



**2003 AFCEE Technology Transfer Workshop**

San Antonio, Texas

*Promoting Readiness through Environmental Stewardship*

# **Web-Based ERPIMS Applications**

**William H. Batschelet  
AFCEE/ERS  
24 February 2003**



- **Environmental Resources Program Information Management System**
- **ERPIMS is a standard data structure and validation tool for preparation and delivery of environmental data in support of the characterization and cleanup efforts at the various Air Force installations.**

**“With the increased number of contractors and contracts, there is a need for quality control of test reports, laboratory results and reports.”**



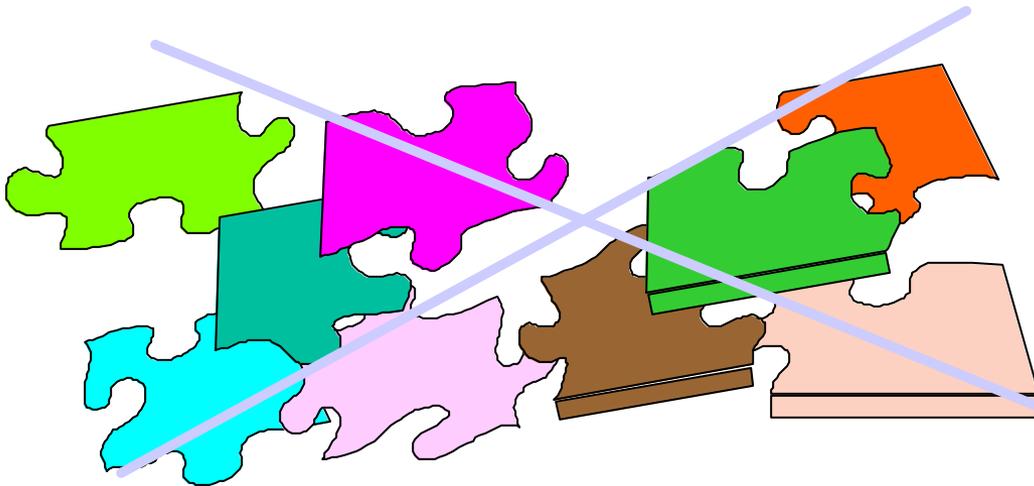
# ***What does that mean?***





# ***A Standard Format for Electronic Data Deliverables***

- **Electronic Files -- NO Paper Hardcopies.**
- **Standard Order -- Information in data files is always arranged in the same manner, regardless of installation or contractor.**





# ***Electronic Data in a Standard Format***

- **Contractors already maintain electronic data on their computers, at Government expense.**
- **Electronic data is easier to manipulate, manage, and share.**
- **Standard format provides for economies of scale in the development and maintenance of tools.**
- **Standard format insures compatibility across the system and usability throughout the Air Force.**



# *Why Require This?*

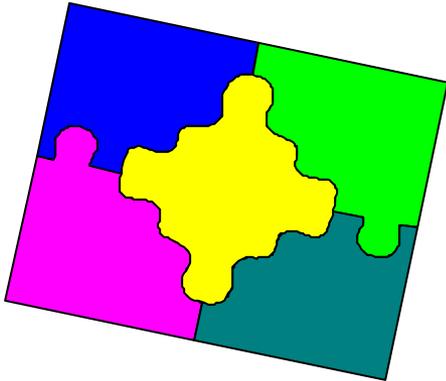
- The government has paid for the data.
- Data should be available for reuse any time it is needed.
- Data will be needed long after many of us have left the scene.
- **The electronic data becomes the historical record!**



# *Data Captured*

## Site/location

Installation  
Site Definition  
Exact location

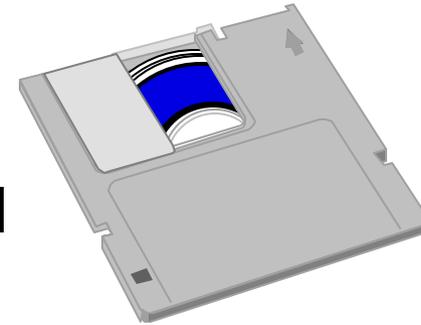


## Hydrogeology

Well completion  
Groundwater level  
Lithology &  
Hydrology

## Analytical

Sampling event  
Test information  
Test results

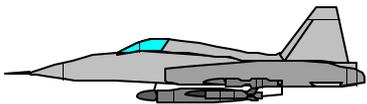


## Remediation

Systems Inventory  
Technologies  
Performance



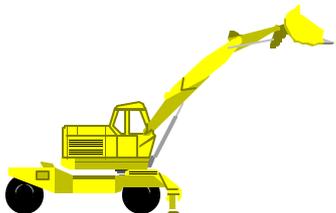
# Database Size



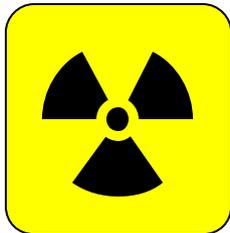
**151 Air Force Installations**



**127,022 Sampling Locations**



**5,906 Hazardous Waste Sites**

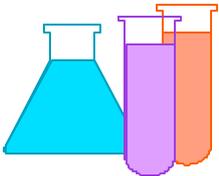


**28,508 Monitoring Wells**

**2,573 Chemical Substances**



**32,379,301 Analytical Results**



**Over 36,300,000 Records in the Production Database  
89 percent are analytical chemistry results**



## **ERPIMS is:**

- **An Oracle database residing on a DEC Alpha 4100.**
- **A standardized data structure for AF environmental data.**
- **A collection of formatting and data validation rules.**
- **A repository for AF-Wide environmental data.**
- **An asset and process for environmental data management.**
- **Accessible and usable to the whole Air Force community.**
- **Spatial Data Standards compliant.**



# ***What It Isn't***

## **ERPIMS is not:**

- **Data display and visualization tools.**
  - **Some are available.**
- **A difficult or expensive system for data submission.**
- **A requirement that impairs contractor performance.**



# ***ERPIMS Data Quality Control***

- **VERIFICATION** -- "Bean Counting", e.g., Number of Wells, Number of Samples, etc.
  - *ERPIMS does a superb job at performing the verification function.*
  
- **VALIDATION** -- Establishing the Quality and Reliability of Data, Especially Laboratory Data.
  - *With the current Validation rules, ERPIMS performs the validation function well.*
  
- **ASSESSMENT** -- Determining Data Usefulness for Particular Applications.
  - *ERPIMS is not as effective for assessment because much data is not submitted.*

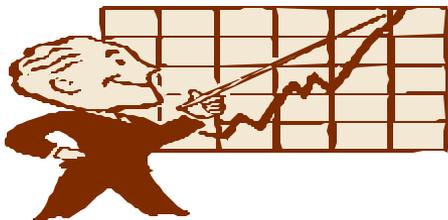
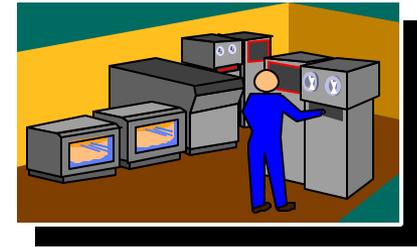


# ***ERPIMS Services***



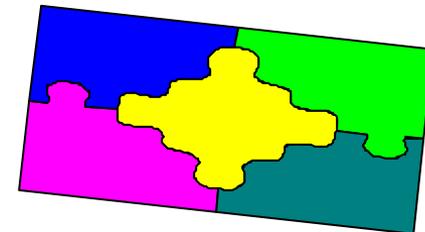
**ERPIMS Help Desk Support**  
(For installations and AFCEE contractors)

**Data Export Support**  
(Data for external uses)



**Direct Data Access**  
(View only, for external customers)

**Query and Reporting**  
(Management, Regulators, etc.)



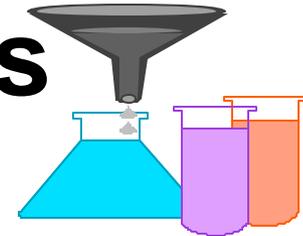


# *ERPIMS Data Use*



**Decision Making Aids**  
(Spreadsheets, charts, *etc.*)

**Special Research Projects**  
(Spreadsheets, charts)



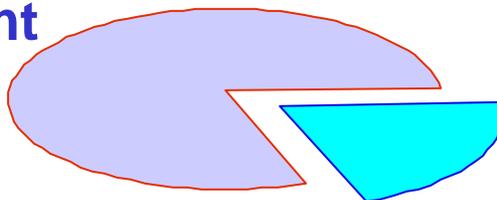
**GIS Systems**  
(Mapping applications)



# *Special Studies Support*

- **Delineation of Contamination.**
- **Risk Assessment.**
- **Cleanup Levels.**
- **Monitoring Programs, O&M.**
- **Background inorganics.**
- **Tech Effort & Project \$\$\$.**

**Data Mgmt**  
**80%**



**Analysis &  
Reporting**  
**20%**



# ***Show Me the Money I'll Show You the Data***

- **ERPIMS or resident database at installation (cheap).**
- **Existing contractor database (expensive).**
- **Hire a new contractor to develop data (most expensive).**



# ***AFCEE Support Background Investigation***

- **ERPIMS electronic data is available and cheap.**
- **ERS has algorithms for State and installation-specific background.**
- **Sanity checks and quality control.**
  - **Use baseline of AF data.**
  - **Apples to apples comparison; filtered vs total samples.**
  
- **POC: Phil Hunter, P.G.  
AFCEE/ERS  
Tel 210 536-5281  
DSN 240-5281  
philip.hunter@brooks.af.mil**



# ***ERPIMS Web-Based Tools***

- **AEGIS GWM**
  - **Graphical interface**
- **AEGIS Fire**
  - **Graphical interface**
- **Net VIEW**
  - **Non-graphical**
- **Secure site**
- **Password protected**
- **Access limited**



# Web-Based Products

**AEGIS GWM**  
AEGIS GWM uses an ActiveX plugin. Your System's Administrator must initially install this plugin for viewing maps. Afterwards, any user may access maps from Internet Explorer's browser on your computer. [GWM](#)

---

**AEGIS Fire**  
AEGIS Fire downloads a Java Applet for viewing maps. Contact you System's Administrator regarding settings for Java Applets. Internet Explorer is the preferred browser. [FIRE](#)

---

**Net VIEW**  
NetView allows non-graphical access to an Installation's ERPIMS data. This module requires no plugin or Java enabling. Internet Explorer is the preferred browser. [Net VIEW](#)

---

**Data Download**  
AFCEE provides ERPIMS and Installation Geometry data for our customers. The standard format is to provide Installation Specific ERPIMS data in MicroSoft ACCESS database format. The Geometry is provided in ESRI Shape File format. [Data Download](#)

[Feed Back](#)



# ***ERPIMS GIS Tools Applications***

- **The following capabilities are utilized by external customers:**
  - **Verify ERPIMS data reported in submittals.**
  - **Respond to public/regulatory requests for data.**
  - **National Pollutant Discharged Elimination System (NPDES) reporting requirements by extracting data from the ERPIMS database.**
  - **Retrieve data from the ERPIMS data base, in a graphical format, for presentations and reports.**
  - **Easily identify missing data.**
  - **Inserts into the Installation Management Action Plan.**
  - **Determine condition of properties.**
  
- **MMR customer quote: “*ERPIMS information is constantly used in my daily routine.*”**



## **Demonstration**



# *Ongoing Activities*

- **Merge AEGIS GWM and Fire products.**
  - **New interface: ArcIMS.**
- **Update data validation criteria to AFCEE QAPP 3.1.**
- **Future activities???**



# **Questions and Discussion**

