



# **Environmental Knowledge and Assessment Tool**

**Presented by  
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## Background on EKAT

- Vision – to develop a Web-based software tool that provides environmental management and regulatory compliance guidance
- Funding agency is the United States Marine Corps, Quantico, Virginia
- Development has been a collaborative effort
  - M2 Technologies, Inc.
  - Kansas State University
  - CABEM Technologies, Inc.



## Future Development

- Development and maintenance is ongoing for MARCORSYSCOM
  - Update databases annually
  - Update links quarterly
  - New modules planned
- Development for others is envisioned
  - Flexible modular design



## Program Features

- Designed for use by people with little or no environmental background, as well as for use by environmental professionals
- Includes features for project management, research, documentation, and reporting, in a collaborative environment
- Powerful search engine and content management



# Image of Home Page

EKAT - Environmental Knowledge and Assessment Tool - Microsoft Internet Explorer

File Edit View Favorites Tools Help

**EKAT**

Welcome, Ryan Green  
Logout  
Change Password  
Admin

[Home](#) [My Projects](#) [Research](#) [Tools](#) [Help](#) [Public Forum](#) [Search](#)

**IN THIS SECTION:**

- Go To My Projects
- Start A New Project
- Frequently Asked Questions
- Conversions
- Definitions
- Acronyms / Abbreviations
- Information Resources
- Wizard

Home

## Welcome To EKAT

EKAT is an expert environmental software system. EKAT provides Marine Corps project managers and environmental professionals a tool to identify and evaluate potential environmental issues, including capability to collaborate, document and publish reports in accordance with their environmental requirements.

 **My Projects**     **Tutorials**     **Wizard**

**1 TOPICS:**

- > Conversions
- > Environmental Screening
- > Solvent Screening
- > More Tools

**2 RESEARCH:**

- > Info Resources
- > Research Guides
- > DOD Resources
- > More Research

**3 PUBLIC FORUM:**

- > Public Project List
- > Discussion Board
- > Public Documents

**4 ABOUT:**

- > Feedback
- > About EKAT
- > EKAT Team

**EKAT Announcements**

New EKAT help tools are now available.

< PREV | NEXT >

**EKAT Search**

Do a quick search on EKAT or go to advanced search below for more options:

**SEARCH**

**First Time Users**

This guide explains the main features of EKAT.

[VIEW GUIDE](#) | [VIEW DEMO](#)



- Assessment tools include:
  - Environmental screenings
  - Solvent screenings
  - EmisCalc
  - TECCA (chemical concentrations in air)
  - TRACI (chemical and other environmental impacts)
  - PESHE report generator
  - NEPA decision tree
  - Systems assessment



# Environmental and Solvent Screenings

- Evaluate chemicals for environmental compliance, and key health and safety concerns
- Examine requirements for solvent cleaning operations, and evaluate solvent chemicals for air and hazardous waste compliance in seven states

The screenshot displays the EKAT web application interface. The browser address bar shows 'http://www.ekat-tool.com - EKAT - Microsoft Internet Explorer'. The page features a navigation menu with 'Home', 'My Projects', 'Research', 'Tools', 'Help', 'Public Forum', and 'Search'. A sidebar on the left contains sections for 'Project List View', 'Project: EKAT DEMONSTRATION PROJECT', 'Conversions', 'Definitions', 'Acronyms / Abbreviations', 'Information Resources', and 'Wizard'. The main content area shows a breadcrumb trail: 'Home > My Projects > Project: EKAT DEMONSTRATION PROJECT > Env. Screening > Results'. Below this, there is a 'Results: Overview' section with a table of screening data.

Component	CAS Number	Chemical	Environmental Compliance	Safety and Health	Hazardous Materials	Explosives
Electronic Boards	7440-50-8	copper	CERCLA SDWA EPCRA	NIOSH OSHA CARCINOGEN		
Electronic Boards	15438-31-0	iron				
Electronic Boards	7726-95-6	bromine	CAA EPCRA	NIOSH OSHA		
Electronic Boards	7439-92-1	lead	CERCLA CAA RCRA SDWA EPCRA	NIOSH OSHA CARCINOGEN	PriChem	
Electronic Boards	7440-31-5	tin		NIOSH OSHA		
Electronic Boards	7440-02-0	nickel	CERCLA CAA EPCRA	NIOSH OSHA CARCINOGEN		
Electronic Boards	7440-36-0	antimony	CERCLA CAA SDWA EPCRA	NIOSH OSHA		



## **EmisCalc – Emissions Calculator**

- Calculates pollutant air emissions associated with process activities, using EPA-approved air pollution factors

## **TECCA**

- Estimate the average concentration in air when a liquid chemical is released or spilled in an enclosed space

## **TRACI**

- Evaluate the environmental impact of chemical emissions over the multiple stages of a product's life

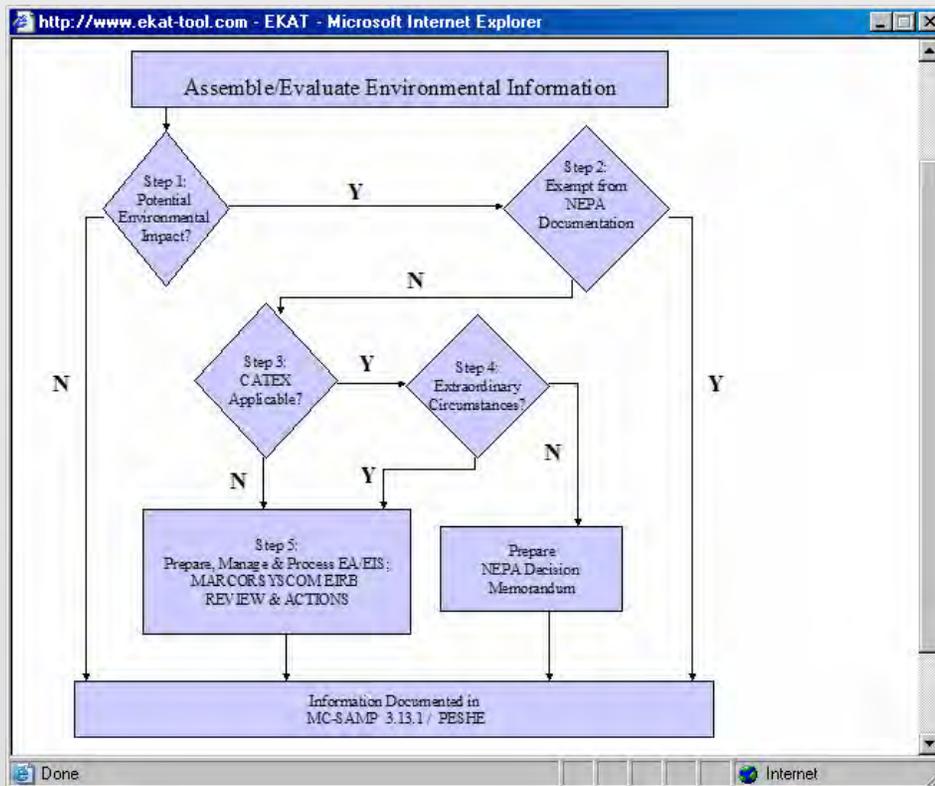


# PESHE

- Required by the DOD for all programs.
- EKAT contains a template for the report, where different screenings and reviews done in EKAT can be inserted.

The screenshot shows a web browser window displaying the EKAT application. The address bar shows "http://www.ekat-tool.com - EKAT - Microsoft Internet Explorer". The page features a navigation menu with options like Home, My Projects, Research, Tools, Help, Public Forum, and Search. A sidebar on the left contains a "Project List View" and "System View" section, along with a "Project: test" section listing various project components. The main content area displays "Results: PESHE Report" for a project named "test". The report title is "Programmatic Environmental, Safety, and Occupational Health Evaluation (PESHE)". It includes a date and time stamp: "5/3/2006 8:59:03 AM Prepared for:" and a "Prepared by:" field. A note at the bottom states: "Note: EKAT generates this recommended PESHE report template populated with information that has been retrieved from EKAT assessments of material lists. EKAT does not complete the PESHE report. This document is editable and should be reviewed, edited, re-named, and saved. The revised document should be uploaded into the appropriate EKAT project documents file for storage." A footer note suggests emailing suggestions to "comments@cabernettechnologies.com". On the right side, there is an "EKAT Instant Help" section with a "No Help available for this page. READ MORE >>" message, a "Save Reports" section with "SAVE AS PDF >>" and "SAVE AS DOC >>" options, and an "Attachments" section with a message: "Please print these documents and attach them to your PESHE Report! Please print these documents and attach them to your PESHE Report!".

# NEPA Decision Tree

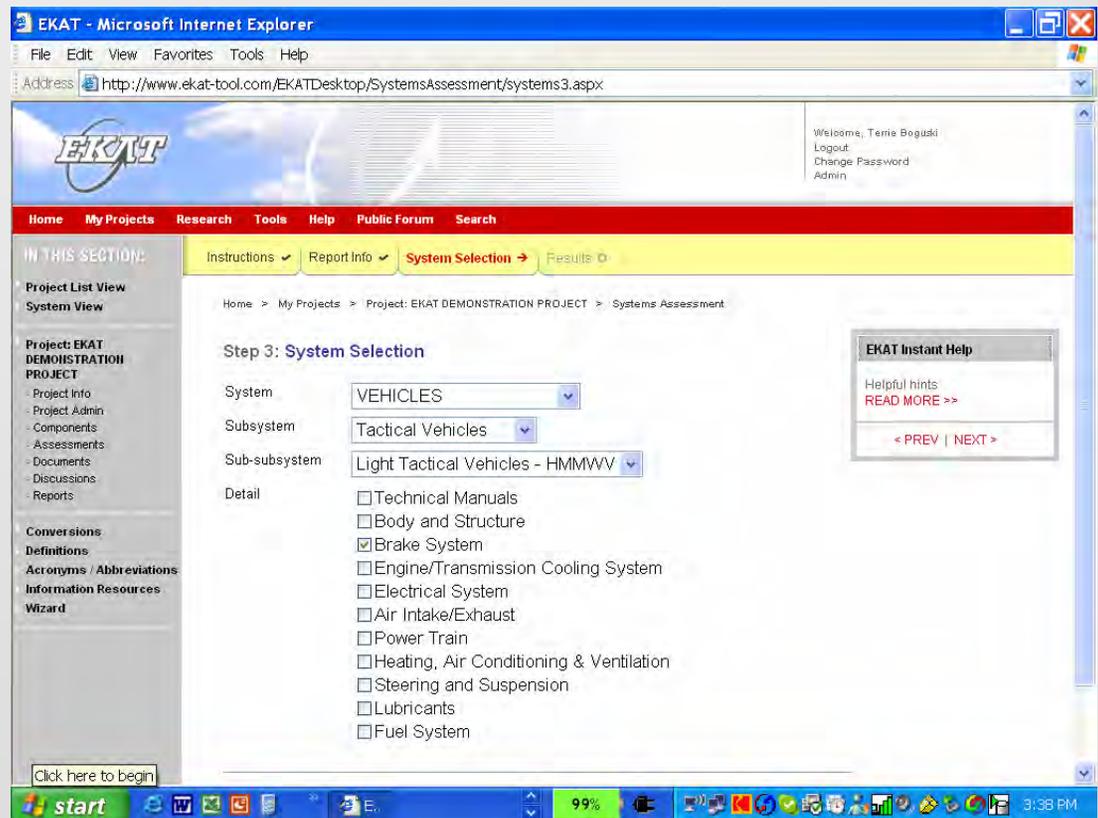


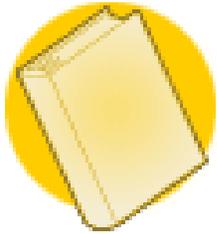
- The NEPA assessment tool assists users in meeting federally-mandated requirements to consider environmental and other related issues for their proposed actions



# Systems Assessment

- Evaluate systems for potential environmental issues
- Prototype includes a vehicle and a computer





## **Tutorials**

- EKAT contains several tutorials to help learn how to use EKAT most effectively
- The tutorials section contains three groups of tutorials:
  - General EKAT tutorials
  - Air emissions training
  - NEPA process training



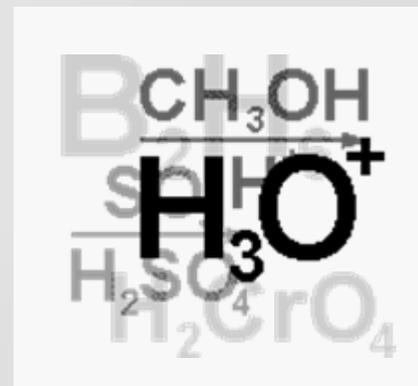
- The Wizard is set up in a question/answer format to guide users to the sections of EKAT which may be of most use
  - Report and regulatory requirements
  - How to handle waste
  - Calculating air emissions
  - What to do in case of a spill
  - General chemical information
  - And more...

## 1 TOOLS:

- Provide quick access to tools that have been built for EKAT, as well as particularly useful tools that are external to EKAT
- Some tools include:
  - Conversions
  - Environmental and Solvent Screenings
  - Various External Tools:
    - EPA Coating Guide
    - EPA Solvent Alternatives Guide
    - TOXNET
    - Pollution Prevention Resource Exchange

## 2 RESEARCH:

- Quick access to environmental resources for researching material properties, investigating environmental issues, and finding pollution prevention alternatives
- Resources include:
  - Information Resources, research guides
  - Synonym and CAS number information
  - MSDS information
  - Periodic Table
  - DOD and other Web Internet Resources



### 3 PUBLIC FORUM:

- The Public Forum allows all users of EKAT to hold threaded discussions, upload documents to share, and view projects that have been put on the public projects list by the project owner.
- Features include:
  - Public Project List
  - Discussion Board
  - Public Documents

## Technical Summary

- The system is designed so it is capable to be hosted internally (intranet) or by a hosting provider (Internet)
- EKAT is based on the Microsoft .net Framework Version 1.1, and is programmed using C#. The database used is SQL Server 2000.
- The custom-built user interface (UI) technology for EKAT is based on ASP.net.





## EKAT Contact Information

- EKAT at [www.ekat-tool.com](http://www.ekat-tool.com) is available for review and to obtain user feedback for further development
- For specific questions about EKAT, contact:
  - John Blair [blairj@m2tech.us](mailto:blairj@m2tech.us)
  - Terrie Boguski [tboguski@k-state.edu](mailto:tboguski@k-state.edu)
  - Jay Fredkin  
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# Questions?

