Robins Air Force Base
Environmental Advisory Board (EAB)
Fact Sheet

Volume 10, Issue 1, August 2015

The Robins AFB EAB

Recognizing the importance of public involvement in environmental matters, Robins Air Force Base (Robins AFB) has established the Environmental Advisory Board (EAB). The mission of the EAB is to encourage participation of surrounding communities in the Base's environmental programs and allow community members and other stakeholders to have meaningful dialog with Base officials. Specifically, the EAB serves to promote community awareness and obtain constructive community review, comment, and input on current and proposed actions associated with environmental programs at Robins AFB. The EAB supports the Air Force environmental mission of sustaining readiness, being a good neighbor, protecting human health and the environment for the Base and community, and making smart business decisions.

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August 2015 EAB Meeting

The summer EAB meeting was held on Thursday, August 6, 2015. The topics briefed included: "Improving Energy Usage at Building 59: A New Approach", "Building 922 (TU/US-C507) Update on Progress", and "Overview of EAB Website".

This *Fact Sheet* provides a summary of the information and topics discussed during the meeting.

The next meeting will be held on Thursday, November 5, 2015.

IMPROVING ENERGY USAGE AT BUILDING 59

Building 59 is the Large Aircraft Corrosion Control Paint/Depaint Facility at the Base. The 225,000 square feet (sf) facility includes two 65,000 sf hanger bays, used to depaint and paint aircraft, a small-parts paint bay, common central facility systems, and a process equipment plant. The facility optimizes the paint removal and application process for the C-5, C-17, and other similar sized aircraft.

Building 59 is the Large Aircraft Corrosion Control Paint/Depaint Facility. The depaint and paint hangers can fully enclose the C-5 aircraft.

Due to the size of the building and very strict process and environmental control requirements (e.g., lighting, air flow, temperature, relative humidity, concentrations of particulates, etc.), the building has a large energy demand, consuming almost 10 percent of the Base's annual energy usage. Although the current heating, ventilation, and air conditioning (HVAC) and lighting systems in Building 59 are operating as intended, audits of the facility identified significant cost saving opportunities though system optimizations (e.g., reduction in electricity and gas usage).

To address these findings, the Base's Environmental and Ergonomics Office teamed with Geosyntec Consultants

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IMPROVING ENERGY USAGE AT BUILDING 59 (CONT'D...)

(Continued from page 1)

and the University of North Carolina at Charlotte to demonstrate and validate a new and innovative Climate Management System (CMS) at Building 59. The funding for the project is being provided by the Department of Defense (DoD) through the Environmental Security Technology Certification Program (ESTCP). The ESTCP program promotes the transfer of innovative technologies from proof of concept to field or production use.

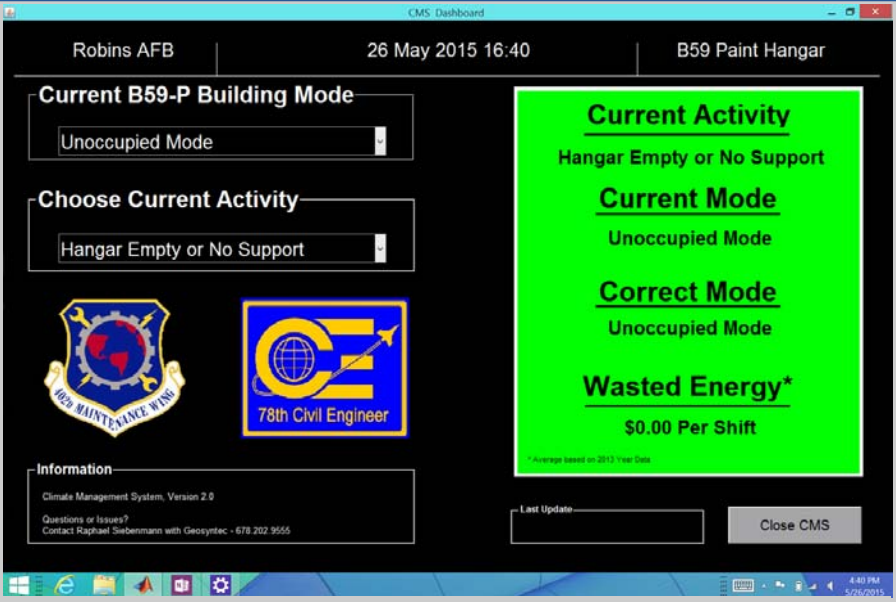
Mr. Raphael Siebenmann of Geosyntec Consultants gave an update on the project at the summer EAB meeting. The overall goal of the project is to reduce energy consumption at Building 59 through simple, operational measures.

As part of the project, building energy usage data was collected over an 8-month period from May to December 2013. A review of the data indicated that significant cost savings could be realized by ensuring the building is operating in the proper mode during each shift. The building has four modes of operation (i.e., unoccupied, non-chemical, cure, and paint/chemical), with the unoccupied mode being the least energy intensive and the paint/chemical being the most energy intensive. Therefore, small, simple changes to daily routines could potentially have a tremendous impact on energy usage.

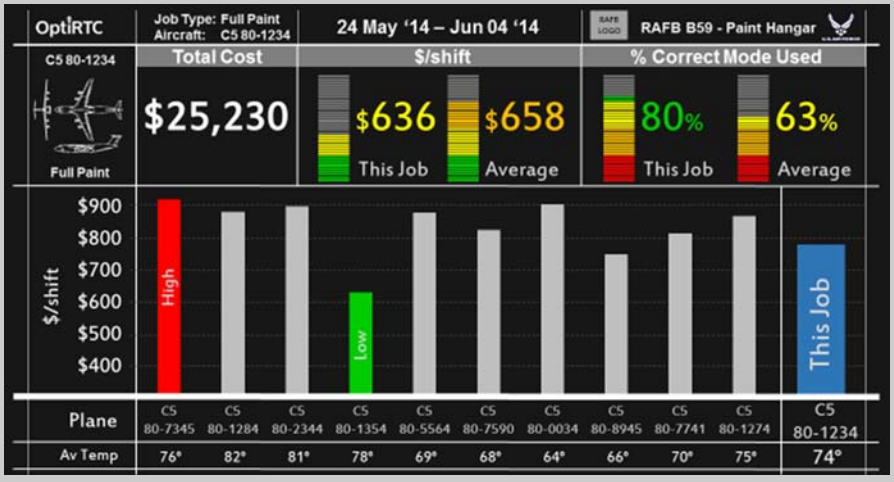
To improve energy management, a tablet-based program has been developed that asks the workers about the tasks being performed on a given shift and subsequently provides a recommendation for the proper mode of building operation. Simple red light/green light feedback is given on whether the correct mode has been selected.

The system can also report anticipated energy costs and cost savings relative to historical data trends, as well as identify when certain operational systems (e.g., a boiler) may not be operating at optimal capacity.

The CMS is being developed such that it can be readily translated to other Robins AFB facilities and DoD installations. Energy savings of about $450,000 per year are anticipated at Building 59. These cost savings represent millions of dollars when scaled to DoD facilities worldwide.



Screen shot from CMS tablet-based system. The shift supervisor can select the current building mode and current activity, and the system will give red light/green light feedback on whether the building mode is set correctly.

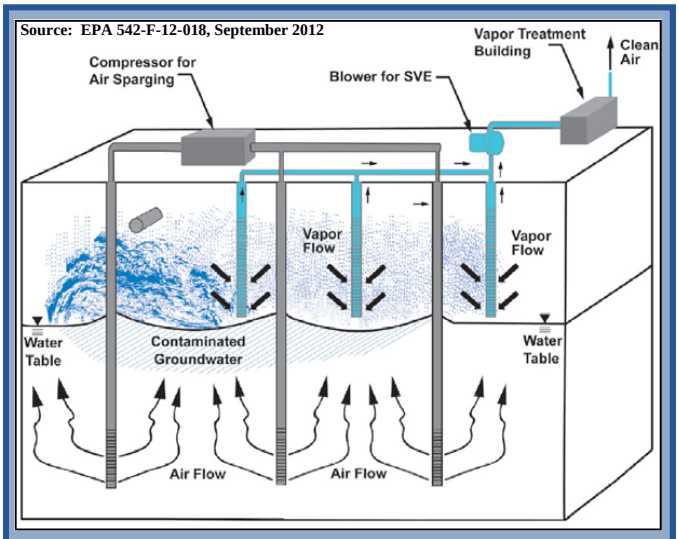


Screen shot from CMS tablet-based system. The system can provide anticipated energy costs and cost savings related to historical data trends.

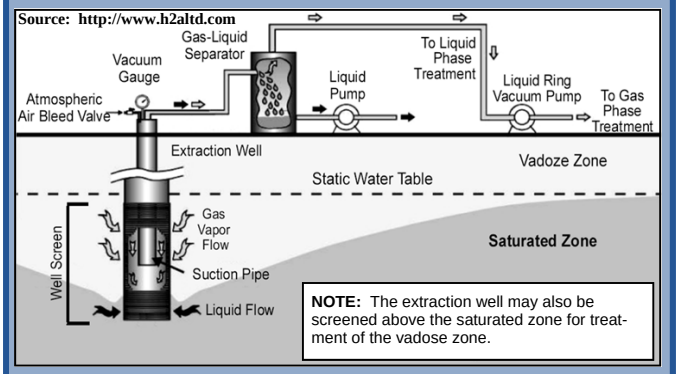
UPDATE ON PROGRESS AT RESTORATION SITE BUILDING 922 (TU/US-C507)

Building 922 is the Base's operational gasoline service station. Investigations and remedial actions at the site began in 1993 after a confirmed fuel release in 1992. In 2001, the site was granted No Further Action (NFA) status by the Georgia Environmental Protection Division (GA EPD) Underground Storage Tank (GUST) Program based on alternative cleanup levels. However, in 2010, during removal and replacement of Underground Storage Tanks (USTs) at the site, residual contamination was observed, and the GA EPD GUST Program requested additional site investigations and remediation, as appropriate.

Mr. Mike Perlmutter of CH2M gave an update on the restoration progress during the EAB. To remediate the contamination, an air sparge/soil vapor extraction (AS/SVE) system was installed and began operation in December 2013. To enhance light non-aqueous phase liquid (LNAPL) removal, a multi-phase extraction (MPE) system was installed and began operation in May 2015 (surfactant flushing can also be used as necessary to expedite site cleanup).



Example Schematic for an AS/SVE System



Example Schematic for a MPE System

Piping and Vault Installation for Remediation Systems

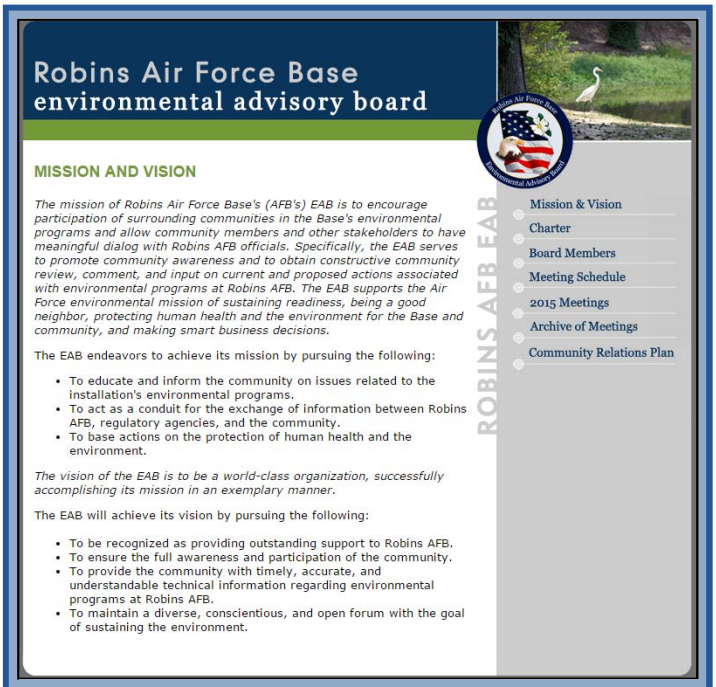
Between December 2013 and June 2015, nearly 62,000 pounds of petroleum hydrocarbons were removed from the subsurface with these systems, and the extent of LNAPL has decreased.

The original performance objective for Building 922 included achieving Federal Primary Drinking Water Standards Maximum Contaminant Levels (MCLs) in groundwater by 2016, which would allow unlimited use of/unrestricted exposure to site groundwater. CH2M is currently working with the Air Force to revise the objective to allow risk-based Alternate Concentration Limits (ACLs) as the remedial levels (RLs). The risk-based approach is allowable under GA EPD regulations and is appropriate for an active gas station. CH2M is currently developing a Corrective Action Plan (CAP)-Part B addendum with the ACLs for regulatory approval.

CH2M will continue operating the AS/SVE and MPE systems and conduct routine groundwater sampling to monitor site progress until the ACL RLs are met. The goal is to achieve the ACL RLs by 2016, conduct one year of groundwater compliance sampling (with the remediation systems shutdown), and achieve NFA at this site in 2018.

ROBINS AFB EAB WEBSITE

Ms. Tamara Hebeler of Geosyntec Consultants provided the EAB members with a live demonstration of the EAB website. The website is available to the public and is a source of information for those looking to learn more about the EAB and the Base's environmental program.



Screen shot of Robins AFB EAB website (www.robinseab.org).

The website includes a Home Page with the EAB Mission and Vision statements. Other links include a list of EAB members, the current year meeting schedule, and documents (i.e., agendas, briefing slides, and Fact Sheets) from meetings from the last five years.

The website also provides links to the EAB Charter and the current Robins AFB Community Relations Plan (CRP).

For more information regarding the EAB, please contact **Ms. Charline Logue, Robins AFB EAB Manager,** at (478) 327-9268 or visit http://www.robinseab.org

Acronyms

ACL	Alternate Concentration Limits
AFB	Air Force Base
AS/SVE	Air Sparge/Soil Vapor Extraction
CAP	Corrective Action Plan
CMS	Climate Management System
CRP	Community Relations Plan
DoD	Department of Defense
EAB	Environmental Advisory Board
ESTCP	Environmental Security Technology Certification Program
GA EPD	Georgia Environmental Protection Division
GUST	GA EPD Underground Storage Tank
HVAC	Heating, Ventilation, and Air Conditioning
LNAPL	Light Non-Aqueous Phase Liquid
MCL	Maximum Contaminant Level
MPE	Multi-Phase Extraction
NFA	No Further Action
RL	Remedial Level
sf	square feet
UST	Underground Storage Tank

Environmental Advisory Board Members

Mr. Alexander Stokes, **Robins AFB** Installation Co-Chair	**Dr. Dan Callahan,** **Warner Robins** Community Member	**Ms. Debra Jones,** **Warner Robins** Community Member	**Mr. Don Thompson,** **Macon** Community Member
Dr. Brian E. Rood, **Macon** Community Co-Chair	**Mr. James Harden,** **Warner Robins** Community Member	**Mr. Mike Maffeo,** **Macon** Community Member	**Mr. Penrose Wolf,** **Perry** Community Member
Ms. Lila Llamas, **US EPA Region 4** Hazardous Waste Division	**Mr. John Harley,** **Centerville** Community Member	**Dr. Linda Smyth,** **Macon** Community Co-Chair	
Ms. Mary Brown, **GA EPD** Hazardous Waste Management	**Mr. Stephen Johnson,** **Macon** Community Member	**Dr. Joseph Swartwout,** **Fort Valley** Community Member	