## FINAL TECHNICAL INTERCHANGE MEETING NO. 4 MEETING MINUTES

## B-3 RESPONSE ACTION STATUS, SITE CLOSURE STATUS, GROUNDWATER RESULTS, AND INTERIM REMEDIAL ACTIONS AT AOC-65

## AND INTERIM REMEDIAL ACTIONS AT AOC-65 CAMP STANLEY STORAGE ACTIVITY, BOERNE, TEXAS FA8903-04-D-8675/DELIVERY ORDER 0006

PARSONS 744223.01000

Date:

Friday, 29 September 2006

Time:

10:00 A.M. - 2:30 P.M.

Place:

Camp Stanley Storage Activity (CSSA)

Subject:

SWMU B-3 Bioreactor Work, TO0006 Status

## Attendees:

Attendee	Organization	Phone
Glaré Sanchez	CSSA	(210) 295-7453
Chris Beal	CSSA	(210) 336-1171
Greg Lyssy	U.S. Environmental Protection Agency (USEPA)	(214) 665-8317
Abigail Power	Texas Commission on Environmental Quality (TCEQ)	(210) 403-4064
Sonny Rayos	TCEQ	(512) 239-2371
Brian Vanderglas	Parsons	(512) 719-6059
Julie Burdey	Parsons	(512) 719-6062
Ken Rice	Parsons	(512) 719-6050
Kathy Sokolic	Parsons	(512) 719-6046

Minutes prepared by Kathy Sokolic, Julie Burdey, and Brian Vanderglas, Parsons.

The meeting was directed by Brian Vanderglas and led jointly by Julie Burdey (site closures, future work), Ken Rice (B-3 bioreactor), and Brian Vanderglas (other TO0006 B-3 items, groundwater). The meeting discussions were conducted per the meeting agenda attached to these minutes. All attendees were present for all portions of the meeting.

The goals of the meeting were to:

- Discuss Solid Waste Management Unit (SWMU) B-3 response action status;
- Discuss site closure status and approach;
- Review groundwater sample results;
- Obtain TCEQ and USEPA input on future projects and public meeting; and
- Discuss future environmental program activities.

## INTRODUCTION AND B-3 SITE WALK

All meeting attendees met in the CSSA Building 98 conference room and Brian Vanderglas introduced the meeting and meeting agenda. Slides 1 through 4 were presented.

A short safety briefing was held focusing on appropriate footwear and then all of the meeting attendees went to the SWMU B-3 site so that they could view the installed bioreactor and associated plumbing. Mr. Rice described how the system would work and how the system was assembled. Mr. Rice indicated the security fence posts currently being installed around the bioreactor will be painted yellow. The vehicles then drove past the AST site and discussed the layout and design. The group then returned to the Building 98 conference room.

## **SWMU B-3 STATUS DISCUSSIONS**

Brian Vanderglas reiterated the meeting purpose items listed on Slide 4 and inquired if there were going to be any comments from either TCEQ or USEPA on the TIM #3 Meeting Minutes originally distributed by e-mail on May 23, 2006. TCEQ representatives and Greg Lyssy with the USEPA requested that the minutes be re-sent for their review and/or approval.

Ken Rice distributed a handout describing the ordnance items that have been found at B-3 (attached). Only one of the items found was fused. Slide 5 summarized the 15,200 CY of waste excavated from B-3, and following slides showed pictures of the removal action, B-3 bioreactor installation construction, and some of the UXO items uncovered. Mr. Rice also described how rake teeth were welded to a trackhoe bucket which was used to spread the debris during inspection by UXO technicians. This implement and technique saved time during UXO identification and avoidance support during the removal action.

The bioreactor construction is complete, but the installed delivery system has not been tested because procurement of the pump has not been completed. Mr. Rice indicated that he would rent a pump before the purchased one arrives to test the delivery system before it is covered.

Mr. Vanderglas discussed the Treatability Study and preliminary results (slides 21-27). Early indicators for the system are promising, as PCE and TCE levels dropped to non-detectable levels in the injection well. Additional sampling is planned in October and January 2007. Full desired effects and aquifer conditioning may take up to two years.

## SWMU AND AOC CLOSURES

Ms. Burdey stated that site closures will begin picking back up again (slides 28-34). Ms. Burdey went over the list of closed sites and the plans for upcoming closures. Mr. Rayos asked Parsons to change "delisting" terminology for the sites with no findings to requesting "no further action" instead. Parsons would like to use self-implementation where appropriate to investigate and close remaining Areas of Concern (AOCs) and SWMUs.

Mr. Lyssy inquired about the status of the site-wide Ecological Risk Assessment (ERA) prepared at Camp Bullis and its potential applicability to CSSA. Ms. Power of TCEQ indicated that the Camp Bullis ERA only covered Landfill 08 Site, and was not site-wide, however, she indicated that it would be a good idea for CSSA to try and get the same TCEQ ERA reviewer for the ERA(s) that might be performed at CSSA. Mr. Rayos requested CSSA prepare written request for him to coordinate any ERA at CSSA with the same TCEQ reviewers involved with Camp Bullis, and he would try to coordinate with Maureen Hatfield. Mr. Lyssy also indicated that the USEPA ecological assessment review team would also be interested in reviewing any site-wide ERA prepared for CSSA. Everyone agreed that a site-wide ERA would be a good idea

to address a number of similar sites, but that a more site specific report might be needed for some sites with specific ecological risk considerations.

Ms. Sanchez noted that the contracts are moving from AFCEE to the Corps of Engineers (COE). She asked TCEQ and USEPA if the CSSA QAPP prepared to meet the AFCEE QAPP requirements would be acceptable to both EPA and TCEQ now that the COE was managing the restoration projects, and they indicated that the CSSA QAPP was approved under the H Order and is the governing document for data quality no matter who is managing the work. Ms. Burdey mentioned that the CSSA QAPP has already been specified in the project scope of work.

Ms. Burdey mentioned that Weston will be handling some of the sites at CSSA planned for investigation in the next fiscal year, and Chris Beal described what has been found in these areas to date. The USEPA would like a representative from Weston to attend the next meeting.

Bob Edwards from Mitrerek described the work his company would be doing for CSSA's environmental program. Primarily, his role will be to perform an evaluation of the CSM, technical help with the bioreactor, Well 9 work, and UXO issues if requested. More generally, he will be looking at work done and being done at CSSA, and provide overall technical oversight.

Mr. Lyssy inquired about the ranges at CSSA. After some discussion regarding USEPA's intention to review the status of existing ranges nationwide, and whether the ranges at CSSA might fall under some of those rules was also discussed. The future of the range sites at CSSA remains an open question. Ms. Sanchez agreed to review the status of the five CSSA ranges, and evaluate whether their status needs to be changed or addressed. Mr. Lyssy said that the ranges may not deserve a high priority, but that CSSA needs to start looking into them.

Ms. Burdey discussed AOC 59, which Parsons would like to have removed from further consideration (or "no further action"). No waste has been found, so Mr. Rayos requested that a letter be sent to him documenting that nothing was there (no evidence of activity) and requesting No Further Action. Also, AOC-70 (product storage for pesticides) was discussed. After a power wash and sampling event, the building has been verified to be clean inside, and the building use change can proceed.

## GROUNDWATER

Ms. Burdey discussed the results of the groundwater testing. Concentrations are down off-post, with only the Klabunde well having any contaminants above their MCL. The discussion moved to the new Centex development and the water retention basins for the development. The retention trenches will be near the Klabunde well, which could possibly affect the plume.

It was noted that the "windmill well" was still waiting for a plugging report. Mr. Beal will make an additional attempt to get the report from the well owner. If he is unsuccessful, Ms. Power offered her assistance in obtaining a copy of the report.

A discussion regarding metals results at CS-9 followed. Lead and mercury were detected above the MDL/AL in the rounds of sampling performed after the well had been rehabilitated. Since this is a supply well, CSSA notified Mary Knipfer of TCEQ. The group discussed possible sources of the metals, including an old pump that could be stuck at the bottom. Mr. Lyssy suggested that we try to use a video camera to investigate what is at the bottom of the well.

Additionally, the well will be sampled monthly, along with CS-10 for mercury and lead (using specific methods). Further action will be dependent on results, but the current theory is that the lead will remain while the mercury levels are likely to fall as mercury falls to the bottom of the borehole. CS-9 will be kept off-line until metals levels are below the MDL/AL.

Ms. Burdey continued with groundwater discussions and mentioned that many of the water levels in the wells were down due to the drought, which affects the ability to collect any samples from the Lower Glen Rose Formation wells. The water levels in the wells used to calculate the average water levels in the LGR in the drought contingency plan will be monitored to determine when LGR wells are able to be sampled again. A sampling round will be scheduled after the water levels reach a pre-specified level that would indicate that most of the wells are ready to be sampled. The group agreed with this approach.

Several wells are in the works to be installed to fill in data gaps identified by the LTMO. These will be 2-in wells used only for sampling. Installation is scheduled to begin October 2, 2006.

## PUBLIC MEETING

Ms. Burdey led a discussion regarding the planning of another public meeting to present the activities and status of CSSA's environmental program. The meetings will tentatively be held December 5<sup>th</sup> at Leon Springs Elementary and December 7<sup>th</sup> at Fair Oaks Ranch Elementary (slide #42), with a pre-meeting suggested by Ms. Sanchez on November 15<sup>th</sup>. TCEQ and USEPA representatives will not attend the pre-meeting. Mr. Lyssy mentioned that he would like to make an effort to ensure the new Centex development residents are aware of the plume, and that we should go door-to-door if necessary. Mr. Beal also mentioned that there are new residents of CSSA that should be personally notified about the meeting. Ms. Power would also like to see San Antonio Water Systems on the list of invitees, as they are intending to supply the water for the new housing development.

The topic of Long-Term Monitoring Optimization (LTMO) was discussed for off-post wells. The group decided that LTMO for off-post wells will be introduced at the meeting. LTMO will be addressed as "optimization" during the public meetings. Once the public has had a reasonable opportunity to understand the LTMO approach, and the USEPA and TCEQ are satisfied that the public is agreeable to the implementation of LTMO for off-post wells, CSSA can start pursuing that approach.

A discussion of the format of the public meetings was held. The next public meeting will continue to follow the same format as previous meetings. Two meetings will be held within the same week to give residents from both local communities an opportunity to attend. A booth for several separate topics will be set up with materials, posters, and handouts and residents can communicate and ask questions in an open forum.

Ms. Burdey asked whether the regulators are available at this time to attend the public meeting. CSSA would like USEPA's and TCEQ's input on conducting the public meeting. TCEQ and USEPA were agreeable to conducting the meeting using a booth format and the time frame did not pose any immediate schedule concerns. Mr. Lyssy stated that he is comfortable with the meeting occurring during December 2006.

The necessity of updating the mailing list to include the new residences was discussed. Ms. Burdey explained that residents can be informed through the mailing list or through newspaper notices about the public meetings, or even door hangings left at the homes.

## **FUTURE WORK**

Mr. Vanderglas summarized the future work items that CSSA and Parsons have been discussing. The B-3 O&M will begin soon. Also, the expansion of the AOC-65/Building 90 SVE system is beginning this fall. There will be a deep nested well located directly next to the building as well as several new wells with a new blower. These new wells will be incorporated with reconfigured existing extraction wells into a SVE blower system between the drainage ditch around Building 90 and the fence-line along Ralph Fair Road.

Ms. Burdey expressed that she would like to have another meeting during the ERA development to get everyone involved on the same page. Mr. Lyssy asked whether TCEQ's technical personnel can be included, but Mr. Rayos indicated there is no way to know who will be assigned. Mr. Lyssy indicated that Cheryl Overstreet (USEPA) be included in the ERA process, noting that Cheryl has worked with many of the TCEQ ecological risk staff. Ms. Burdey will contact her to arrange a meeting at a future date.

## **OTHER TOPICS**

There was a brief discussion regarding the chlorine replacement in the WWTP. The SCADA system was also mentioned, with a brief summary of the capabilities of the system, which is also tied into the bioreactor at B-3.

Following the meeting, there was a discussion focusing on the filters and sand-packs for the AST. Ms. Sanchez would like to guarantee the system is prepared for any spills that may occur. Ms. Sanchez was instructed by Ms. Power to discuss the issue with the Stormwater group at TCEQ and also SPCC enforcement personnel at EPA to ensure compliance of the constructed system.

## FOLLOW-UP ISSUES AND ACTION ITEMS

Re-send TIM #3 Meeting Minutes to attendees for approval.

Update the mailing list for the Community Relations Plan (CRP).

CSSA to conduct additional investigation of CS-Well 9. (downhole camera/video and sampling).



## **DEPARTMENT OF THE ARMY**

CAMP STANLEY STORAGE ACTIVITY, RRAD 25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

## Agenda for Technical Progress Meeting Number 04 CDRL B006

Construction of Outfall Reuse System, Aboveground Storage Tank Relocation & Interim Remedial Actions at SWMU B-3 & AOC-65 AFCEE WERC, Task Order 06

Time: Friday, September 29, 2006; 10:00 am to 2:30 pm

Place: Building 98, Camp Stanley Storage Activity

## **Proposed Order of Discussion**

Date & Time	Topic
10:00 am- 10:30 am	Site Tour of SWMU B-3
10:30 am – 11:00 am	SWMU B-3 Status of Removal Action Bioreactor Construction Injection Treatability Results
11:00 am – 11:30 am	Site Closures Current Status Closure Approach moving forward Plan for FY2006
11:30 am – 11:45 am	Groundwater Sample Results Off-post Results On-post Results New well installations
11:45 am – 1:00 pm	Lunch
1:00 pm – 1:30 pm	Public Meeting Schedule and format Topics and Presentation Material (posters) Risk Communication Training Reminders
1:30 pm – 2:00 pm	Current and Proposed Future Remedies & Activities SWMU B-3 AOC-65/Building 90 Miscellaneous (non-TCE/PCE sites) SWMUs and AOCs
2:00 pm – 2:30 pm	Other Topics – AST relocation, WWTP, AOC-65 SVE expansion

## CSSA TIM# 4 Meeting Sign-In

## 9/29/06

Name		Organization	Phone
Kathy	Sokolic	Parsons	512-8719-6046
Bob Edu	iards	Mitretek	210-408-5552
Blaré	Sanche	CSSA	(210)295-7453
SONN	PASS	TOEQ	512.239.2371
6RE6	L4558	USEPA	214 6558312
Ken K	ine /	Parsons	912-719-6050
Shigail	Rower	TCEQ-RB	210-403-4064
Julie	Burdey	Parsons	512-719-6062
Brank	nders as	Parsone	512-719-6059

# Technical Progress Meeting #4

Camp Stanley Storage Activity September 26, 2006 Boerne, TX

## Agenda

- · 10:00 am 10:30 am SWMU B-3 Site Tour
- · 10:30 am 11:00 am SWMU B-3 Discussion

Public Meeting

 1:00 pm – 1:30 pm Schedule and Format

· 11:45 am - 1:00 pm Lunch

Agenda

· 1:30 pm - 2:00 pm Future Activities

 SWMU B-3 - AOC-65

- Topics and Presentation Material Risk Communication Reminders

- Removal Action Status
- 11:00 am 11:30 am Site Closures
  - Current Status

  - Closure ApproachPlan for FY2006
- · 11:30 am 11:45 am Groundwater Results
- On-post Results

- Biorcactor Construction/O&M Injection Treatability Study

- Off-post Results
- New Well Installations

- AST relocation, WWTP, AOC-65 SVE expansion

· 2:00 pm - 2:30 pm Other Topics

- Miscellancous (non-TCE/PCE sites)

## **B-3** Activities



# **B-3** Activities Completed

- 15,200 CY waste excavated from SWMU B-3 and disposed at WMI's Coval Garden Landfill:
  - 13,660 CY of Class 2 non-hazardous
  - 40 CY asbestos material (non-friable) as Class 1 ACM

· Discuss Site Closure Status & Approach

Review Groundwater Results

Plan Public Meeting

Discuss B-3 Response Action Status

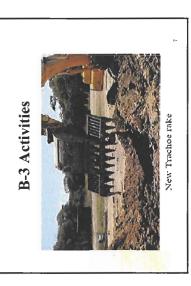
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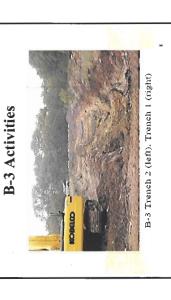
· Discuss Future Environmental Program

Activities

- 400 CY treated benzene containing soil to Class 2 NH
- 200 CY Pb containing soil treated with PIMS to Class 2 NH - 200 CY treated PCE/TCE containing soil to Class 2 NH
  - 200 CY Class 1 NH (lead) soil
- 500 CY Class I NH (TPH) soil

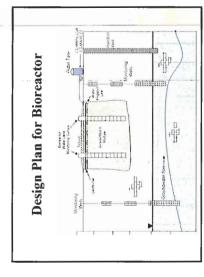
· UXO items encountered during Removal Actions





**B-3** Activities

B-3 Trench 4 (left), Trench 3 (right)



## **B-3 Bioreactor Construction**

**B-3** Activities

• Completed Work

- Pea Gravel/Mulch Blend Backfilled

- Monitoring Sumps Installed

- Water Delivery Piping Installed

• Current/Future Work

- Pump Installation

- Security Fence Construction

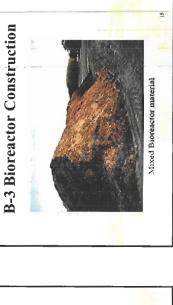
- Startup & then Complete Backfill

- O&M

Linnestone bedding planes



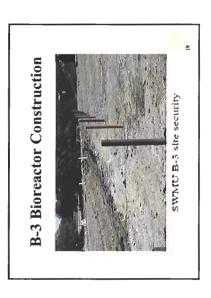


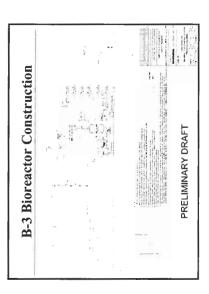










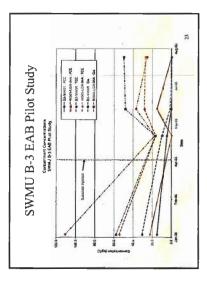


• 100 gallons of Na-Lactate, 2,900 gallons of water, & 170 gallons of emulsified oil injected on April 6-8.

B-3 Injection Treatability Study
• Iodide Tracer Test performed in 3/06

 Post injection sampling in May, June, August with future sampling in October & January 2007.

Samples tested for PCE/TCE, methane, ethane, ethene, TOC, Cl., fatty acids, iron, sulfates, & nitrate/nitrite.



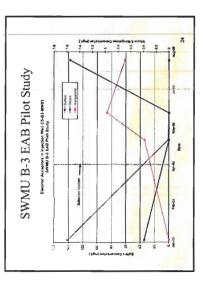
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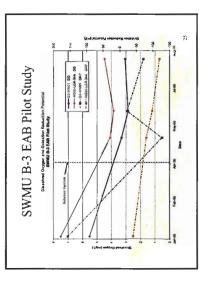
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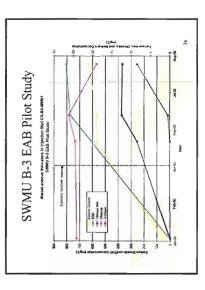
SWMU B-3 EAB Pilot Study

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## Status Summary

## 84 Total SWMUs and AOCs:

43 Closed

**SWMU and AOC Closure Status** 

- 4 RRS1 Closure or Delisting Requested
  - 37 Remaining Sites

# SWMU B-3 EAB Pilot Study Summary

- Contaminant concentration data indicate that PCE and TCE are being degraded to cis-1,2-DCE.
   Dissolved oxygen and redox data indicate that system is reducing and but not highly anaerobic.
   Increase in DO and ORP noted after rainfall (recharge) in June. Returned to pre-rainfall levels in 1 week.

- Sulfate data suggests reduction to sulfide is occurring.
   Forrous iron data indicates that reduction of ferric iron to ferrous is occurring.
   Increases in carbon dioxide and methane suggest that biodegradation is occurring.

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3-30 <sup>(1)</sup> AOC-41 <sup>(3)</sup>	ADC-40"	AO	AC	A	¥	Ä			å	۳.	۱۳			-

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# 4 Sites with Outstanding Issues

- AOC-55 and SWMU B-29: RRS1 Closure requested, pending
- AOC Coal Bins and SWMU B-14: Delisting approval pending

37 Remaining Sites ADC-48% ADC-58% ADC-58% ADC-58% ADC-58% ADC-58% ADC-58% RMU 1 ADC-58% RMU 2 ADC-58% 1 mengaconfluencides have; name; 2 hu ma hvvme; 1:64e Siles hghlighted in blue are part of current work scape.

# Overall Approach to Closure

- Use of self-implementation (removal actions) to bypass APAR requirement where appropriate
   Post-wide or site-specific Ecological Risk Assessment to establish Eco PCLs for all investigations
   Management of contaminant plume in groundwater
   Combining proximal, similar sites into a single APAR

# Other Recent Actions

SWMU B-20 used for firing range berm Soil piles at SWMU B-24 and

Conduct investgation (geophysical survey, shallow borings on gnd) Establish PCLs and compare results

SWMU and AOC Project

Parsons' 2007

Establish PCLs and compare existing results Conduct AOC-73 investigation (geophysical survay, sampling) Collect additional hampeles to define the extent at other siles

AOC-73, B-2, B-8, B-20/21, B-24

restigate polential additional trenches at B-24 epare RACR or APAR (one combined report for 5 sites)

Collect additional samples, if nacessary Prepare RACR or APAR (one combined report for 3 sites)

Establish PCLs and compare exsting results Pressure-wash I-1 and collect rinsate samples

1-1, AOC-67 & AOC-68

Prepare APAR

AOC-69

- Sampling at AOC-59, potential delist?
  - Pressure-washing and sampling at AOC-70, potential delist?

**Groundwater Monitoring** 

Status and recent results

36

## Groundwater Monitoring

- Funded for four sampling events (Sept-06, Dec-06, Mar-07 and June-07
- -LTMO frequencies used on-post only
- · One annual report (end of 2006) and summary reports each quarter
- Semi-annual Westbay well sampling and outfall 002 and 004 sampling included
- One annual Fact Sheet for Groundwater Monitoring and one miscellaneous fact sheet, as needed

## Groundwater Monitoring Off-Post Results

- 59 off-post wells have been sampled in the past
- Frequency for sampling either quarterly or annually, based on DQOs and previous results
- Wells above reporting limits for VOCs in 2006:
- RFR-10, RFR-11, LS-2, and LS-7 (wells already equipped with filtration system)

## Groundwater Monitoring CS-9 Results

- Lead and mercury detected in CS-9
  - Well CS-9 is currently unused
    - Reported to TCEQ PWS
- Monthly sampling of CS-9 will be conducted for the immediate
- CSSA is investigating installing a new drinking water well
- Data validation is still being conducted on the results

## Well Installations

(scheduled for October 2, 2006)

- Well locations selected to further define the plume:
- -To the north-northeast (around MW16 well location)
- -To the west toward residents along Ralph Fair Road
- (Jackson Woods subdivision)
- -To provide a better understanding of the potentiometric surface and better define faults

## Groundwater Monitoring On-Post Results

- · LTMO implemented on-post as of Dec '05
- Most LGR wells are sampled semi-unnually
- Most CC and BS wells are sampled every two years
- In 2006, regional water levels continue to decrease and some LGR wells were unable to be sampled in June and September 2006
- Drought affected wells (CS-MW4-LGR, CS-MW5-LGR, CS-MW11B-LGR, CS-MW18-LGR, CS-MW10-LGR, CS-MW12-LGR, CS-MW12-LGR, CS-MW12-LGR)
- Once water levels recharge to above pump depths, CSSA would like to conduct a one-time sampling of all LGR wells

# Public Meetings-December 2006

- Tentative dates
- Leon Springs Elementary, December 5th
- Fair Oaks Ranch Elementary, December 7th
  - Draft posters to CSSA October 31, 2006 Issue CSSA News Release in November
- Invitation Letter to Public Officials in November - Publish in local newspapers
  - · Preparation Meeting tentative November 15th
    - Send invitation to members of mailing list

Consider postcard invitation to new residents (Centex development, etc.) to join CSSA mailing list

# Public Meeting in December 2006

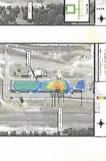
- Topics for booths/posters; - History and Mission
  - Groundwater Program
- Groundwater Sampling
- Contamination Cleanup - Cleanup Activities
- Bexar Metropolitan and San
  Antonio Health District
  have both indicated they
  will participate



## Planned Future Activities

- SWMU B-3 O&M
- AOC-65/Building 90
- Expanded SVE & Continued SVE
  - Groundwater Study at AOC-65?
- · Miscellaneous Environmental Programs

## AOC-65 SVE Expansions





Other Topics

AST Relocation
 WWTP

- Future SWMU B-3 Efforts
- Continued O&M/Data Collection
- Guidance to group similar sites
   Guidance for ecological risk assessments

## Conclusion

· Questions or Concerns



# Proposed Future CSSA Work

- Determine percolation rate, operating parameters, treatment rate, impact on underlying GW, etc.

   Future SWMU B-24 sifted soil

   Recycle sifted soil into new small arms firing range berm at CSSA Range Management Unit 1

   Technical approach for TRRP site closure