



# DEPARTMENT OF THE AIR FORCE

20th FIGHTER WING (ACC)  
SHAW AIR FORCE BASE, SOUTH CAROLINA

MEMORANDUM FOR 20 FW/CV

FROM: 20 CES/CEIER

SUBJECT: Restoration Advisory Board (RAB) Meeting Minutes

1. Meeting information:

- a. Date: 4 February 2013
- b. Time: 1830
- c. Location: New Beginning Banquet Facility, 1335 Hwy 441, Sumter, SC 29154
- d. Co-Chairman: Col Lance Kildron, USAF Chairperson
- e. RAB Members/Alternates and Others in Attendance

City/County Officials

Mr. Eddie Newman, County Representative

Mr. Bill Rozier, City Representative (Not Present)

South Carolina Department of Health and Environmental Control (SCDHEC)

Ms. Rachel Poole, SCDHEC, Columbia Office

Mr. Keith Lane, SCDHEC Region 4, Sumter Office

RAB Community Members

Mr. Daniel Burkett (RAB Community Co-Chair)

Ms. Melanie Bennett (Not Present)

Mr. Chip Chase

Mr. Charles Firmbach

Mr. Albert Gagnon

Mr. John Hayes (Not Present)

Mr. Tony Horton (Not Present)

Rev. Willie Lawson

Dr. Wendell Levi, Jr.

Mr. Ralph Oxendine (Not Present)

Ms. Amanda Skelton

Ms. Elizabeth Williams (Not Present)

Others, Air Force Affiliated

Mr. Keith Kellner 20 MSG/DI

Lt Col Terrence Walter 20 CES/CC

Mr. Chris Aamold 20 CES/CD

Lt Earon Brown 20 FW/PA

Maj Brian Hughes 20 AMDS/SGPB

Mr. Juvenal Salomon 20 CES/CEIER

Ms. Aliza Tindall 20 CES/CEIER

Mr. Doug Simpleman US Army Corps of Engineers

Ms. Jean Chytil US Army Corps of Engineers

Ms. Delma Stoner US Army Corps of Engineers

Mr. Denny Jorgenson URS Corp.

Mr. Bob Mallisee URS Corp.

Mr. Dave Overbey URS Corp.

Mr. William Hays URS Corp.

Mr. Kyle Dermatis URS Corp.

Others, State of South Carolina

Mr. Michael Danielsen

SCDHEC

Media Representatives

(Not Present)

Community Members

Mr. Henry Topping

Forest City

Mr. James Robinson

2. Mr. Salomon, Base Restoration Project Manager, served as meeting moderator and opened the meeting. He introduced 20th Fighter Wing Vice Commander, Col Lance Kildron.
3. Col Kildron opened the meeting by welcoming and thanking the community for their attendance.
4. Mr. Salomon facilitated the remainder of the meeting. He introduced the RAB members and explained the purpose of the meeting. The purpose of this meeting is to keep the community informed of the status of Shaw AFB's Environmental Restoration Program. Shaw AFB's goal is to be transparent to what the base is doing to clean up the contamination. He highlighted the meeting's focus is activities completed in the past 6 months and upcoming events. He also alerted the RAB members of an important upcoming event that the community can participate on. SCDHEC is planning to initiate a permit modification this spring. The slide presentation is attached (Atch 1).
5. Mr. Salomon briefed the Shaw AFB Environmental Restoration Program cleanup goals. Two years ago the Air Force invested a lot of money to clean up remaining active legacy sites. The Air Force's solution is to leverage contractor's expertise to close these sites. The contractor's proposal included closing 14 sites by the end of their contract performance period, September 2020. The challenge is not all sites can reach site closeout by this period of performance. These challenging sites include three landfills where it is more cost effective to monitor every five years than to completely dig up; a Dieldrin site that has migrated off base and is being monitored; three PCE/TCE (Perchloroethylene/Trichloroethylene) sites undergoing long cleanup processes; and a fuel spill site that is relatively easy to clean up, but unfortunately this site is located in the middle of the runways and presents other challenges. The ultimate goal is to close all sites, but it will be beyond 2020.
6. Mr. Salomon updated the status of activities completed, the fieldwork that began in July 2012 and ozone sparging pilot study results. URS Corp., Shaw AFB's cleanup contractor, drilled over 200 wells on and off base in about 8 months; typically it takes about 3 to 5 years to complete. The difference is instead of focusing on each site separately, the contractor is looking at the bigger picture and some of the sites are co-located or co-mingled. Remember, URS Corp. is on the hook for closing 14 sites under a performance-based contract by September 2020. The reason URS Corp. drilled more monitoring wells is to collect more data to better characterize and define the plume boundaries, which will give them better confidence before implementing their proposed aggressive remedies. The 2-month ozone sparging pilot study completed on the northeast side of the base was successful; results show average 60 percent reduction rate. This pilot study is one of the remedies URS Corp. is proposing for some of the sites. The great thing about using the former fire training area site location for the pilot study is it has multiple contaminants, which assisted the contractor in determining which sites they could effectively use this remedy. The next ozone sparging pilot study will be a first on the Dieldrin site, which presently has no clean up solution except to monitor the pesticide's natural deterioration.
7. Mr. Salomon briefed upcoming activities. SCDHEC is in the process of scheduling a permit modification this spring. The permit allows for the handling, treatment, storage and disposal of hazardous waste operations. This is a much more stringent requirement than what we do at home. All hazardous waste that comes out of the base is regulated and monitored. The permit also specifies the procedures that Shaw AFB must follow when there is a release of hazardous waste into the environment. SCDHEC is the lead regulatory agency for Shaw AFB and will initiate the permit modification sometime in late March. Shaw AFB is modifying the permit to propose final remedies for 7 sites and add 6 new sites. Once initiated, the public has the opportunity to review the documents and provide feedback. SCDHEC generally schedules a public meeting 20 days after the notices are mailed. Upon review and consideration of public comments, SCDHEC will issue the final permit modification.

8. Mr. Salomon discussed another upcoming activity: the expansion of the pump, treat and inject system. With the current system, it will take 180 years to clean up the TCE/PCE site; expanding the system will reduce the time to 45 years to clear up the contamination's footprint off base. The contractors will increase the number of extraction wells and add injection wells. After the contaminated water is cleaned, the clean water will be injected back into the groundwater to speed up the cleanup. It is important that the wells be positioned where they provide the most benefit. Shaw AFB is working with landowners for long-term easements regarding the placement of these wells.

9. Community members posted a few questions. Answers to these questions are attached (Atch 2).

10. Prior to closing, Mr. Salomon sought inputs from the RAB panel. Mr. Burkett announced that Mr. Oxendine submitted his resignation from the RAB. Mr. Firmbach presented the motion to accept Mr. Oxendine's resignation and Mr. Newman seconded the motion. Mr. Salomon announced that Shaw AFB RAB has a website where the community can obtain information regarding the Environmental Restoration Program. (<http://www.shaw.af.mil/library/restorationadvisoryboard.asp>)

11. Col Kildron provided closing remarks. He announced that he will be deploying and will not be able to attend the next RAB meeting. He expressed that it is important that Shaw AFB continue to educate the community about the Environmental Restoration Program. He conveyed that he is a homeowner in Sumter as well and he does not know what is under his property. The positive factor is Shaw AFB knows about the contamination, cleaning it up and addressing the concerns of the community.

12. The next meeting will be scheduled in 6 months, around August 2013, starting at 6:30 pm at the New Beginning Banquet Facility. Questions regarding the meeting may be directed to Shaw AFB's Public Affairs Office, (803) 895-2019.

//SIGNED – JQS – 12 Feb 13//  
JUVENAL Q. SALOMON, GS-12, DAFC  
RAB Administrator

Approved as written.

// SIGNED – LAK – 15 Mar 13//  
LANCE A. KILD RON, Colonel, USAF  
Vice Commander, 20th Fighter Wing

Attachments:

1. RAB Presentation Slides
2. Question and Answer Session

cc:

20 FW/CV/JA/PA

20 MSG/CC

20 CES/CC/CEA/CEAN

20 AMDS/SGPB

AFCEE/ERB (Mr. Anthony Williams)

US Army Corps of Engineers (Mr. Doug Simpleman)

SCDHEC (Ms. Rachel Poole, Mr. Keith Lane)

Sumter County Public Works Director (Mr. Eddie Newman)

Sumter City Engineer (Mr. Bill Rozier)

RAB Community Members (Mr. Daniel Burkett, Rev. Willie Lawson, Ms. Melanie Bennett,  
Dr. Wendell Levi, Jr., Mr. Chip Chase, Mr. Charles Firmbach,  
Mr. Albert Gagnon, Mr. John Hayes, Mr. Tony Horton,  
Mr. Ralph Oxendine, Ms. Amanda Skelton, Ms. Elizabeth Williams)



# *20th Fighter Wing*



# ***RESTORATION ADVISORY BOARD***

***“Welcome”***



**Col Lance A. Kildron  
Vice Commander  
Shaw Air Force Base**

**4 February 2013**



# Agenda



- **Purpose / Mission**
- **Question Cards**
- **Shaw AFB Environmental Restoration Program Goals**
- **Recent Activities**
  - Field work since July 2012
  - Ozone Sparging Pilot Study Results
- **Upcoming Activities**
  - Shaw AFB Hazardous Waste Permit Modification
  - Design of Expanded Pump, Treat, & Inject System
- **Intermission**
- **Q&A**
- **Closing Remarks**



# ***RAB Purpose/Mission***

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- **Shaw AFB RAB Charter guides our direction ...**

## **PURPOSE:**

- **Promote community awareness**
- **Obtain constructive community review/comment/input on current/proposed environmental cleanup actions**

## **MISSION:**

- **Open and interactive dialogue**
  - **between the U.S. Air Force, SC Department of Health and Environmental Control, and local community**
  - **concerning Shaw AFB's Environmental Restoration Program**



# Question Cards



- Health       Technical  
 Legal       Other

Question:

What is ...?

John Doe  
123 Question St.  
Sumter, SC 29154  
(803) 895-XXXX

***Please turn in question cards during intermission.  
Questions will be addressed after briefing.***



# Shaw AFB Environmental Restoration Program Goals

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- **New AF direction ... Site Closeout**
  - This means ... Unlimited Use / Unrestricted Exposure
- **23 remaining active sites to cleanup**
  - Includes 6 “new” post-1986 compliance cleanup sites
- **Solution: Performance-Based Remediation Contract**
  - Awarded in 2011, \$19.8M (funded through 2015)
  - Objective: Close 14 sites by 2020 (end of contract period)
- **For remaining 9 open sites, reduce life cycle costs**
  - 4 TCE/PCE plumes (long cleanup period)
  - 3 landfills (costly removal of buried waste)
  - 1 Dieldrin pesticide plume (persistent, long half-life)
  - 1 fuel spill site (in shallow aquifer but underneath runway)



# *Recent Activities*

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- **Field work since July 2012**
- **Ozone Sparging Pilot Study Results**



# *Field Work since July 2012*

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## ■ **Purpose:**

- Aid in design of groundwater capture remediation system(s), involving 12 cleanup sites
- Investigate 6 recently added new sites

## ■ **Scope:**

- ~226 environmental wells & probes
- Some inside airfield restricted area
  - Temporary airfield construction waiver required
- Some located off-base ... 17 locations
  - Used County right-of-ways to minimize access to private parcels
  - Access permission requests to 8-10 private parcel owners



# Ozone Sparging Pilot Study Results



## ■ Purpose:

- Determine effectiveness and radius of influence of ozone sparging

## ■ Location:

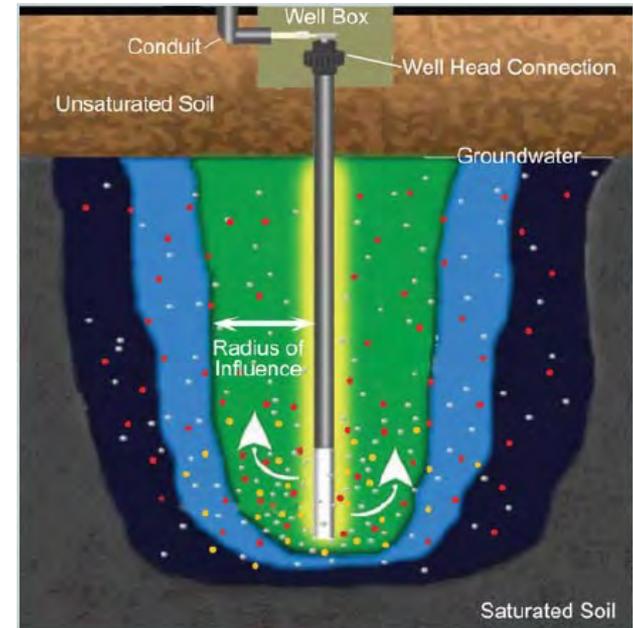
- FT-01 (SWMU 59), old fire training pit
- Contains multiple contaminant types

## ■ Results:

- Ran 3 ozone injection wells (Aug-Oct)
- Two-month results very promising ...
- Average 60% reduction rate at 30-35 feet radius

## ■ Next Study:

- Test effectiveness @ Dieldrin pesticide plume (OT-16A / SWMU 78)
  - First of its kind!





# *Upcoming Activities*

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- **Shaw AFB Hazardous Waste Permit Modification**
- **Design of Expanded Pump, Treat, & Inject System**



# **Shaw AFB Hazardous Waste Permit Modification**

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***SC DHEC plans to conduct permit mod ... ~Mar-Jun 2013***

- **Purpose of Permit**
- **Resource Conservation and Recovery Act  
Corrective Actions**
- **Why Modify Permit?**
- **Permit Mod Process**
- **Sites Identified for Permit Mod**



# Purpose of Permit



- **Allows for hazardous waste operations**
  - Handling, storage, treatment, and disposal
- **Provides requirements for the **corrective action** of Solid Waste Management Units or Areas of Concern**
- **Issued by SC Department of Health and Environmental Control**



# Resource Conservation and Recovery Act Corrective Actions



Phases	Answers the Question:
Facility Assessment	Is there a problem (contamination)?
*Facility Investigation	How big is the problem?
*Corrective Measures Study	What are the proposed solutions?
Statement of Basis / <u>Permit Modification</u> (Also termed as Record of Decision / Decision Document)	What is the selected solution (Final Remedy)?
Corrective Measures Implementation	How is the solution (Final Remedy) implemented?
No Further Action (Site Closeout)	Is problem solved?

\*Conduct Interim Corrective Measures, as necessary / as applicable



# ***Why Modify Permit?***

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- **List new sites**
- **Propose remedies (Draft Permit Mod)**
- **Provide opportunity for feedback from stakeholders**
- **Select/approve final remedies (Final Permit Mod)**
  - Serves as Record of Decision / Decision Document



# *Permit Mod Process*

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- **SC Department of Health and Environmental Control is Lead Agency**
- **Public Notice (usually runs 45-60 days of public review)**
- **Public Hearing/Meeting (to receive comments)**
- **Issue Permit Modification (after review/consideration of public comments)**



# Sites Identified for Permit Mod



- **Several sites ready for Final Remedy selection:**
  - Deep TCE plume @ Golf Course/Runway N. End (AOC-N / SS-36)
  - Shallow TCE/PCE Plume near Veh. Maint. Area (AOC-O / CG-38)
  - Shallow Fuel Plume @ Runway S. End  
(OU-1 - SWMU-2, SWMU-50, AOC-K / OT-05, ST-14, SS-15)
  - Former Fire Training Area @ NE base boundary (SWMU-59 / FT-01)
  - Fuel Line Leak Bldg 1613 Ramp (AOC-M / ST-30)
  
- **New sites to be listed:**
  - Shallow TCE/PCE Plume near Veh. Maint. Area (AOC-O / CG-38)
  - Six post-1986 Compliance Sites – various locations on base  
(AOC-P thru U / OT-519, OT-520, TU-522, OW-523, SS-524, SA-525)

**\*Note:**

**SWMU – Solid Waste Management Unit**

**AOC – Area of Concern**



# ***Design of Expanded Pump, Treat, & Inject (PT&I) System***

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## ■ **Purpose:**

- Expand co-mingled AOC-F / AOC-H treatment system, to reduce cleanup time in the off-base part of the plume from 180 to 45 years
- Integrate proposed AOC-N treatment system

## ■ **Focus on minimizing off-base “footprint”**

## ■ **Pursue long-term access permissions on off-base construction impacts**

- Anticipate water pipeline trenching along Hwy 441/Peach Orchard Rd, including some residential access roads
- Anticipate extraction/injection well installation inside select private parcels

## ■ **“Concept” design/build plan and progress to be presented at next RAB**

- Subject to change based on access agreements and utilities avoided



# *Intermission*

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- **10 Minutes**
  - Please turn-in question cards



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# *Questions & Answers*



# Closing Remarks

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- **Inputs from Board Members**
- **Action Items**
- **Address questions to Shaw AFB Public Affairs**
  - (803) 895-2019
  - <http://www.shaw.af.mil/library/restorationadvisoryboard.asp>
- **Administrative Records/Information Repository**
  - Contact Shaw AFB Freedom of Information Act Manager, (803) 895-1630
    - <http://www.shaw.af.mil/library/foia.asp>
- **Next Meeting**
  - [Approximately August 2013](#)



**Attachment 2**  
**Questions from the Restoration Advisory Board (RAB), 4 February 2013**

*(\* Questions and answers were paraphrased for clarity.)*

**1. What is the highest concentration of TCE/PCE plume off base and where is it located?**

*The highest concentration is 200 parts per billion (ppb) and located on Mr. Brown's property 150 feet below the surface.*

**2. What is an Interim Measure?**

*When a situation arises that requires immediate attention to clean up a site, an interim measure or temporary remedy gets implemented. In the process of proposing a final remedy for a site, it usually takes time to review and comment on documents, initiate a permit modification (to approve remedy), go through public review and finalize the permit. The interim measure by-passes some of the more formal approval procedures to ensure cleanup actions get started as soon as possible, but does circumvent DHEC's approval authority. In most cases and after regulatory approval, the interim measure implemented may become the final remedy or part of the final remedy selected.*

**3. Has the Permit Modification Process started?**

*No, the next Permit Modification process has not started. Officially the process begins when South Carolina Department of Health and Environmental Control (SCDHEC) mail the notices to the public announcing the permit modification. The notice includes the date, time and location of the public meeting, the location of the documents the permit modification is based upon for public review and who to contact if an individual has questions or concerns.*

*SCDHEC is in the process of updating the mailing list and including Shaw AFB's permit modification into their master schedule as it involves various offices within SCDHEC. SCDHEC plans to initiate the permit modification mid to late March and public meeting would be scheduled the end of April or beginning of May.*

*Sometimes it may take a year to negotiate the permit modification. Once an agreement is reached, then it is presented to the public for review. SCDHEC takes the public's comments into consideration before they finalize the permit modification.*

**4. Are there different categories in a Permit Modification?**

*It is one permit modification. For the benefit of the public, SCDHEC creates a Statement of Basis or fact sheet for each site. Each fact sheet summarizes the required action/decision, whether is it a new site to be added into list, a site with proposed final remedy, or a site ready for closeout requiring no further action.*

**5. What is the time length of the current contract?**

*The time length of the current Air Force contract with URS Corp. is ten (10) years; the period of performance is until September 2020.*