Use the Environmental Knowledge and Assessment Tool (EKAT) to estimate air emissions and more

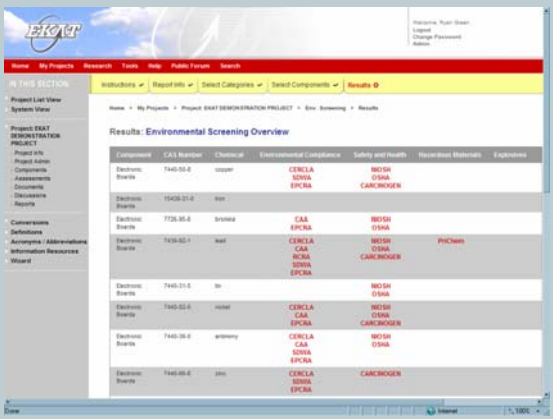
Terrie Boguski, Larry Erickson, Ryan Green, Leslie Jamka
Center for Hazardous Substance Research, Kansas State University, Manhattan, KS 66506

Introduction

Designed and built by the team of M2 Technologies, Kansas State University, and CABEM Technologies as members of the Urban Operations Laboratory (UOL), the Environmental Knowledge and Assessment Tool (EKAT, www.ekat-tool.com) is an automated tool to identify, research, and evaluate environmental and pollution prevention options for products. EKAT presents information on technical and regulatory requirements and serves as a resource center linking to other references, tools, and databases. One of the most beneficial aspects of EKAT is its ability to serve as a preliminary environmental screening tool for regulatory requirements and other potential issues of concern. EKAT contains a built-in emissions calculator and links to resources for assistance with compliance requirements.

EmisCalc

EmisCalc, EKAT's emissions calculator, estimates pollutant emissions associated with different equipment and process activities, using EPA-approved air pollution factors from the Factor Information REtrieval (FIRE) database. Different industrial processes are selected through a pull-down menu. Results are useful for air-permitting requirements and can also be seamlessly integrated with an EKAT assessment tool for life-cycle impact evaluations.



Environmental Screenings

The environmental screening tool compares chemicals the user enters to chemicals in the EKAT database and summarizes the results. The EKAT database includes listed chemicals regulated by federal law (Clean Air Act, Clean Water Act, Safe Drinking Water Act, etc.), lists of carcinogenic chemicals, Occupational Safety and Health Administration (OSHA) permissible exposure levels, and more. Information resources (IR) in EKAT provide links to original sources of information used in the environmental screening tool.

We would like to acknowledge the Marine Corps System Command – funding for this research was given by the United States Marine Corps through a contract with M2 Technologies.

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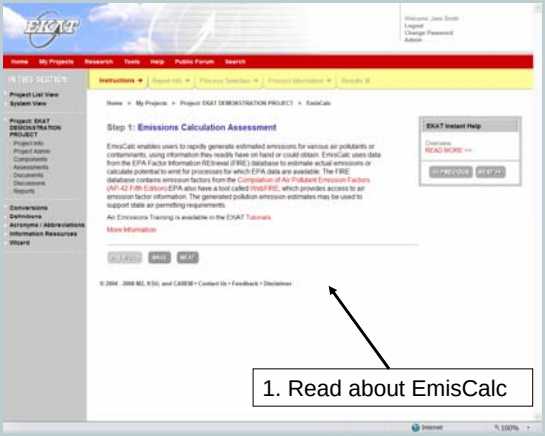
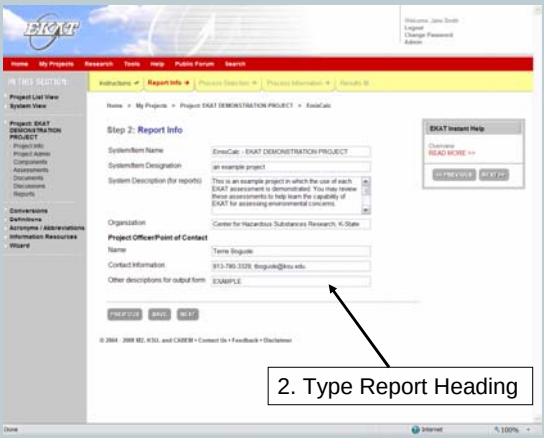
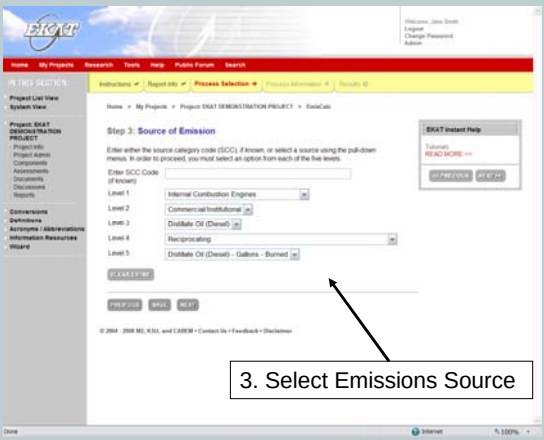






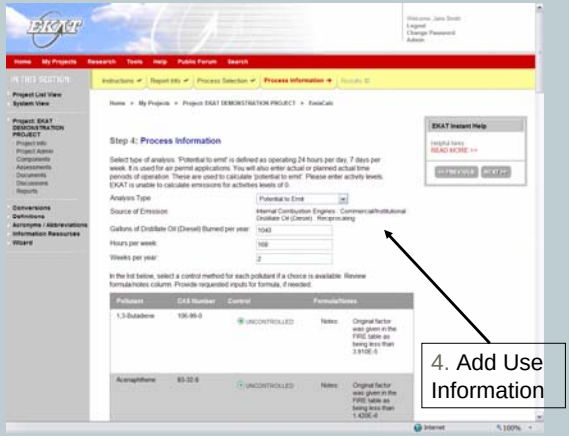
Estimate Equipment Emissions In 5 Easy Steps

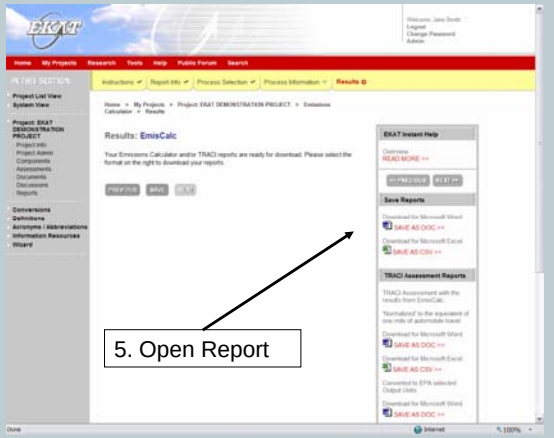
Try it at *www.ekat-tool.com*

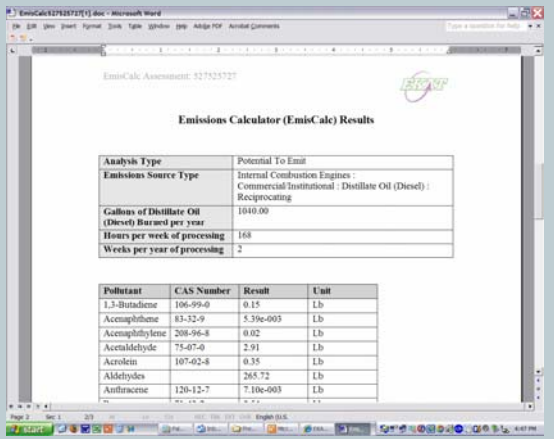
View this EmisCalc Demonstration Project

Based on EPA Factor Information REtrieval (FIRE) Database

Tell us what you think!







Emissions Calculator (EmisCalc) Results

Analysis Type	Potential To Emit
Emissions Source Type	Internal Combustion Engines : Commercial/Institutional : Distillate Oil (Diesel) : Reciprocating
Gallons of Distillate Oil (Diesel) Burned per year	1040.00
Hours per week of processing	168
Weeks per year of processing	2

Pollutant	CAS Number	Result	Unit
1,3-Butadiene	106-99-0	0.15	Lb
Acenaphthene	83-32-9	5.39e-003	Lb
Acenaphthylene	208-96-8	0.02	Lb
Acetaldehyde	75-07-0	2.91	Lb
Acrolein	107-02-8	0.35	Lb
Aldehydes		265.72	Lb
Anthracene	120-12-7	7.10e-003	Lb

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