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CONFIRMATION OF: CONFERENCE ☒ TELECOM ☒ OTHER:	DATE HELD: DECEMBER 7 - 8, 2009 DATE ISSUED: DECEMBER 17, 2009 RECORDED BY: ALEX THOMAS PLACE: WESTMARK HOTEL FAIRBANKS DOCUMENT CONTROL NO:
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SUBJECT: TAKU GARDENS FFA MEETING REVIEW OF ACTIVITIES

PARTICIPANTS - FAIRBANKS:

TERRY HEIKKILA - JACOBS	DAVID BEISTEL - DPW	JACQUES
SARAH BELWAY - JACOBS	JOSEPH MALEN - DPW	
ALEX THOMAS - JACOBS	GENE CLARE - DPW	
DAVE FRANSDEN - JACOBS	MARILYN GAUTHIER - CH2M HILL	
ROBERT BROCK - USAED	JEREMY BLEI - CH2M HILL	
MESERET GHEBRESLASSIE - USAED	DENNIS SHELTON - CH2M HILL	
		DEB CAILLOUET - ADEC MARTY BREWER - ADEC JANICE WIEGERS ADEC (08/12) ANN FARRIS ADEC (08/12) JACK GUSMANO - EPA FRANKIE JEWEL - TECH LAW

TELE: NONE

General Note: Please number the pages - either use "RB" for Robert Brock or change his name to Bob Brock

ACTION REQ'D BY	MEETING NOTES
	ITEM
	<p>December 7 - 12:45</p> <p>Joe Malen (DPW) - introductions/ agenda discussion</p> <p>Sarah Belway (Jacobs) Presentation of Spring - Fall 2009 Field Activities (Power point presentation available on ftp site) - <i>provide copy w/ this document (PDF)</i></p> <p>Following topics presented <i>add'l work completed in 09</i></p> <ul style="list-style-type: none"> ▪ Additional Sampling <i>Completed in 09</i> <ul style="list-style-type: none"> • Surface Soil Sampling • Sound Berm Sampling ▪ PCB Foundation Removal and Sampling <p><i>JM - Note that samples in PCB area were taken from native soil. I.e not from gravel fill under the foundations and side walls</i></p> <p>JG - Question: To confirm; was sampling in PCB area for a new event? And were other events (Surface soil sampling and sound berm) to fill data gaps?. Also note that sound berm samples were taken from the sides and not from top during 2009 sampling.</p> <p>JM - Correct. Also during the PCB sampling if there was an area where potential contamination was noted in the PCB area the 10% full suite sample was taken there. <i>ie stressed soil, smell, or presence of drums etc</i></p> <p>JG - Question to confirm 10% full suite was because PCBs were the only COC there</p> <p>JM - Yes correct.</p> <ul style="list-style-type: none"> ▪ EM61 Investigation (B11, B15, B35) <p>SB - Explanation of timeline of Building 11 Excavation. Scrap metal piles were removed from the area of excavation in 2007 which were understood to be the source of the EM61 hot spot in that area. However after additional investigation in 2008 revealed that the total amount was not removed further investigation was completed in at Building 11 in 2009.</p>

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	<p>Note that we did not find any MEC, but 6 empty crushed drums were removed during the investigation.</p> <p>Final geophysical ^{m2f} shown after all investigation activities presented.</p> <p>JM – Where did the well come out at the Building 15/17/19 investigation (pointed to on geophysics map. Explained to group that MW07 was removed during debris removal. <i>sampled, found non-detects all COLs then</i>)</p> <p>TH – explained that we do have more recent data however not shown here. Where ever we excavated we collected samples and did a geophysical survey</p> <p>JG – Was the anomaly at the Building 35 investigation due to backfill material?</p> <p>JM – Yes from B48 backfill</p> <ul style="list-style-type: none"> Groundwater Monitoring – Summer/Fall <p>SB – 33 wells were monitored <i>in the spring + 2009 Temporary probes & Cas wells</i></p> <ul style="list-style-type: none"> TCE Delineation (Geoprobes, Wells) – <i>Provide some details how many points; which</i> B9 POL Investigation <i>Analytical methods used - where there any exceedances were</i> <p>SB- POL was found during ditch drainage activities, fuel line potential source for the contamination. (shown on geophysical map of area)</p> <p>SB – Excavation 6 – 15 ft (groundwater)</p> <p>Did not reach elevated PID until at least 3 ft bgs</p> <p>JM – Noted that whole area when they were building quarters encountered a lot of diesel smell in soil. Amanda Stark, Spill coordinator ADEC, noted that during construction of houses in this area that it was not surprising to find. Did not stop construction because of smell/odor. Noted that they found 1-2" pipeline all over the base. Not also surprising that there was not a map for it because it was a temporary installation (Quanset huts etc.) <i>is the</i> Found another section of pipe during construction of drainage ditch. We know there is still petroleum there – will be addressed later.</p> <ul style="list-style-type: none"> 1,2,3 TCP Delineation (Gore Modules, Wells) – <i>details how many points, approx spacing</i> B49 Investigation <i>what analytical method - Results - Include picture</i> <p>SB- Description of process, pictures and number of drums. In general approx 10 ft below foundation. Drums centered underneath garage.</p> <p>JM – 2500 sq ft includes ramps side walls (to reduce excavation etc) or sloughing. Air vents for blowing in warm air to prevent freezing.</p> <p>Noted that this was the only building that we observed drums underneath foundations.</p> <p>Also when you look at distance between drums and pit run and undisturbed soil; if that is where the contractor stops when he excavates then he would not have seen the drums when he was backfilling. Unlikely that allegation that he was building on top of stuff is true</p> <p>JG – How far underneath did the drums go?</p> <p>SB – The last drum was 15 ft in from the front of the garage.</p>

Is this the depth to bottom of excavation? please clarify

and approved letting the contractor go back to work.

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	<p>draft?</p> <p>JB It was but in appendix and August data wasn't there yet.</p> <p>AF – Did you do 10 units. 5 units for radon and 10 for VOCS?</p> <p>JM – Yes did each different types of units.</p> <p>MB – Did those five units correspond with exceedances? <i>be specific on what we call exceedances</i></p> <p>JB – Picked buildings based on previous results based on VOCs and geographic area. All of the houses that had exceedances</p> <p>MB - Soil gas results – were all of those houses sampled for indoor air?</p> <p>DS - No as the detects were discovered in august we were not able to compare.</p> <p>AF - Was there a difference in the housing square footage between the units?</p> <p>JM – Not very much in area but a slight difference in configuration.</p> <p>AF - Was there a difference in construction?</p> <p>JM - Dec 05 foundations laid – and housing built the next year. All of similar construction slab laid etc. <i>on-grade etc.</i></p> <p>AF -What method did you use for Radon ?</p> <p>DS- University of California- Sintilation Cell Counting. – everything compensated for decay. (1/2 life of 8 days).</p> <p>DC – Is there a radon concern in these houses?.</p> <p>DS- No 5 pCuries/L is alarm level for indoor air and we are an order of magnitude different for indoor air.</p> <p>DS- Sub slab to indoor air attenuation EPA figure (AEHS Spring 2008 Dan Diego CA Vapor intrusion workshop)</p> <p>DS- In order to use VOCs you have to have a big sub slab concentration or attenuation factor <i>SOURCE STRENGTH</i>; it's difficult to calculate at Taku <i>BECAUSE</i> (there are not big concentrations).</p> <p>DS- Presented Guidance for the Evaluation and Migration of Subsurface Vapor intrusion to indoor air</p> <p>Discussion/presentation? Why not just use VOCS to develop a site specific Attenuation factor?.</p> <p>DS- The conclusion in the revised RA will include this.</p> <p>EPAs teirs approach DEC default attenuation factos or Q1 and part of Teir 2 Site Specific attenuation factos using radon as part of teir 3</p> <p>JM – Can we put a statement about interconnection between groundwater and soil gas for TCE?</p> <p>JB- Yes will get into the updated conceptual site model.</p>

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	<p>JG – Can you incorporate the path (presentation) into the RI – the verbal discussion of the result?</p> <p>AF – Do you have monitoring wells near houses – (yes water and soil results).</p> <p>MG - Max TCE 15 ppm in groundwater. Not high enough to present a big source to indoor air.</p> <p>JG – This would also affect FS – to show that there is not a link between GW and indoor air otherwise options you would choose that are not active don't want to give the impression that you have a lingering source of indoor air</p> <p>JV – Zero in and make arguments about specific buildings. Discuss why you have Sub slab concentrations here but not in subslab etc.</p> <p>DS – We have to be careful not to give the impression that one house is worse than the other, to avoid perception of houses being better or worse than another</p> <p>AF – Are you having a lot of public interest?</p> <p>JM – We are being told by the command group that there will be interest. People are comfortable. DPW told command group that there will be sub slab monitoring</p> <p>AF – Agree with Janice that looking at highest concentrations would help with public concentration. <i>perception</i></p> <p>DS – We will focus on highest concentrations in Nature and extent but calculate the risk for all homes.</p> <p>MB – Would like to tell the story in the RI as it wasn't presented in first version. <i>? } ?</i></p> <p>DS – We had criteria on how to select the 10 buildings in RI. <i>?</i></p> <p>MB- A lot of difference in how military people question homes. We can't presume that the public is going to respond the same as non military. <i>?</i></p> <p>JM – Public presence <i>interest (on Post)</i> is high and gets asked a lot of questions. <i>Some curiosity downtown when volunteering</i></p> <p>MB- You need to tell the whole story.</p> <p>DC – If you give the evaluation of <u>worst case scenario</u> and it was not bad then people will understand better.</p> <p>DC- Sampling events should be presented clearly. Data needs to be organized by building not event. Same with groundwater. Would be easier to see trends etc.</p> <p>DS – Are there any red flags for you (ADEC) that come up for using Radon?</p> <p>ADEC – Worse case – was indoor air sampled in worse houses to confirm that attenuation factor is appropriate? Better to know this information before hand. You should bring discussion of background air into general discussion.</p> <p>DS- We are trying to make generalization across 110 buildings.</p> <p>ADEC – Explain that you are using multiple lines of evidence. Radon sampling is one line of evidence.</p> <p><i>*</i> DC – If you took top five exceedances and did indoor air on them it would help you prove that</p>

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	<p>your exceedances are not above risk levels.</p> <p>DS – Chances are that indoor air may have been sampled <i>WHERE WE HAVE WORST-CASE SUB-SLAB TARGET LEVEL EXCEEDANCES. WE WILL CHECK.</i></p> <p>JW ADEC -Never comparison to target levels <i>? Dennis</i></p> <p>DC You are calculating risk according to 30 year occupancy. Need to point that out that it is ultra conservative. That the occupancy is not going to be any more that six years. If you take worse building on all lines of evidence – then calculate the risk over 30 years and 6 years to prove that with as many ways that it was safe <i>I DON'T UNDERSTAND CONTEXT. SEEMS OUT OF PLACE...</i></p> <p>AF- Attenuation factors are building characteristic driven (not chemical) <u>and therefore this needs to be taken out.</u> <i>? Dennis Respond Please</i></p> <p>ADEC – we need to be convinced that there is not a risk (we want to make this go away) but this needs to be presented in RI <i>NOT SURE WHAT NEEDS TO BE "TAKEN OUT".</i></p> <p>JW – What are your thoughts on Chloroform – DS looked at results – some could have been analytical variances who know, – pretty much everywhere. <i>Dennis was this all?</i></p> <p>JG - Is it a construction (OSHA) or waste issue? This is something to think about <i>CAN'T RECALL IF THIS WAS ALL THAT WAS SAID DURING MEETING.</i></p> <p>Break</p> <p>10:20 Returned to general discussion of Soil gas</p> <p>DC – We compared results, there did not seem to be any reproducibility Scatter in results no repeatability??</p> <p>JB- 10% of data does go through level 4 validation. Data is validated and as far as we can tell the data is good.</p> <p>MB- ADEC – knows that we will be looking at repeatability in the revised RI.</p> <p>MB- Vapor intrusion new to all of us.</p> <p>MB - B12 has the highest hits on Sub Slab – but does not have indoor air. <i>Alex - was there a response on tape?</i></p> <p>MG – We do have results from Building 14. <i>Dennis Please provide response</i></p> <p>ADEC- We really are going to have to have the worse case scenario. If we have to collect more data then there will be less questions. Now that we have more data you have to look at the risk characteristic. Assume that highest sub slab makes highest indoor air.</p> <p>ADEC - Maybe you need to collect more indoor air samples?</p> <p>JG – Are we going to discuss timetable? I am more concerned about the real risk of GW. Potential real risk to drinking water. Drinking water risks <i>Alex Please check tape for complete sentences.</i></p> <p>Pick out sentry wells so that the water does not reach the drinking well. Have we delineating the plume?</p> <p>JG – At least commit to picking out sentry wells to see if we have a problem.</p> <p>JM - We see that as the next step after we get the data dump in January. Know that the Army has included those wells (TCE delineation etc) so now monitoring 42 wells. Don't necessarily</p>

I think this was JG