the Authorized Use List and the Ordering Module. These systems enable the HSMS system to be migrated to the activity level without installing the HSMS client or purchasing additional Oracle licenses. The modules allow activity personnel to request and order hazardous materials via a browser. This system saves the activities and the Hazardous Material Pharmacy several steps in the material ordering and management process. The system allows the activity to order the materials on line and enables the pharmacy personnel to prepare the order before the activity sends the personnel to pick up the requested materials.

The system is built using Borland's Delphi and ExpressWeb framework. The browsers send the requests to an Apache server that delegates them to the Mannus designed module. The module performs actions against the Oracle system and generates html to return to the browser. The submit order triggers a server based email is sent to the Hazardous Material Pharmacy personnel for processing.

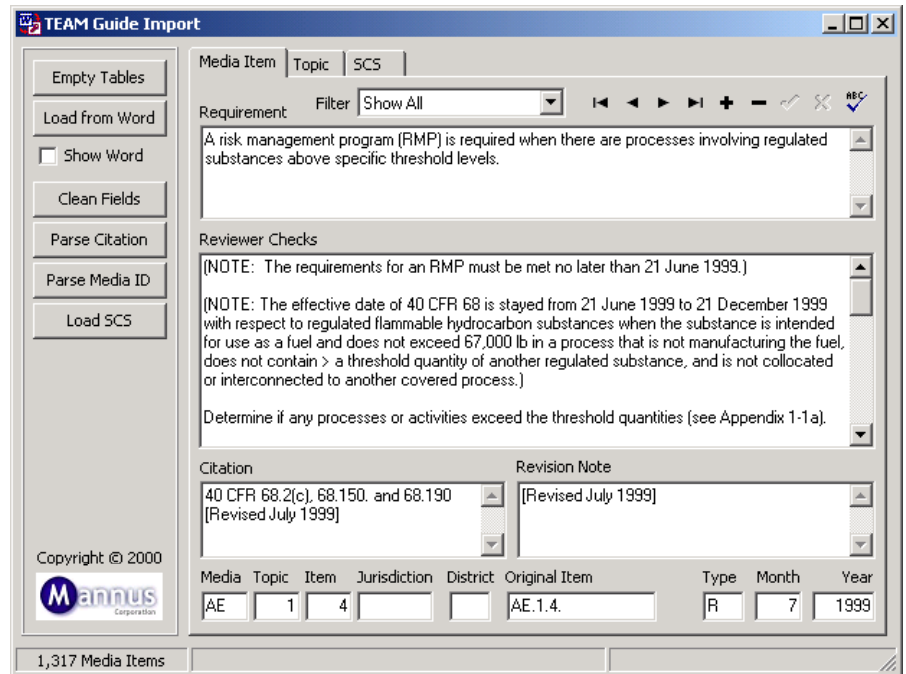
FAA Environmental and Occupational Safety and Health Assessment Software

The FAA contracted Mannus personnel to construct an Environmental/Occupational Safety and Health Assessment tool designed for field personnel. The FAA design called for the field tool to upload data to the Intranet/Oracle based Compliance and Project Management Modules. The system was also required to download software, protocol and facility updates. The system uploads and downloads using HTTP and XML with all data compressed for optimal performance and to maintain data integrity. The tool enables users the flexibility of preparing for assessments in different regions of the country and uploading the data once a viable connection to the intranet is established. This process also allows the firewall to be maintained as well as traditional security measures.

USACERL's Team Guide Import

USACERL personnel process Microsoft Word Team Guide documents into Microsoft Access database using the Team Guide Import program. The tool

is designed to aid Team Guide authors to standardize the development of the protocols and to provide database versions to its customers. The product converts Microsoft Word documents into a Microsoft Access database. The tool extracts data from Word and moves it into Access,



enabling USACERL's Team Guide Customers to use their protocols in a database environment.

WPAFB's Environmental Quality (EQ) database

The EQ system is used by AFMC to request, approve and track funding for environmental projects. Mannus aided in the design and construction of the system using Delphi and a multi-tier Simple Object Access Protocol (SOAP) architecture over secure HTTP.

Mannus Corporation's Internal Tools

Mannus has developed internal two internal tools used to increase the performance of the data analyst, while minimizing the input of the software programmer. The Data transform program enables the data analyst to load data into a high end server based database (Oracle, Informix) from a laptop based Microsoft Access or similar database. The system enables the data analyst to set up the data migration instructions in XML in order to perform the data translation. The tool, which is built using Delphi, allows the user to map key fields, replace serial numbers across numerous tables and allows the input of large volumes of data directly into the target system.

The Data Evaluation tool is constructed in Microsoft's newest development language C# (C-Sharp). The tool allows the data analyst to develop scoring rules in XML that are used to compare similar data or groups of data fields. The goal of the comparison is to select the best group of data from the data sets and to set the resultant set as primary reference database. This "winning" data set is then presented in a report comparison format against the data that was used as the evaluation set in order for the data analyst to check the validity of the normalized data set. The rules may be changed and the data re-evaluated prior to replacing existing data with the new reference data base.

RESUMES OF CORPORATE PERSONNEL

Mannus has included the resumes of its key personnel, which reflect the quality, depth and cornerstone of the company's experience.

Greg Hunter

Mr. Hunter has over 14 years of experience conducting environmental projects and managing projects in all aspects of the environmental field. He has managed large-scale, high profile projects that have exceeded client's expectations and were within budget. His environmental compliance experience includes conducting and managing large-scale multimedia inspections, preparing NPDES, Title V Air, RCRA Part B and storm water discharge permits. The pollution prevention (P2) projects completed

include; P2 plans at Wright-Patterson Air Force Base (WPAFB), Niagara Air Force Reserve, Fort Knox, and the Atlantic Regional Division of Naval Facilities. He has also been at the forefront of the pharmacy concept and has analyzed DOD data systems to develop appropriate tracking systems. Mr. Hunter has managed and participated in the preparation of NEPA documents relevant to environmental and land-use planning and is familiar with the aspects of Environmental Assessments, Environmental Impact Statements, wetlands delineation, threatened and endangered species studies, and Natural and Cultural Resource Management Plans. Mr. Hunter has performed numerous site assessments, site investigations, remedial engineering studies, and remediation design and installation.

Environmental Compliance Assessment, Fort Knox, Kentucky. Mr. Hunter coordinated with a team from Fort Knox and the Corps of Engineers (COE) to develop a cost-effective approach to achieving compliance with federal and state regulations. Mr. Hunter and personnel from Fort Knox and the COE developed a concept to collect and manage data required for compliance documents. He led the team that implemented this concept at Fort Knox, prepared cost estimates, coordinated all data collection activities, and prepared necessary documents, permits, and programs from the integrated data.

Occupational Safety and Health; Environmental Compliance Assessment; and P2 Programs, FAA, Illinois and Indiana. Mr. Hunter served as the Program Manager for FAA's health and safety, compliance, and P2 programs in two states. He developed the process and led the team that evaluated 240 sites in Illinois. He managed the input of data into FAA-supplied software that generated the assessment reports. Mr. Hunter also managed the revision of software to provide increased flexibility in field applications and report preparation.

Storm Water Pollution Prevention Plans (SWPPPs), Fort Knox and USAR Facilities. Mr. Hunter performed storm water surveys of industrial activities at Fort Knox and 14 Reserve Centers in Michigan, Indiana, Ohio, and Kentucky. He prepared the plans, reviewed the pertinent regulations and historical records, described the current site conditions, identified best

management practices, and prepared site-specific SWPPs in accordance with the CWA and the storm water permit guidelines for each state. The plans were standardized and enabled the Army to implement consistent training across all state lines.

OSHA and Asbestos Surveys, Various Commercial/Industrial Clients. Mr. Hunter has conducted over 20 industrial hygiene assessments at industrial facilities for compliance with OSHA regulations. Mr. Hunter assessed the facilities for employee exposure to chemical contaminants (asbestos, radon, indoor air quality, lead, etc.), safety issues and ergonomic concerns. Mr. Hunter collected the samples, analyzed the laboratory data, and prepared reports that presented the results and conclusions. The reports enabled the clients to determine current and future risk of operations and facilities.

FAA's Environmental and Safety Program. Mr. Hunter managed the FAA's Environmental and Occupational Safety and Health Audit data and the development of the FAA's Annual Inspection Program (AIP). Mr. Hunter managed the day-to-day activities associated with a FAA SEAMS help-line, established to provide customers assistance with Environmental Health and Safety data and solutions. He also led the team in developing a findings tracking program that is used to track incidence of noncompliance at the 65,000 FAA facilities across the country.

Environmental Assessments, U.S. Army Installations. Mr. Hunter has provided oversight in the preparation of a draft EA of an Integrated Natural Resource Management Plan (INRMP) at Fort Bragg and Camp Mackall, North Carolina. Issues of concern include the military mission, threatened and endangered species, and forest management. Mr. Hunter led a multidisciplinary team of scientists and engineers in the preparation of an EA and associated FNSI for a proposed development of landing zones, drop zones and a tactical airstrip at Fort Knox, Kentucky. Issues of concern included threatened and endangered species, wetlands, erosion, water quality, noise, and cultural resources. The documents were completed in accordance with NEPA and Army regulations.

Environmental Assessments, Army Reserve. Mr. Hunter is overseeing the preparation of the EA at the Army Reserve Area Maintenance Support Activity in Curtis Bay, Maryland. The facility has a pier in need of repair, which has degrading sheet piling causing sinkholes to develop threatening the structural integrity of the building located nearby.

Remedial Investigations, Various Commercial/Industrial Clients. Mr. Hunter conducted 30 remedial investigations to determine impacts to groundwater quality from industrial operations. Mr. Hunter determined soil boring locations, identified suspected contaminants, collected soil and water samples, analyzed sample results, designed and installed sparge and vent wells, and conducted pumping tests to evaluate the use of bioremediation.

Remediation Systems Various Commercial/Industrial Clients, Michigan. Mr. Hunter managed four installations and one retrofit for remediation systems in Michigan. The typical system was a sparge and vent system that enhanced bioremediation activities by increasing dissolved oxygen in the groundwater.

Pollution Prevention Plans/Pollution Prevention Opportunity Assessments (PPOA), Louisville District USACE & Naval Activities, LANTDIV. Mr. Hunter conducted PPOAs at WPAFB, Niagara International Airport, Minneapolis/St. Paul International Airport, Fort Knox, Fort Campbell, and 13 Naval Activities that supported Air and Naval operations. Mr. Hunter inventoried hazardous materials, calculated fugitive air emissions, evaluated disposal procedures, and identified the types and quantities of solid and liquid waste streams, and recycling activities. Mr. Hunter prepared a report that detailed the assessment findings, recommended alternative products and procedures, and provided economic analyses of each recommendation.

Hazmart Implementation Services, US Army. Mr. Hunter led a multi-disciplined team in the effort to implement the pharmacy concept at Fort Knox and Fort Drum. He focused on utilizing existing HM inventory systems and data in order to populate the Army HM tracking system Hazardous Substance Management System (HSMS). The work required supplemental data from other DOD systems to fully populate the HSMS

database. The total electronic population effort was the first of its kind for the Army and involved developing custom software to interface with FEDLOG and the Hazardous Material Information System (HMIS). Mr. Hunter also helped establish business practices and trained users on the HSMS system.

Solid Waste Studies, WPAFB, Ohio. Mr. Hunter collected data to analyze the type and amount of solid waste generated at WPAFB. Mr. Hunter evaluated the data to determine the appropriate locations for additional recycling activities and a reduction/schedule change in solid waste pickup. These changes enabled the Air Force to meet recycling goals and saved money by reducing collection activities.

Spill Prevention, Control and Countermeasures (SPCC) Plans, U.S. Army. Mr. Hunter prepared SPCC Plans for three Army facilities located in Illinois to evaluate the material handling locations, petroleum and chemical storage locations, current spill response procedures, spill response materials, and potential discharge points in the event of a spill. Mr. Hunter prepared site-specific SPCC Plans in accordance with 40 CFR 112 and the client's direction.

Matt Palcic

Mr. Palcic is a Systems Engineer with 13 years of experience in software design and construction and has extensive experience in building environmental and safety compliance tracking systems, and construction and integration of hazardous material inventory control and tracking systems. Mr. Palcic has performed the following services.

Compliance EHS. Mr. Palcic was the lead developer of this product that is being utilized by the National Forest Service to conduct their environmental audits nationwide. The tool was designed to minimize the coding required when organizational, protocol, scoring or assessment personnel are changed. It was designed as an intuitive product that requires little training for personnel that are familiar with Microsoft Windows products.

Safety and Environmental Assessment Management System, Federal Aviation Administration HQ, Washington, DC. As project lead for the construction of the FAA's safety and environmental compliance auditing and tracking system, Mr. Palcic designed a regionalized data collection tool that allowed FAA management to track compliance violations and prepare budgets for corrective action funding. The system is used nationwide at all FAA-managed airport facilities.

Hazardous Substance Management System Implementation, Fort Knox, Kentucky. Mr. Palcic recommended and implemented the US Army's pilot Hazardous Substance Management System (DOD's Oracle-based HSMS) at Fort Knox. Tasks included converting Hazardous Inventory Control System (HICS) data, collecting and refining inventory and usage data from existing procurement systems, developing data import routines to interface with an Informix or Oracle database server, and developing new reporting and query tools to supplement those found in HSMS. Inefficiencies in the HSMS model were addressed and standardized MSDS coding was implemented.

Hazardous Substance Management System Implementation, Fort Drum, New York. Mr. Palcic converted Fort Drum's HICS system to HSMS, utilizing Hazardous Material Information System (HMIS) and FedLog data to supplement information not tracked in HICS to reduce time to initial operational capability.

HSMS Supplemental Utilities, DoD-wide. Mr. Palcic developed a set of utilities to complement those missing from HSMS. One utility is designed to simplify design of complex queries performed by HSMS database administrators. The other utility is a substantial reporting enhancement that makes EPCRA Tier II and TRI reporting from HSMS feasible. A simplified inventory reporting feature makes spot audits possible, and usage reporting for any arbitrary time period makes planning and trend analysis possible. The system is being distributed for free to any government agency that requests it, and is being considered by the Navy for standardized use.