



Robins Air Force Base Restoration Advisory Board (RAB) *Fact Sheet*



Volume 17, Issue 1, March 2024

The Robins AFB RAB

Recognizing the importance of public involvement in environmental matters, Robins Air Force Base (Robins AFB or Base) has established the Restoration Advisory Board (RAB). The mission of the RAB is to encourage participation of surrounding communities in the Base’s environmental restoration program and allow community members and other stakeholders to have meaningful dialog with Base officials. Specifically, the RAB serves to promote community awareness and obtain constructive community review, comment, and input on current and proposed actions associated with the environmental restoration program at Robins AFB. The RAB 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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March 2024 RAB Meeting

The spring RAB meeting was held on Thursday, March 14, 2024.

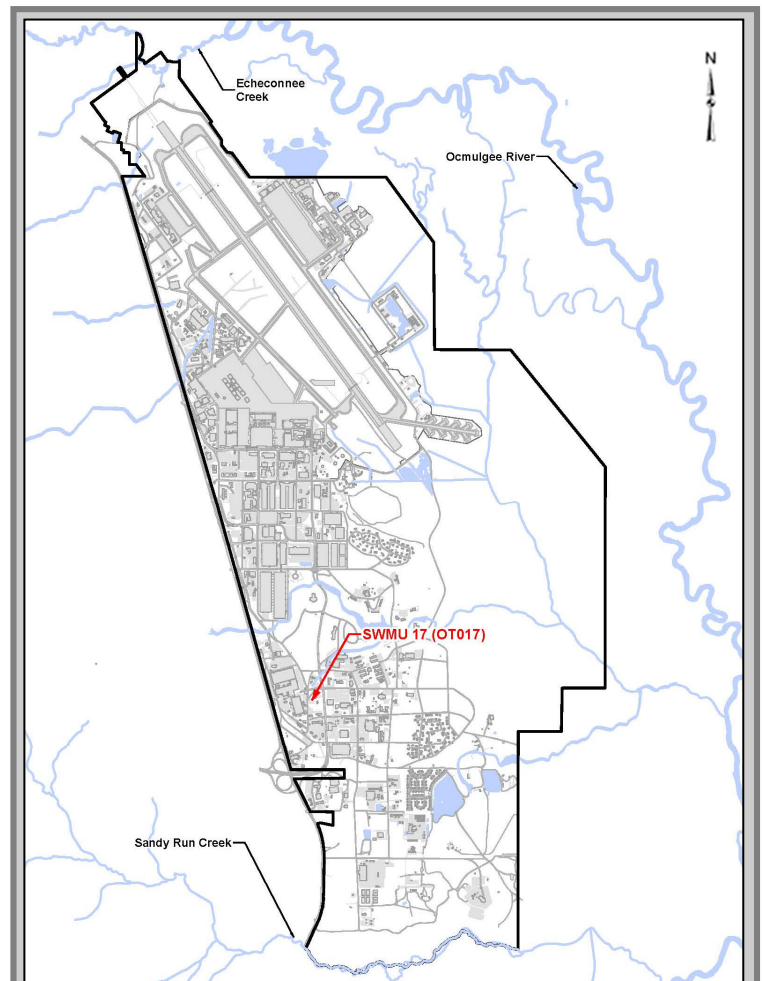
This *Fact Sheet* provides a summary of the information and topics discussed during the meeting.

The next meeting will be held on Thursday, September 12, 2024 at 6:00 p.m.

Supplemental Site Investigation (SSI) at Solid Waste Management Unit (SWMU) 17 (OT017)

At the spring RAB meeting, **Dr. Kip Gray** of Geosyntec Consultants, Inc. (Geosyntec) briefed: “SSI at SWMU 17 (OT017). The site is associated with a release from an underground storage tank (UST) located northwest of Building 645, which was used to store trichloroethylene (TCE). The contamination migrated to the east. A kaolinitic clay aquitard divides the upper unconfined and lower confined groundwater aquifer and

(Continued on page 2)



During the recent RAB meeting, the findings of the Phase I SSI activities at OT017 were presented.

SSI at SWMU 17 (OT017) (Continued...)

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affects horizontal and vertical migration of the contamination.

The initial remedy for SWMU 17 was groundwater extraction and soil vapor extraction (SVE) wells. Under the Performance-Based Remediation (PBR) contract, Jacobs continued operation of the SVE system, but replaced groundwater extraction with enhanced reductive dechlorination (ERD). The current corrective action plan (CAP) objectives for SWMU 17 are to reduce contaminant of concern (COC) concentrations in groundwater to below remediation levels.

SWMU 17 is an Alternative Objective (AO) site under the Optimized Remediation Contract (ORC) for Robins AFB. The AO sites are defined by the Air Force as having “complex attributes that have, to date, inhibited progress toward the achievement of RC [Response Complete].” AO sites generally have incomplete conceptual site models (CSMs) and are expected to require longer than 30 years to achieve RC under the current remedial approach. Under the ORC, advanced site characterization (ASC)/high-resolution site characterization (HRSC) techniques are being used during SSIs to revise the site’s CSM. The updated CSM is then being used to evaluate the current site remedy for potential enhancements, modifications, or alternatives.

The Phase I SSI field activities consisted of conducting high volume sampling (HVS), borings using the Waterloo Aquifer Profiling System (APS), and collecting discrete soil and groundwater sam-

ples.

Key data gaps and associated findings from the SSI were summarized as follows.

- ◆ Area under Building 645: The unconfined TCE groundwater plume extends beneath Building 645 and dissolved mass is presently outside the radius of influence of the existing remedy. The confined aquifer TCE plume may extend beneath Building 645.
- ◆ Evaluation of TCE Hot Spots: The TCE hot spots are limited in extent and are generally located within the monitoring well network. Substantial concentrations of TCE above 500 micrograms per liter ($\mu\text{g/L}$) and daughter products are located between ERD injection transects downgradient of Building 645.
- ◆ Evaluation of Clay Layer: A semi-confining leaky clay layer was encountered at each boring location and was thinnest directly east of Building 645. TCE was generally detected in aquitard soils at each boring location and substantial TCE mass is stored within the clay layer. The existing remedy has been ineffective in treating TCE in aquitard soils suggesting that this material may act as a secondary source to groundwater.

The path forward for the Phase II SSI activities includes installation of additional monitoring wells. Passive flux meters (PFMs) will be installed in select monitoring wells to evaluate flux from the clay aquitard.



Example of an HVS setup



APS tip

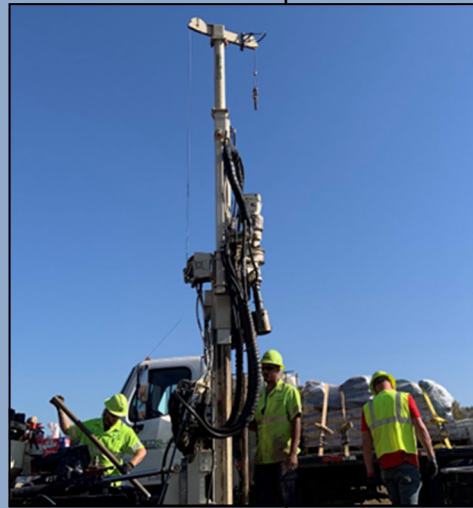
Update on Progress: SWMUs 59 and 60 (CG501 and CG502)

SWMUs 59 and 60 are fuel release sites located along the flightline, which were identified in 1995; no evidence of ongoing leaks have been identified. The current remedial system includes: (i) vertical and horizontal biosparge wells; and (ii) in-situ submerged oxygen curtains (iSOC[®]). Both the biosparge wells and iSOC[®] wells are designed to increase oxygen in the subsurface to enhance natural degradation of the subsurface contaminants. Both technologies have been effective within their zone of influence.

Site investigations conducted in recent years to refine the CSM identified residual light non-aqueous phase liquid (LNAPL) beneath the taxiway near active and inactive pipelines outside the zone of influence of the current remedial system. The residual LNAPL is generally located below the water table. The LNAPL appears immobile and non-recoverable and is acting as an ongoing source contributing to the downgradient groundwater plume.

As such, a CAP Addendum was prepared by Geosyntec to expand the biosparge system at both sites with a total of four horizontal directional drilled (HDD) biosparge wells (two at each site) and eight vertical biosparge wells at each site. The CAP Addendum was approved by the Georgia Environmental Protection Division (GA EPD) in October 2021.

Geosyntec subsequently prepared a Remedial Design/Remedial Action (RD/RA) Work Plan to detail the design of the expanded system.



Photographs from installation of vertical and horizontal biosparge wells at SWMUs 59 and 60. Top left and right are vertical wells being installed. Bottom four are the horizontal drill rig, the drill bit, the drill bit at the exit pit, and the well casing being pulled back into the drilled hole.

Installation of the vertical and horizontal wells was completed in late 2023 and early 2024.

Construction of the biosparge conveyance piping and mechanical parts of the system is scheduled for 2024.

RAB Modifications

At the spring RAB meeting, the recent changes to the RAB were discussed.

These changes include: (i) beginning the meetings an hour earlier to start at 6:00 pm; (ii) moving the meetings to be semi-annual in the spring and the fall (i.e., March and September on the 2nd Thursday of these months); and (iii) changing the structure to align with Air Force guidance, which includes changing from an Environmental Advisory Board (EAB) to a RAB and changing the position for the Installation Co-Chair.

The money for the RAB function is provided by Air Force restoration funding; and therefore, the RAB terminology is more appropriate.

In addition, per Air Force guidance, the Installation Co-Chair



March 2024 RAB Meeting

should be either the Wing Commander or the Mission Support Group Commander or equivalent. Historically, the director of Environmental Management was a Mission Support Group Commander. However, with Environmental Management now being under Civil Engineering, an alternative Installation Co-Chair is required. To implement these changes, the Charter for the group was updated.

For more information regarding the RAB, please contact **Mr. Fred Otto, Robins AFB RAB Manager**, at (478) 327-9272 or visit <http://www.robinseab.org>

Acronyms

AFB	Air Force Base
AO	Alternate Objective
APS	Aquifer Profiling System
ASC	Advanced Site Characterization
CAP	Corrective Action Plan
CSM	Conceptual Site Model
COC	Contaminant of Concern
EAB	Environmental Advisory Board
ERD	Enhanced Reductive Dechlorination
GA EPD	Georgia Environmental Protection Division
Geosyntec	Geosyntec Consultants, Inc.
HDD	Horizontal Directional Drilled
HRSC	High Resolution Site Characterization
HVS	High Volume Sampling
iSOC [®]	In Situ Submerged Oxygen Curtain
LNAPL	Light non-aqueous phase liquid
µg/L	micrograms per liter
ORC	Optimized Remediation Contract
PBR	Performance-Based Remediation
PFM	Passive Flux Meter
RAB	Restoration Advisory Board
RC	Response Complete
RD/RA	Remedial Design/Remedial Action
SSI	Supplemental Site Investigation
SVE	Soil Vapor Extraction
SWMU	Solid Waste Management Unit
TCE	Trichlorethylene
UST	Underground Storage Tank

Restoration Advisory Board Members

Mr. Heyward Singleton, Robins AFB Installation Co-Chair	Mr. Lawrence Collins, Byron Community Member	Dr. Richard Mines, Macon Community Member
Dr. Linda Smyth, Macon Community Co-Chair	Mr. James Harden, Warner Robins Community Member	Dr. Clarence Riley, Warner Robins Community Member
Mr. Craig Benedikt, US EPA Region 4 Superfund Division	Mayor John Harley, Centerville Community Member	Dr. Brian E. Rood, Macon Community Member
Mr. Jim Ashworth GA EPD Hazardous Waste Management	Mr. Stephen Johnson, Macon Community Member	
Ms. Tiffany Bowen, Warner Robins Community Member	Mr. Mike Maffeo, Macon Community Member	