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MINUTES FROM ORLANDO PARTNERING TEAM MEETING ON 13 JULY 2000 NTC  
ORLANDO FL  
7/13/2000  
NAVFAC SOUTHERN

**ORLANDO PARTNERING TEAM - MEETING MINUTES**

Date: 13-14 July 2000  
 Location: Atlanta  
 Team Leader: Steve Tsangaris  
 Recorder: Rick Allen  
 Gatekeeper/Timekeeper: Dave Grabka  
 Facilitator: Stephanie Fraser-Beekman (email: drsbeekman@aol.com)

**ATTENDEES****OPT MEMBERS:**

Rick Allen  
 David Grabka  
 Wayne Hansel  
 Steve McCoy  
 Nancy Rodriguez  
 Steve Tsangaris

**SUPPORT MEMBERS:**

Barbara Nwokike  
 Earl Bozeman (Tier II)

**GUESTS:**

Rick Arnseth (TtNUS)  
 Mark Salvetti (HLA)

**HANDOUTS DISCUSSED AT THE MEETING**

1. UST/IR Update and Status - May 2000 (Rick)
2. SA 2, SA 52, OU 3 tag maps (Steve M.)
3. Myers-Briggs slides (Stephanie)
4. KmnO4 pilot study update slides (Mark Salvetti)
5. OU 4 Groundwater Treatability Studies, In-situ Chemical Oxidation Pilot Study (HLA)
6. SA 35, SA 40 tag maps, lead or arsenic sample results (Steve M.)
7. SA 36 tag maps for groundwater contamination (Steve M.)
8. SA 36 Groundwater Investigation slides (Steve M.)
9. Piping plan for OU4 extraction wells (Steve T.)
10. Work Plan for Enhanced In-Situ Bioremediation of Chlorinated Solvents Via Vegetable Oil Injection at SA 39, NTC Orlando (Steve T.)
11. SA 2 Treatability Study, ORC Injection, Herndon Annex (Rick Arnseth)
12. OU 2 tag map (Steve M.)

**13 July 2000****CHECK-IN**

Dave, good things balanced by the bad; our welcome to Stephanie, who reports she was an Army brat; Rick Gladiator, trip to Maine, ailing cat; Steve M ripped off deck, wined/dined with exwife; Nancy anticipates PE results, has new car fever; Wayne, trip to New York, Boston, and Maine; Steve T. trip to Ashville, white water rafting; Mark S's son Danny won town championship in minors, trip to ME to see Aegis cruiser in Bath

**Action Items**

Went through action items (see revised list at end of minutes).

## UST/IR/Transfer Updates

UST/IR: See handout (updates are bold/italicized in the handout) and action items developed during discussion.

### Transfer:

- VA asked to lease warehouse space at Area C; SDIV will recommend approval to DOD for transfer; VA plans to build a drug distribution center
- SA 27, 33 deeds for transfer completed, transfer complete to Developer

### Tier II:

- Tier II wants another joint meeting; Tier II will issue a questionnaire to Tier I to plan the agenda
- Metrics discussion: 5 to 6 metrics to measure progress; point out value of partnering; look at existing tracking systems instead (use systems already in place)
- Tier II minutes are posted on EPA Region IV web site

## IDW Disposal

- TT disposed of 39 drums/80 empties in June, CH2m hill disposed of 14 in June
- Today (7/13/00), TT will dispose of 65 drums
- By end of July TT will dispose of an additional 20 drums
- 48 drums will be left at end of this month
- 43 empties at Area C to be used by CH2Mhill
- Steve will issue a revised copy of drum summary after 65 drums disposed of today

## Training

Stephanie presented the Myers-Briggs Type Indicator to the Team.

## SA2, SA52, OU3 Monitoring

**SA 2** Benzene decreased in well 13C from 87 ppb to 23 ppb, and increased in well 8C from 19 ppb to 49 ppb.

**SA 52** Dieldrin increased in Well 13 from 0.19 ppb to 0.43J ppb.

✓ **Action Item: Steve check with lab to see why PQL for Dieldrin at SA 52 apparently too high (Dieldrin should not have been a J value at 0.43 ppb).**

**OU 3** In SA 8, several wells have decreased As concentrations, while Well 08-11 has the highest As concentrations seen yet (959 ppb). Nothing of interest going on at SA 9. No exceedances in the drive point wells in SA 8. Dave wants hardness testing of lake water.

✓ **Action Item: Steve will add hardness testing to sampling plan at OU 3.**

**Treatability Bench Study** Batch sorption results. Predominantly arsenite vs. arsenate (70/30). Bench studies used Iron modified zeolite; surfactant modified zeolite; activated aluminum (used

widely in water treatment plants on the surface). Collected water from SA 8, well 08-11; lab spiked samples at 5 As concentrations from 350ppb to 445 ppm. Activated alumina had highest As sorption, from 350 to less than 2 ppb; iron modified zeolite was next, reduced groundwater from 350ppb to 39ppb; surfactant modified zeolite had poor performance, especially at low concentrations.

Batch results will result in recommendations for column tests; will test activated alumina and iron modified zeolite, use synthetic groundwater spiked with As(III) and herbicides; should have column tests done within a month or two.

Dave wants to have retardation factor determined through bench scale testing to see how fast the As moves through the aquifer.

**Action Item: Steve McCoy will collect soil this week at OU 3 to determine KD.**

#### **OU 4 KmnO4 Pilot Test**

Issues: well clogging; excess solids on cartridge filters. Shallow VOCs: excellent reduction (5000 ppb to 800 ppb). Shallow travel times slightly faster than predicted; color is a good indicator of the health of the effectiveness of the pilot study, as is conductivity. Organic carbon in deep portion of aquifer may be reason the deep zone is not being cleaned up as effectively. Conclusions: (1) can maintain groundwater circulation cell; can treat VOCs above hard layer, slower treatment below; 4 grams/liter KmnO4 effective, may be able to reduce further. FS Study revisions: replace recirc wells with extraction system, update KmnO4 costs/design; finalize FS response to comments, begin proposed plan, issue (final) pilot study report; system shutdown week of 7/24.

#### **SA 35, SA 40, SA 54 Soil Sampling**

**SA 35.** Sampling for lead at Area A north of Bldg 2079, 3 samples below residential SCTL; can establish a "clean" line at this site.

**SA 40.** Have established "clean" line on east, south, not yet on west side (analyzing today on west side).

**SA 54.** Delineation is nearly complete on site, analyzing two samples today to complete "clean" lines to NE and SW.

**14 July 2000**

#### **SA 36 Investigation**

No soil contamination following soil removal. Groundwater TCE contamination is similar to prior sampling events. Groundwater flow is different for "A", "B", and "C" wells.

Conclusions: insufficient groundwater data to determine flow direction and gradients across site.

Recommendations: install 2 "A" wells, 4 "B" wells, and 4 "C" wells at 4 locations to provide upgradient/downgradient control on contaminant flow. OPT approved proposed locations of additional wells.

**Action Item: Dave recommended that Steve produce lithologic sections at SA 36.**

#### ***OU 4 Treatment System Update***

Steve handed out the Piping Plan for OU 4 Extraction Wells.

#### ***SA 39 IRA***

Steve handed out the SA 39 work plan for Enhanced In-Situ Bioremediation.

#### ***SA 2 ORC Treatability Study***

TT proposes bench scale testing to determine if ORC will be effective (are sufficient nutrients present?). If "yes", ORC treatment will focus on "source" area and in the zone 40-60 ft bls. Treatment zone will take place on Navy property (not across ditch). Approx 300 injection points (assume 15 foot centers between points along lines 20 feet apart) will be required. Organic carbon, methane will also compete for the ORC with benzene. If study starts immediately, bench scale results back early Sept., work plan prep/review, mobilize DPT, ORC injection start Sept 20, finished by end of October; total cost of \$207K (add \$40K and 3 weeks for 10 foot centers). Beware of the benzene "spike" during the early portion of the study!

#### ***OU 2 DPT Sampling Plan***

SE corner of OU 2 has TCE of 1200 ppb (location G262, the focus of additional sampling). There is another PCE hit of 180 ppb at G24, further north on the east boundary. Steve proposed two lines of DPT explorations in the intermediate zone, one north and one south of the highest TCE hit. Steve also suggested the team might consider additional DPT explorations along the east boundary west of pushes G22 to G26. The team decided to install the additional explorations just south and east of the landfill cell where soil gas results had hot spots.

**Action item: Steve will email us proposed locations for additional DPT explorations at OU 2 during the week of 7/17.**

#### ***SA 39 SSR Review Comments***

FDEP/EPA will provide review comments ASAP. EPA wants signature block.

#### ***Critique, Agenda, Close-Out***

+'s	Δ's
Dinner at Atlanta Fish Market	Dave got crapped on by the birds at lunch
New facilitator – welcome Stephanie!	Cold meeting room
Metrics mired at Tier II	Metrics mired at Tier II
Moving ahead with pilot studies/remediation	
Good meeting location – easy access	

2 sets of minutes in 1 week!	
Got thru agenda	

***Future Meeting Schedule***

August 16 and 17 – Orlando

October 3 and 4 – Oak Ridge

November 15 and 16 – Orlando

## ACTION ITEM SUMMARY July 2000

### Action Items (Carryover)

1. Steve M., Steve T., and Rick will coordinate to complete schedule. Final will be distributed to the OPT for site management, business planning purposes, and developer coordination. Final will be uploaded to David Pullman/CH2M HILL to compile in the master schedule for SouthDiv. **Status:** Ongoing
2. Steve: When data are available, revise SA35 SSR, update report and revise as per comments received during the meeting. **Status:** Ongoing
3. Steve: Update SA40 SSR as per comments received during the meeting and Dave's recommendation for a risk-based remedy. **Status:** Ongoing
4. Wayne talk to property owners at SA 2 about contaminated groundwater. **Status:** On hold
5. Steve M: TtNUS to initiate bench-scale treatability studies to remove As and other contaminants from OU 3 groundwater. **Status:** Ongoing
6. Dave: Provide examples of sites where only secondary standards are being remediated and to present rational for rejecting the proposed SA 18 background wells. **Status:** Incomplete
7. Nick: Send BAP data from SA 16 ditch to Dave. **Status:** Ongoing.

### Action Items (New)

1. Steve M.: check with lab to see why PQL for Dieldrin at SA 52 apparently too high (Dieldrin should not have been a J value at 0.43 ppb).
- ✓ 2. Steve M.: add hardness testing to sampling plan at OU 3.
3. Steve M.: collect soil this week at OU 3 to determine KD.
4. Steve M.: produce lithologic sections at SA 36.
- ✓ 5. Steve M.: email us proposed locations for additional DPT explorations at OU 2 during the week of 7/17.

(Sorry, Steve!)

**ORLANDO PARTNERING TEAM  
AGENDA  
August 16 and 17, 2000 – Orlando, FL**

Team Assignments		Support	Expected guests
Team Leader:	Rick Allen	Barbara Nwokike	
Recorder:	David Grabka		
Gate/Timekeeper:	Wayne Hansel		
Facilitator:	Stephanie Fraser-Beekman		
Tier II Link:	Flip Altman		

Time	Subject	Objective	Lead
<b>Wednesday – August 16, 2000</b>			
1:00	Check-In, Action Item Review	Administration	RA
1:45	UST/IR/Transfer Updates	Information transfer	RA/WH
2:30	SA 35, 40, 54 Update	Information transfer	SM
3:00	<b>BREAK</b>	Leg stretch	
3:15	OU 1 Monitoring	Information transfer	ST
3:45	OU 3 treatability (column studies)	Information transfer	SM
4:15	RAB prep (OU 4 retrofit, SA 39 IRA, SA 2 ORC)	Brainstorm/Discussion	WH
5:15	EOD		
<b>Thursday – August 17, 2000</b>			
8:00	Icebreaker	Wake up	RA
8:30	OU-4 design comments	Information transfer	ST
9:00	OU 2 DPT (including remedy selection)	Information transfer/Decision	SM
10:30	<b>BREAK</b>	Recycle	
10:45	OU 3 IROD response to comments	Information transfer/decision	RA
11:30	SA 17 update	Information transfer/decision	ST
12:00	<b>LUNCH</b>	Administration	
1:15	Training	Get Smart	SFB
2:15	IDW update	Information transfer	SM
2:45	OU 4 permanganate study, costs of FS for OU 4	Information transfer, discussion	RA
3:15	<b>BREAK</b>		

3:30	SA 2 treatability study update (bench scale tests)	Information transfer, discussion	SM
4:00	Checkout/Agenda		RA
4:45	Adjourn	Travel Safe	