

MEET A MEMBER OF THE APIMS COMMUNITY

Steve Rasmussen is the APIMS Program Manager and the Air Quality Program Manager for Hill Air Force Base. Steve serves as the co-chair for the Functional Work Group for the EESOH-MIS air module. He also is a member of the EESOH-MIS Integrated Product Team (IPT).

Steve began his civil service career at Hill Air Force base as an aircraft sheet metal mechanic. He later worked in the motor pool and quickly worked his way up to body shop foreman. His transition into the environmental discipline started when he worked for the motor pool as a Unit Environmental Coordinator.

In September of 1990 he transferred to Environmental Management where he served as an Air Quality Engineering Technician. In 1992 he was promoted to the Air Quality Program Manager.

Steve was responsible for the concept of APIMS and devel-



Steve Rasmussen

oped the program as a database to be used for compliance at Hill Air Force base. In 1996 AFMC mandated that only one air quality database would be funded. APIMS was the program selected and since that time Steve has been the Program Manager.

Steve has spearheaded several initiatives for APIMS. He has worked with a group of engineers and digital imaging specialists to develop algorithms to determine stack opacity using digital photographs. These algorithms are

utilized in the Digital Opacity Compliance System (DOCS) which generates a file that can be stored in APIMS. He is pursuing an effort to get the test method developed in conjunction for DOCS through ASTM. If this standard is adopted by the EPA it will provide an alternative method to Method 9 for opacity determination. The ability to determine fugitive emissions is also being pursued.

The other project Steve is spearheading is the ability to submit Emission Inventories electronically to the EPA. This would require a universal schema that would be suitable for both industry and military facilities. Then these submissions would be disseminated to each state in a customized/ approved xml style sheet.

Steve has also served on the DoD advisory teams for the Aerospace, Chrome and DLSME NESHAPS.

Upcoming Events

- Air Quality Managers Roundtable Meeting (includes FUG session) - June 25, 2007
- 100th Annual AWMA Conference, Pittsburgh PA — June 26 - 29, 2007
- APIMS FUG Teleconferences
 - August 2, 2007
 - September 6, 2007
- ANG Environmental Workshop, Orlando FL — August 21 -23, 2007

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REGULATION UPDATE - EPA Non-road Diesel Rule

EFFECTIVE JUNE 1, 2007.

Refiners will begin producing low-sulfur diesel fuel for use in locomotives, ships and non-road equipment (those used in industries such as agriculture and construction). Low sulfur diesel fuel must meet a 500 parts per million (ppm) sulfur maximum. This is

the first step of EPA's Non-road Diesel Rule, with the eventual goal of reducing the sulfur level of fuels for these engines to meet an ultra-low standard (15 ppm) to enable new advanced emission-control technologies for engines used in locomotives, ships, and other non-road equipment. (Source- EPA Newsroom)

APIMS can handle the switch to a new grade of diesel fuel easily by allowing each facility to enter new Material Products with the appropriate sulfur content. For more information call the APIMS helpdesk.

FEATURED FUNCTIONALITY: Verifying Chemicals in an Emission Factor Set

A calculation method for calculating emissions from miscellaneous chemical use is based on material balance. This method assumes that the material is entirely consumed by the process and if a volatile chemical is a constituent of the material, then it is es-

entially emitted. Recently a helpful utility was added to APIMS that assists an air quality professional with this type of calculation.

The enhanced functionality in APIMS allows a user to select the chemicals to be calculated from a list that

is filtered by the corresponding Emission Factor Set.

Since the material balance calculation method does not require an Emission Factor, the user was still required to associate each chemical to be calculated

to an Emission Factor set even though the factor value is null or not referenced by the algorithm.

As a result, the air quality professional has to manually reconcile the list of chemicals in the emission

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CALCULATION CONSTITUENT CHECK

*CALCULATION NAME: CONSTITUENT VALIDATION TEST TIME FROM: 2005/01/01 0000 TIME TO: 2005/12/31 0000

*POLLUTANTS

*CAS NO	*CHEMICAL NAME	*ALGORITHM	*EF ID	STD	EF STATUS	SETUP STATUS	COLUMN STATUS	*POLLUTANTS
100414	ETHYLBENZENE	CHEM-06	1654	Y	NOT IN EF SET	OK	OK	HAP
105602	CAPROLACTAM	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	ODC
105602	CAPROLACTAM	CHEM-12	3220	N	NOT IN EF SET	NOT IN SETUP	OK	ODC
106934	ETHYLENE DIBROMIDE	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
106934	ETHYLENE DIBROMIDE	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP
108883	TOLUENE111	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
108883	TOLUENE111	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP
108907	CHLOROBENZENE	CHEM-06	1654	Y	NOT IN EF SET	OK	OK	HAP
122667	1,2-DIPHENYL-HYDRAZINE	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
122667	1,2-DIPHENYL-HYDRAZINE	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP
123911	1,4-DIOXANE	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP
123911	1,4-DIOXANE	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
463581	CARBONYL SULFIDE	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
463581	CARBONYL SULFIDE	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP
53963	2-ACETYLAMINOFLUORENE	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP
53963	2-ACETYLAMINOFLUORENE	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
60355	ACETAMIDE	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
60355	ACETAMIDE	CHEM-12	3220	N	NOT IN EF SET	NOT IN SETUP	OK	HAP
75058	ACETONITRILE	CHEM-06	1654	Y	NOT IN EF SET	NOT IN SETUP	OK	HAP
75058	ACETONITRILE	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP
75070	ACETALDEHYDE	CHEM-06	1654	Y	NOT IN EF SET	OK	OK	HAP
75218	ETHYLENE OXIDE	CHEM-12	3220	N	OK	NOT IN SETUP	OK	HAP

ADD CAS TO EF AND SETUP MATERIALS WITH CONSTITUENT

Value of: CAS_NO Record: 1/? <ESC> <DBG>

Constituent Validation Form in APIMS.

Verifying Chemicals in an Emission Factor Set (cont)

factor set to those that are constituents in materials used by the process to ensure all pollutants are calculated.

APIMS now offers a query utility that compares the chemical constituents of materials used by processes selected for a calculation against the emission factor set for the corresponding algorithm. This comparison can be exe-

cuted before the user runs a calculation. Not only does it display each chemical that is missing from the Emission Factor Set, it also advises the user if the constituent association record is missing the constituent percentage value referenced by the algorithm, or if the chemical is not selected to be calculated in the calculation setup. For each chemical that is listed

APIMS allows the ability for a user to add the chemical to the Emission Factor Set and/or calculation setup, or navigate to the Material Product record and enter the constituent content value that is null.

This utility is available on the Run Calculation form and is accessed through the Constituent Validation button.

Constituent validation automates the review of emission factor sets for material-based calculations.

MEMBER FEATURE - The Challenge of Air Quality in China

Pamela Rockwell

In February I had a great privilege of traveling to China. I was surprised to see such a vast and sprawling metropolis when visiting Beijing.

I was equally surprised to see how little of the city I could see through the haze.

During one day of touring our guide told us to enjoy the sun because it is not very often that you see the sun in Beijing. In fact, in 1998 Beijing launched a 'Defending the Blue Sky' program to improve the air quality situation. Unfortunately in January of this year Beijing only had 11 blue sky days.

So what contributes to the air quality issues in China? In 2001 China entered the World Trade Organization making it possible for more citizens to own personal vehicles. The increased amount of motor vehicles coupled with the high

use of coal for industrial and residential heating has amassed into a huge air quality problem in eastern China.

People wear masks over their faces and the streets were slick with a slick grime.

In 2005 China revealed a master plan for the 2008 Summer games. In this plan the city would have blue skies, or be pollution free, for 80 percent of the year.

In my own estimation the organizers will be hard pressed to reach their visions of a green Olympic games. In fact, according to the European Satellite Agency, in September of last year, Beijing and the surrounding area had the world's highest levels of nitrogen dioxide.

The country's leaders continue to resist complying with new proposed air quality standards stating that such restrictions are not fair for a

developing nation.

I applaud the efforts that the Chinese are taking to protect the environment. I also understand that with their substantial population and industrial growth it will be very challenging to meet their own goals.

This month the Clean Air Initiative for Asian Cities together with representatives from AWMA and other world agencies are working towards improving training for Air Quality Management in China.

In 2008 many people from the world will get the privilege of enjoying a beautiful city and culture during the Olympic games. Let's hope that during that time Beijing has Blue Sky Days, and still many more beyond the games.

REFERENCES: Inter Press Service News Agency; NASA: CHINA daily; Clean Air Initiative for Asian Cities



NASA photo showing air pollution in Eastern China.



The Proven Solution for Air Quality

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DID YOU KNOW?

On September 27, 2006, the California Global Warming Solutions Act (AB 32) was signed into law. The bill requires California Air Resources Board (CARB) to promulgate regulations in phases to do the following: report and verify Statewide Green House Gas (GHG) emissions, establish limits equivalent to Statewide emission levels in 1990 to be achieved by 2020, achieve the maximum technologically feasible and cost effective GHG reductions, and monitor and enforce compliance. The DoD can demonstrate their commendable track record at reducing their GHG emissions using APIMS to calculate the emissions from historical usage data.

As more states follow the steps taken in California to account for and reduce GHG emissions, APIMS will continue to expand and enhance the current emission factor standards for all GHGs. Look for additional GHG emission factors in APIMS this summer.

VERSION RELEASE NOTES

The Why, What, When, Where and How of the APIMS 10g Upgrade

APIMS is currently undergoing a major platform upgrade. This upgrade is commonly referred to as "the 10g Upgrade" and will be officially designated as version 5.0. The purpose of this article is an attempt to answer some of the common questions the program office has encountered from the user community as they have learned of this effort.

Why is APIMS being upgraded to 10g?

There are a number of "good" reasons to upgrade APIMS to 10g including application and database performance, enhanced web capability, staying current with technology, etc. However, the primary driver is arguably the list of findings from the Fall 2006 Certification and Accreditation (C&A) audit, most of which can only be closed by upgrading the current platform components. Although a 1-year Approval to Operate (ATO) was granted to CCS/APIMS, this ATO is contingent upon upgrading to 10g and closing the findings.

What is "the 10g upgrade"?

This effort involves the upgrade of four major platform components from older versions to those listed below:

- Operating System to Solaris 10
Database to Oracle 10g
Oracle Forms/Reports to 10g
Application Server to Oracle 10g Release 2

When will the upgrade be released?

Although the platform upgrade is largely complete, a full regression test of the system is required to identify negative impacts to the application and its functions. The first phase of regression test will be completed in June 2007 and the Beta test phase is scheduled for completion in August 2007. The length of time it takes to get through the C&A process, which culminates in the receipt of a new Certificate of Networkiness (CoN), will likely be the critical path to the release date. Users should expect the new version to be rolled out by the fourth quarter of CY 2007.

How will the upgrade impact me, the user?

The primary impact to users will be in how they access their database. In the past, most users used locally installed client forms. New users will access APIMS via the web (e.g., Internet Explorer). The days of loading the client version of Oracle Forms on every users desktop will be a thing of the past.

Where will my database be located?

As alluded to above, one of the advantages of the 10g upgrade will be the ability to access APIMS via the web. This web capability helps alleviate the requirement to host the database and application at each site and allows for the consolidation of databases to a central server. This move to a central server will result in a significant cost saving to the Air Force in terms of hardware maintenance.

What if my connection is slow or unreliable to the central database?

Users will be provided an opportunity to test their connection speed and reliability prior to being moved off of local hardware to ensure adequate system performance. There is a contingency plan in place which will allow some sites to continue to be hosted locally, if performance is unacceptable.

