

**APPENDIX E.**  
**Field Change Requests**

### Field Change Request (FCR)

FCR NO. RVAAP-SCF-001

DATE INITIATED 02/06/2009

PROJECT RVAAP Deep Bedrock Well Installation in the Basal Sharon Conglomerate

CONTRACT NO. W912QR-04-D-0028

#### REQUESTOR IDENTIFICATION

NAME: Amanda Trenton

ORGANIZATION: SAIC

PHONE: 330-405-5822

TITLE Geologist

SIGNATURE

*Amanda Trenton*

#### BASELINE IDENTIFICATION

BASELINE(S) AFFECTED  Cost  Scope  Milestone  Method of Accomplishment  
AFFECTED DOCUMENT (TITLE, NUMBER AND SECTION) Sampling and Analysis Plan Addendum No. 1 for the Deep Bedrock Well Installation in the Basal Sharon Conglomerate

DESCRIPTION OF CHANGE: Addition of "sparks from welding" to Table 3-1 Hazard Inventory under Fire and explosion. Addition of an AHA line item to discuss hazards and precautionary measures for welding under the "Soil Boring, Soil Sampling, and Monitoring Well Installation Using Air Rotary or Auger Drilling" section of the SSHP within the SAP. Please see attached addendum to the SSHP.

JUSTIFICATION: This task was not anticipated at the time of the original hazard analysis. Since this task has been added to the project a proper AHA for this task must be included within the SSHP.

IMPACT OF NOT IMPLEMENTING REQUEST: Identification and assessment of hazards associated with this task and procedures/ required controls for performance of this task would not be properly documented and available for reference.

PARTICIPANTS AFFECTED BY IMPLEMENTING REQUEST: Since field activities, including welding activities have not occurred yet, no real change will be noticed by the field crew.

COST ESTIMATE (\$) 0

ESTIMATOR SIGNATURE

*Amanda Trenton*

PHONE 330-405-5822

DATE 02/06/2009

PREVIOUS FCR AFFECTED  YES  NO; IF YES, FCR NO. \_\_\_\_\_

CLIENT PROJECT MANAGER

*Mark W. Nettle*

DATE 2/10/09

CLIENT QA SPECIALIST

NA

DATE NA

SAIC H&S MANAGER SIGNATURE (IF APPLICABLE)

*Stephen L. Davis*

DATE 2/9/09

### 3.0 HAZARD/RISK ANALYSIS

The purpose of the task hazard/risk analysis is to identify and assess potential hazards that may be encountered by personnel and to prescribe required controls. Table 3-1, a general checklist of hazards that may be posed by this project, indicates whether a particular major type of hazard is present. If additional tasks or significant hazards are identified during the work, this document will be modified by addendum or field change order to include the additional information.

**Table 3-1. Hazards Inventory**

Yes	No	Hazard
	X	Confined space entry
	X	Excavation entry (excavations will be entered)
X		Heavy equipment (drill rigs, backhoe)
X		Fire and explosion (fuels, sparks from welding)
X		Electrical shock (utilities and tools)
X		Exposure to chemicals (contaminants and chemical tools)
X		Temperature extremes
X		Biological hazards (poison ivy, Lyme disease, West Nile disease)
	X	Radiation or radioactive contamination
X		Noise (drill rig)
	X	Drowning
X		MEC (potential to encounter unexploded ordnance)

MEC = munitions and explosives of concern

Specific tasks are as follows:

- Soil sampling;
- Vegetation clearing with chainsaws, machetes, and sling blades, as required;
- Civil surveying;
- Investigation-derived waste handling and disposition;
- Subsurface soil sampling and monitoring well installation using air rotary and hollow stem auger drill rigs;
- Well development and groundwater sampling; and
- Equipment decontamination performed by the Subcontractor.

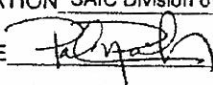

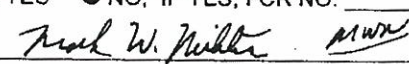
#### 3.1 TASK-SPECIFIC HAZARD ANALYSIS

Table 3-2 presents task-specific hazards, relevant hazard controls, and required monitoring, if appropriate, for all of the planned tasks.

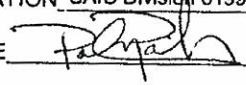
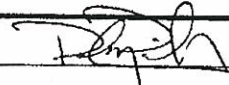
Table 3-2. Hazards Analysis (continued)

Safety and Health Hazards	Controls	Monitoring Requirements
Contact with overhead structures or utilities	Rig will not be allowed to come within 10 feet of overhead power lines. At the time the mast is being towered up drill crew members should not be engaged in any other activity, the task at that time is to assist in towered up in the safest manner possible. At the time the mast is being towered down, other drill crew members should not be engaged in any other activity, the task at that time is to assist in towered down in the safest manner possible. The mast of the drill rig must be towered down before moving to the next location.	FM will survey location and ensure absence of obstructions and overhead utilities prior to rig set-up.
Noise	Hearing protection $\geq$ NRR 25 within 7.6 m (25 ft) of rig unless rig-specific monitoring indicates noise exposure of less than 85 dBA.	Daily safety inspections
Fire (vehicle fuels, subsurface contaminants, welding)	Fuels stored in safety cans with flame arrestors. Bonding (metal to metal) and grounding during fuel transfers. Fuel storage areas marked with no smoking or open flames signs. Fire extinguishers in all fuel use areas. Only experienced welders. Inspect welding equipment before use. Welding to be performed per the subcontractor's H&S program. PPE compliant with requirements of subcontractor's program. Removal of any combustible materials with 15 ft of welding activities. Fire prevention including fire extinguisher and fire blanket present during welding activities.	Combustible gas indicator if buried organic material or other source of flammable gas is suspected. Combustible gases must be less than 10% of LEL within welding area.
Contact with MEC	Pre-entry screening survey by MEC Avoidance Subcontractor. On-site training in ordinance recognition for all field personnel. Clearance of sites by UXO technicians for intrusive work. Downhole monitoring every 2 to 3 ft until cleared for continuous drilling by MEC Avoidance Subcontractor. Continuous escort by MEC Avoidance Subcontractor in areas with a potential to encounter MEC. Withdrawal of all SAIC and subcontractor personnel from immediate area and field marking of suspect area if MEC is discovered.	Visual and instrument surveys by MEC Avoidance Subcontractor


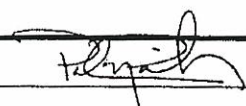
## Field Change Request (FCR)

FCR NO. <u>RVAAP-SCF-002</u>	DATE INITIATED <u>3/11/2009</u>
PROJECT <u>Deep Bedrock Well Installation In The Basal Sharon Conglomerate</u>	
CONTRACT NO. <u>W912QR-04-D-0028</u>	
<b>REQUESTOR IDENTIFICATION</b>	
NAME <u>Paul Parrish</u>	ORGANIZATION <u>SAIC Division 6199</u> PHONE <u>(614) 439-1812</u>
TITLE <u>Field Manager</u>	SIGNATURE 
<b>BASELINE IDENTIFICATION</b>	
BASELINE(S) AFFECTED <input type="radio"/> Cost <input checked="" type="radio"/> Scope <input type="radio"/> Milestone <input type="radio"/> Method of Accomplishment	
AFFECTED DOCUMENT (TITLE, NUMBER AND SECTION) <u>SAP Addendum No. 1 Section 4.1.3.5</u>	
DESCRIPTION OF CHANGE:	
<p>The Facility-Wide SAP Section 4.3.2.3.11 Well Development calls for well development to take place no longer than 7 days after the mortar collar has been install or final grouting has taken place. SAIC is requesting that the time between final grouting and/or mortar collar placement and initiating well development be no longer than 14 days</p> <p><i>THIS REVISION WAS PREVIOUSLY DISCUSSED + VERBALLY AGREED TO BY VICARIE DEWISCH OF THE OHIO EPA. MWN</i></p>	
<b>JUSTIFICATION:</b>	
<p>Because of delays in the field a sufficient number of wells were not completed in a time frame close enough together so that multiple wells could be developed at one time to avoid multiple mobilizations to the site with personnel and equipment. Well development will be able to be completed for most site wells with in the 7 day window, but the first well installed SCFmw-006 will be outside of the 7 day window, but well development will be initiated on the 13th day after the mortar collar has been put in place. The delay in the well development will not impact the well or the ability to sufficiently develop the well.</p>	
<b>IMPACT OF NOT IMPLEMENTING REQUEST:</b>	
<p>The deadline for developing the well according to the Facility-Wide SAP will be missed. The integrity of the well or the development of the sand pack around the screened interval will not be impacted.</p>	
<b>PARTICIPANTS AFFECTED BY IMPLEMENTING REQUEST:</b>	
SAIC Field crew and subcontractor personnel.	
COST ESTIMATE (\$) <u>2,000</u>	ESTIMATOR SIGNATURE 
PHONE <u>(614) 439-1812</u>	DATE <u>3/11/2009</u>
<b>PREVIOUS FCR AFFECTED</b> <input type="radio"/> YES <input checked="" type="radio"/> NO; IF YES, FCR NO. _____	
CLIENT PROJECT MANAGER <u> MWN</u>	DATE <u>3/18/09</u>
CLIENT QA SPECIALIST <u>NA</u>	DATE <u>NA</u>
SAIC H&S MANAGER SIGNATURE (IF APPLICABLE) <u>NA</u>	DATE <u>NA</u>

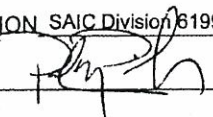

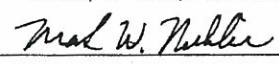
## Field Change Request (FCR)

FCR NO. <u>RVAAP-SCF-003</u>	DATE INITIATED <u>3/11/2009</u>
PROJECT <u>Deep Bedrock Well Installation In The Basal Sharon Conglomerate</u>	
CONTRACT NO. <u>W912QR-04-D-0028</u>	
<b>REQUESTOR IDENTIFICATION</b>	
NAME <u>Paul Parrish</u>	ORGANIZATION <u>SAIC Division 6199</u> PHONE <u>(614) 439-1812</u>
TITLE <u>Field Manager</u>	SIGNATURE 
<b>BASELINE IDENTIFICATION</b>	
BASELINE(S) AFFECTED <input type="radio"/> Cost <input checked="" type="radio"/> Scope <input type="radio"/> Milestone <input type="radio"/> Method of Accomplishment	
AFFECTED DOCUMENT (TITLE, NUMBER AND SECTION) <u>SAP Addendum No. 1 Section 4.1.2.2</u>	
DESCRIPTION OF CHANGE: <p>The Facility-Wide SAP Section 4.3.2.3.6 Bentonite Seal calls for bentonite seals to be 0.9 to 1.5 m (3.0 to 5.0 feet) thick when installed. SAIC is seeking approval to place a bentonite seal up to 6.0 m (20.0 feet) thick to prevent failure of the bentonite seal.</p> <p><i>THIS REVISION WAS PREVIOUSLY DISCUSSED + VERIFIABLY AGREED TO BY VICKIE DEPPISCH OF THE OHIO EPA. MWW</i></p>	
<b>JUSTIFICATION:</b> <p>Because of fracture zones in the area of the bentonite seal installation the potential for failure of the seal during grout placement is greater. During the installation of the grout in well SCFmw-005 the bentonite seal which was 1.5 m (5.0 feet) thick failed and the sand pack and well screen were compromised requiring the well to be drilled out to remove any potential influence of the grout on the water quality parameters. The use of a thicker bentonite seal will hopefully prevent future failures and allow for the wells to be installed properly</p>	
<b>IMPACT OF NOT IMPLEMENTING REQUEST:</b> <p>The impact of not allowing for the use of a larger seal increase the risk of bentonite seal failure during grout placement and causing costly and untimely delays in the completion of the installation of the wells.</p>	
<b>PARTICIPANTS AFFECTED BY IMPLEMENTING REQUEST:</b> <p>SAIC Field crew and subcontractor personnel.</p>	
<b>COST ESTIMATE (\$)</b> <u>20,000</u> <b>ESTIMATOR SIGNATURE</b> 	
<b>PHONE</b> <u>(614) 439-1812</u> <b>DATE</b> <u>3/11/2009</u>	
<b>PREVIOUS FCR AFFECTED</b> <input checked="" type="radio"/> YES <input type="radio"/> NO; IF YES, FCR NO. _____	
<b>CLIENT PROJECT MANAGER</b> <u>Mark W. Muller</u> <i>MWW</i>	<b>DATE</b> <u>3/16/09</u>
<b>CLIENT QA SPECIALIST</b> <u>NA</u>	<b>DATE</b> <u>NA</u>
<b>SAICH&amp;S MANAGER SIGNATURE (IF APPLICABLE)</b> <u>NA</u>	<b>DATE</b> <u>NA</u>

## Field Change Request (FCR)

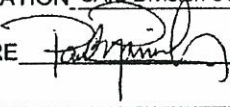

FCR NO. <u>RVAAP-SCF-004</u>	DATE INITIATED <u>3/11/2009</u>
PROJECT <u>Deep Bedrock Well Installation In The Basal Sharon Conglomerate</u>	
CONTRACT NO. <u>W912QR-04-D-0028</u>	
<b>REQUESTOR IDENTIFICATION</b>	
NAME <u>Paul Parrish</u>	ORGANIZATION <u>SAIC Division 6199</u> PHONE <u>(614) 439-1812</u>
TITLE <u>Field Manager</u>	SIGNATURE 
<b>BASELINE IDENTIFICATION</b>	
BASELINE(S) AFFECTED <input type="radio"/> Cost <input checked="" type="radio"/> Scope <input type="radio"/> Milestone <input type="radio"/> Method of Accomplishment	
AFFECTED DOCUMENT (TITLE, NUMBER AND SECTION) <u>SAP Addendum No. 1 Section 4.1.2.1</u>	
DESCRIPTION OF CHANGE:	
<p>The Facility-Wide SAP Section 4.3.2.3.4 Screen and well casing placement calls for well screens to be 3.0 m (10.0 feet) long when installed. SAIC is seeking approval to use a well screen that is 4.5 m (15.0 feet) in length for the installation of the well at SCFmw-005. Section 4.1.2.1 of the SAP Addendum No. 1 allows for a longer length screen to be installed subject to the approval of both USACE and Ohio EPA.</p> <p><i>THIS REVISION WAS PREVIOUSLY DISCUSSED &amp; VERBALLY AGREED TO BY VICKIE DEPPISCH OF THE OHIO EPA. MWV</i></p>	
<b>JUSTIFICATION:</b>	
<p>To better capture a representative sample of the water in the basal portion of the Sharon Conglomerate where fracture zones are present it is necessary to install a screen that is 4.5 m (15.0 feet) in length. This will allow the screened interval and sand pack to cover the fracture zone identified during the drilling of the well and in conjunction with the request in Field Change Order RVAAP-SCF-003 for the bentonite seal placement will allow for the installation of a well with a lesser chance of a bentonite seal failure and will help capture a representative sample of the water quality of the basal portion of the Sharon Conglomerate.</p>	
<b>IMPACT OF NOT IMPLEMENTING REQUEST:</b>	
<p>The impact of not allowing for the use of a longer screen may be that fracture zone will not be within the screened interval of the well and a representative sample of the water quality within the basal portion of the Sharon Conglomerate will not be collected.</p>	
<b>PARTICIPANTS AFFECTED BY IMPLEMENTING REQUEST:</b>	
SAIC Field crew and subcontractor personnel.	
<b>COST ESTIMATE (\$)</b> <u>No Value</u> ESTIMATOR SIGNATURE 	
PHONE <u>(614) 439-1812</u>	DATE <u>3/11/2009</u>
<b>PREVIOUS FCR AFFECTED</b> <input checked="" type="radio"/> YES <input type="radio"/> NO; IF YES, FCR NO. _____	
CLIENT PROJECT MANAGER <u>Frank W. Muller</u>	DATE <u>3/16/09</u>
CLIENT QA SPECIALIST <u>NA</u>	DATE <u>NA</u>
SAICH&S MANAGER SIGNATURE (IF APPLICABLE) <u>NA</u>	DATE <u>NA</u>

### Field Change Request (FCR)

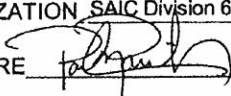
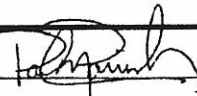
FCR NO. <u>RVAAP-SCF-005</u>	DATE INITIATED <u>3/19/2009</u>
PROJECT <u>Deep Bedrock Well Installation In The Basal Sharon Conglomerate</u>	
CONTRACT NO. <u>W912QR-04-D-0028</u>	
REQUESTOR IDENTIFICATION	
NAME <u>Paul Parrish</u>	ORGANIZATION <u>SAIC Division 6199</u> PHONE <u>(614) 439-1812</u>
TITLE <u>Field Manager</u>	SIGNATURE <u></u>
BASELINE IDENTIFICATION	
BASELINE(S) AFFECTED <input type="radio"/> Cost <input type="radio"/> Scope <input type="radio"/> Milestone <input checked="" type="radio"/> Method of Accomplishment	
AFFECTED DOCUMENT (TITLE, NUMBER AND SECTION) <u>SAP Addendum No. 1 Section 4.1.2.1</u>	
DESCRIPTION OF CHANGE: The Facility-Wide SAP Section 4.3.2.2.1 Casing/screen calls for the casing and screen to be constructed of new, precleaned, 5.0 cm (2.0 inch) Schedule 40 PVC. SAIC is seeking approval to use schedule 80 casing and screen for the installation of the well at SCFmw-001. Section 4.1.2.1 of the SAP Addendum No. 1 allows for the use of schedule 40 or 80 PVC depending on the field conditions. Because of the depth which this well be installed schedule 80 PVC casing and screen would be the most appropriate.	
JUSTIFICATION: To insure that the well is installed properly and will not fail after placement of the grout.	
IMPACT OF NOT IMPLEMENTING REQUEST: The impact of not allowing for the use of the schedule 80 PVC casing could lead to the failure of the well and cause the drill to be drilled out and replaced.	
PARTICIPANTS AFFECTED BY IMPLEMENTING REQUEST: SAIC Field crew and subcontractor personnel.	
COST ESTIMATE (\$) <u>No Value</u>	ESTIMATOR SIGNATURE <u></u>
PHONE <u>(614) 439-1812</u>	DATE <u>3/19/2009</u>
PREVIOUS FCR AFFECTED <input checked="" type="radio"/> YES <input type="radio"/> NO; IF YES, FCR NO. _____	
CLIENT PROJECT MANAGER <u></u>	DATE <u>4/3/09</u>
CLIENT QA SPECIALIST <u>NA</u>	DATE <u>NA</u>
SAIC H&S MANAGER SIGNATURE (IF APPLICABLE) <u>NA</u>	DATE <u>NA</u>



## Field Change Request (FCR)

FCR NO. <u>RVAAP-SCF-006</u>	DATE INITIATED <u>4/13/2009</u>
PROJECT <u>Deep Bedrock Well Installation In The Basal Sharon Conglomerate</u>	
CONTRACT NO. <u>W912QR-04-D-0028</u>	
<b>REQUESTOR IDENTIFICATION</b>	
NAME <u>Paul Parrish</u>	ORGANIZATION <u>SAIC Division 6199</u> PHONE <u>(614) 439-1812</u>
TITLE <u>Field Manager</u>	SIGNATURE 
<b>BASELINE IDENTIFICATION</b>	
BASELINE(S) AFFECTED <input type="radio"/> Cost <input checked="" type="radio"/> Scope <input type="radio"/> Milestone <input checked="" type="radio"/> Method of Accomplishment	
AFFECTED DOCUMENT (TITLE, NUMBER AND SECTION) <u>SAP Addendum No. 1 Section 4.1.8</u>	
DESCRIPTION OF CHANGE:	
<p>The Facility-Wide SAP Section 4.3.8 Decontamination Procedures calls for the use of methanol during the decontamination process for non-dedicated sampling equipment used for the measuring of static water levels and the purging of monitoring wells for the collection of groundwater samples during the investigation. SAIC is proposing that isopropanol be used instead of methanol for the chemical rinse step in the decontamination process.</p> <p style="text-align: right;"><i>SOLVENT - PESTICIDE GRADE</i> <span style="float: right; margin-right: 20px;"><i>MWR</i></span></p>	
<b>JUSTIFICATION:</b>	
<p>The use of isopropanol will accomplish the same chemical decontamination step as the methanol rinse with a less hazardous material. Ohio EPA recommends the a solvent rinse may not be needed and would only be needed when high levels of contaminants are known to be present. In the future a request may be made to discontinue the use of the chemical rinse during the decontamination process for this project.</p>	
<b>IMPACT OF NOT IMPLEMENTING REQUEST:</b>	
No impact on the project if not implemented	
<b>PARTICIPANTS AFFECTED BY IMPLEMENTING REQUEST:</b>	
SAIC Field crew.	
COST ESTIMATE (\$) <u>No Value</u>	ESTIMATOR SIGNATURE 
PHONE <u>(614) 439-1812</u>	DATE <u>4/13/2009</u>
<b>PREVIOUS FCR AFFECTED</b> <input checked="" type="radio"/> YES <input type="radio"/> NO; IF YES, FCR NO. _____	
CLIENT PROJECT MANAGER <u>Mark W. Nubler <i>MWN</i></u>	DATE <u>4-14-09</u>
CLIENT QA SPECIALIST <u>NA</u>	DATE <u>NA</u>
SAICH&S MANAGER SIGNATURE (IF APPLICABLE) <u>NA</u>	DATE <u>NA</u>

## Field Change Request (FCR)

FCR NO. <u>RVAAP-SCF-007</u>	DATE INITIATED <u>4/14/2009</u>
PROJECT <u>Deep Bedrock Well Installation In The Basal Sharon Conglomerate</u>	
CONTRACT NO. <u>W912QR-04-D-0028</u>	
<b>REQUESTOR IDENTIFICATION</b>	
NAME <u>Paul Parrish</u>	ORGANIZATION <u>SAIC Division 6199</u> PHONE <u>(614) 439-1812</u>
TITLE <u>Field Manager</u>	SIGNATURE 
<b>BASELINE IDENTIFICATION</b>	
BASELINE(S) AFFECTED <input type="radio"/> Cost <input type="radio"/> Scope <input type="radio"/> Milestone <input checked="" type="radio"/> Method of Accomplishment	
AFFECTED DOCUMENT (TITLE, NUMBER AND SECTION) <u>SAP Addendum No. 1 QAPP Table 7-2</u>	
DESCRIPTION OF CHANGE:	
<p>The SAP Addendum No. 1 QAPP Table 7-2 Samples To Be Collected calls for the perchlorate samples to be collected during Quarterly Event <sup>MWN</sup> <del>2</del> <sup>JULY</sup> <del>(April 2009)</del> to match when perchlorate samples will be collected during the Facility-Wide Groundwater Monitoring Program <del>which would be their 2nd quarterly event for 2009.</del></p>	
<b>JUSTIFICATION:</b> <sup>SECOND QUARTER MWN</sup>	
<p>To match the sample collection sequence of the Facility-Wide Groundwater Monitoring Program perchlorate samples need to be collected during the <del>first</del> <sup>second</sup> quarterly sampling event for the Sharon Conglomerate bedrock wells. The USACE requested that the samples be collected during the <del>3rd</del> <sup>2nd</sup> quarterly event, <del>but because of the start of the Sharon Conglomerate well installation project the quarterly events do not match up with the Facility-Wide Monitoring Program.</del> <sup>MWN</sup></p>	
<b>IMPACT OF NOT IMPLEMENTING REQUEST:</b>	
Sharon Conglomerate Bedrock Well perchlorate sampling will be out of sequence with the Facility-Wide Monitoring Program and would be more difficult to match the laboratory results between the two efforts at the facility if it is not implemented.	
<b>PARTICIPANTS AFFECTED BY IMPLEMENTING REQUEST:</b>	
SAIC Field crew and contract laboratory.	
COST ESTIMATE (\$) <u>No Value</u>	ESTIMATOR SIGNATURE 
PHONE <u>(614) 439-1812</u>	DATE <u>4/14/2009</u>
<b>PREVIOUS FCR AFFECTED</b> <input type="radio"/> YES <input checked="" type="radio"/> NO; IF YES, FCR NO. _____	
CLIENT PROJECT MANAGER <u>Mark W. Miller</u> <sup>MWN</sup>	DATE <u>4/14/09</u>
CLIENT QA SPECIALIST <u>NA</u>	DATE <u>NA</u>
SAICH&S MANAGER SIGNATURE (IF APPLICABLE) <u>NA</u>	DATE <u>NA</u>