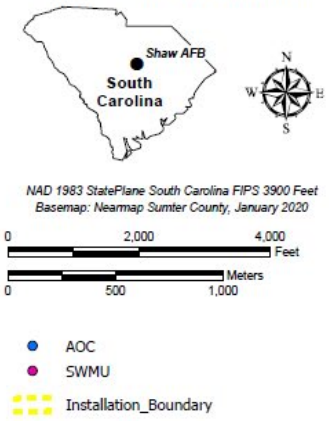
ORC Overview

Continued



AOC – Area of Concern
SWMU – Solid Waste Management Unit

ORC Overview

Continued

- **Period of Performance: Aug 2020 through Aug 2026**
- **Goals:**
  - **Advanced Site Characterization (4 sites)**
  - **Remedial Action – Operation (11 sites)**
  - **Long Term Management (3 sites)**

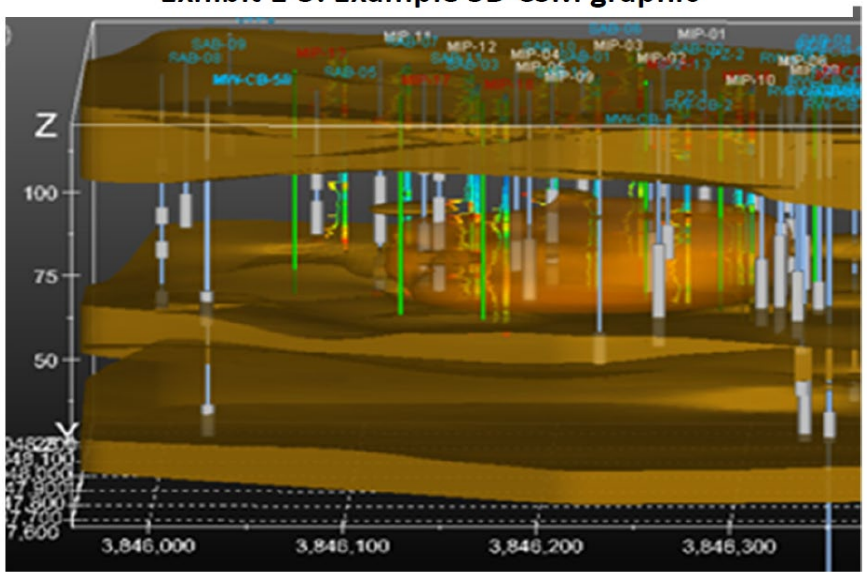
Advanced Characterization Sites

- **"Alternative Objectives"**
- **4 Sites with ongoing Remedial Action–Operation (RA-O):**
  - **OT016B (AOC F)**
  - **SS015 (OU-1/SWMU 2)**
  - **SS035 (SD029/AOC H/AOC L)**
  - **SS036 (AOC N)**
- **Ongoing RA-O at these sites includes:**
  - **Groundwater Treatment Plant for OT016B, SS035, and SS036**
  - **In Situ Chemical Oxidation (ISCO) for OT016B and SS035**
  - **Long Term Monitoring (LTM) and Land Use Controls (LUCs) for all 4 sites**
    - Includes off-base LUCs and bilateral agreement requirements

Advanced Characterization Sites Continued

- Supplemental Site Investigations (SSIs)
- High Resolution Site Characterization (HRSC) at all four sites including:
  - Soil and groundwater vertical profiles
  - Updated Three-Dimensional Conceptual Site Models (3D CSMs)
  - Vapor Intrusion Studies
- Following Completion of SSIs/HRSCs:
  - Remedial Evaluation and Recommendations Reports
  - Updated decision documents as necessary based on findings
  - Corrective Measures Implementation Work Plans

Exhibit 1-3. Example 3D CSM graphic



Advanced Characterization Sites

Continued

- **Groundwater Treatment Plant:**
  - **Pump, Treat, Inject System for water from sites OT016B (AOC F), SS035 (SD029/AOC H/AOC L), SS036 (AOC N)**
  - **Completed modification October 2020 as part of a Time Critical Response Action to augment existing plant with an ion exchange resin system**
    - Treats up to 1,500 gallons per minute of extracted water impacted with PFOS/PFOA above the US EPA Lifetime Health Advisory (HA) of 70 parts per trillion
  - **A phased re-start of the system (supervised by SC DHEC) began in November 2020 and was completed in February 2021**
    - Working as designed, treating water to below the PFOS/PFOA HA Level and Maximum Contaminant Level
    - System is now operational

Remedial Action - Operation

- **9 sites have injection systems installed by PBR contractor as corrective measures:**
  - **CG038 (AOC O)**
  - **FT001 (SWMU 59)**
  - **OT016C (AOC D and AOC W)**
  - **ST018 (SWMU 87) – UST site**
  - **ST030 (AOC M)**
  - **SD033 (SWMU 96)**
  - **DLA Building 1200 (SWMU 98)**
  - **DLA Building 1610/1612 (SWMU 99)**
  - **DLA Building 326 (SWMU 100) – UST Site**

Blue text indicates Response Complete (RC) is ORC Performance Objective for site.

Green text indicates Site Closeout (SC) is ORC Performance Objective for site.

Remedial Action - Operation
Continued

- **2 RA-O sites without treatment systems:**
  - **DP039 (AOC 32/SWMU 101)**
    - Supplemental Investigation and updated risk assessment
    - Develop corrective measures study (presumptive remedy for landfills)
    - Develop Statement of Basis
    - Develop Corrective Measures Implementation Work Plan
    - Implement LTM and LUCs with the approved CMI WP
  - **OT016A (SWMU 78)**
    - Supplemental Investigation for dieldrin (pesticide)
    - Revise Corrective Measures Implementation Work Plan as necessary following Supplemental Investigation
    - Continue LTM and LUCs

Long Term Management

- **3 Landfill Sites:**
  - **LF003 (SWMU 58)**
    - Remove perimeter fence and update Statement of Basis accordingly
    - LUCs and landfill cover maintenance through duration of ORC performance period
  - **LF008 (SWMU 85)**
    - LUCs and landfill cover maintenance through duration of ORC performance period
  - **LF009 (SWMU 52)**
    - LUCs and landfill cover maintenance through duration of ORC performance period

Shaw
Aqueous Film Forming Foam (AFFF) Update

PFOS – perfluorooctane sulfonate
PFOA – perfluorooctanoic acid

PFAS – Per- and Polyfluoroalkyl Substances

Shaw AFFF Update

- **Overview**
  - **Background (Air Force Response)**
  - **Shaw AFB Response**
  - **Next Steps**

Background

- What are PFOS and PFOA?
- CERCLA
- Air Force Response
  - Identify
  - Respond
  - Prevent

What are PFOS and PFOA?

Background continued

Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are synthetic fluorinated organic compounds used in many industrial and consumer products, including: nonstick cookware, waterproof fabric, some food packaging, and the firefighting agent Aqueous Film Forming Foam (AFFF).

- **The US Air Force used AFFF from the 1970s until the late-2010s when the Air Force restricted AFFFs use to fighting fires and changed out fire suppression chemicals in trucks, storage tanks, planes, and hangars.**
- **In 2009, the Environmental Protection Agency issued provisional Health Advisories (HAs) for PFOS and PFOA, followed by Lifetime HAs of 70 parts per trillion (ppt) for PFOS and PFOA (combined) in May 2016.**
- **The US Air Force is responding to PFOS/PFOA because:**
  - ✓ **They have reasonable pathways to reach drinking water sources.**
  - ✓ **They present a potential unacceptable risk to human health.**
  - ✓ **Regulatory standards are evolving.**

What are PFOS and PFOA?

Background continued

The US Air Force is taking aggressive action to address potential impact to drinking water that may be attributable to our firefighting mission.

- **In Jun 2009, DoD established policy and assigned responsibilities for the identification, assessment and risk management of Emerging Contaminants**
- **In 2010, AFCEC began a comprehensive assessment that determined AFFF may have been released at the following locations:**

Active Bases	Fire Training Areas
Reserve Bases	Emergency Response Sites
Air National Guard Bases	Aircraft Crash Sites
Closed Bases	Other release areas

CERCLA

Background continued

Comprehensive Environmental Response, Compensation and Liability Act

The US Air Force's investigation work and mitigation actions are guided by CERCLA regulations (aka National Contingency Plan), the Defense Environmental Restoration Program statute (DERP), and the EPA's drinking water Lifetime Health Advisory (HA) of 70 parts per trillion.

AFCEC is moving forward aggressively in accordance with the CERCLA process to identify, define and mitigate potential impacts.

The CERCLA process:

- Ensures thorough investigation work
- Promotes accountability, community involvement and long-term protectiveness

Air Force Response

Background continued

- **The US Air Force is using a three-step approach to assess the potential for PFOS/PFOA contamination of drinking water and respond appropriately.**

1. Identify
- Determine potential AFFF releases
- Verify releases through sampling
- Determine if contaminant pathways to DW exist

2. Respond
- PFOS/PFOA > Lifetime HAs, provide alternate DW supply
- If PFOS/PFOA < Lifetime HAs, establish monitoring schedule

3. Prevent
- Legacy AFFF disposal
- Transition to new AFFF
- Retrofit fire vehicles