

**APPENDIX F**  
**VARIANCE REPORTS**



Variance No: PARCEL211(7)MAY02.VR01

Linked w/NC No: x

Date of Issue: 5-6-02

Page 1 of 1

Project Name: **Fort McClellan – CK05**

Project Number: 774645.27020300

## -Variance Report -

I. Description: (by the person identifying the change)

**FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, STATION No. 6, SUBSECTION OF THE FORMER TOXIC GAS AREA – PELHAM RANGE, PARCEL 211(7)**

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed five surface soil samples and five subsurface soil samples. However, seven surface soil samples and seven subsurface soil samples were collected.

Identified by: Steven Moran, PG – IT Project Manager

Date: 5-6-02

II. Justification for Variance:

The FSSFSP proposed collecting a surface soil sample and subsurface soil sample at sample locations PR-211-MW01, PR-211-MW02, PR-211-MW03, PR-211-MW04 and PR-211-MW05. Station No. 6 is a subsection of the Former Toxic Gas Area, Parcel 211(7), at Pelham Range. Station No. 6 was one of seven training stations in a former training area, the Chemical Obstacle Course. The Chemical Obstacle Course is documented as being located in the northwest portion of Training Area 10B at Pelham Range, falling within the parcel boundary of Former Toxic Gas Area, Parcel 211(7). A site walk was conducted by IT personnel for the Former Toxic Gas Area in January, 2002. During the site walk, four Chemical Warfare Smoke Tanks were discovered along the western parcel boundary, just outside Station No. 6. A decision was made to collect soil samples next to the four tanks. Therefore, one surface soil sample and one subsurface soil sample were collected at sample locations PR-211-GP01 and PR-211-GP02. These two sample locations were not proposed in the FSSFSP. However, collecting soil samples at these two locations will more accurately determine the presence or absence of soil contamination associated with Chemical Warfare Material training activities. This variance will not alter the intent of the Site Investigation at Station No. 6.

III. Applicable Document/Work Plan: (by the person identifying the change)

Site-Specific Field Sampling Plan, Site-Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments; Station No. 6, Subsection of Former Toxic Gas Area Pelham Range, Parcel 211(7), December, 2001.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

**- Signatures -**

Requested by: Jeffrey Tarr, PG - IT Site Manager 5-6-2002  
Date

COE Approved by: *Douglas J. Stots* 5/22/02  
Date

Project Manager Approval: *Jeanne Yacoub* 6/6/02  
Date

QA Approval: *Randy L. McBride* 05-28-02  
Date



Variance No: PARCEL211(7)FEBRUARY2003.VR1

Linked w/NC No: x

Date of Issue: 2-10-2003

Page 1 of 1

Project Name: Fort McClellan - CK05

Project Number: 774645.27120300

**-Variance Report -**

I. Description: (by the person identifying the change)

**DRAFT FINAL SITE-SPECIFIC FIELD SAMPLING PLAN (DFSSFSP), FORMER TOXIC GAS AREA - PELHAM RANGE, PARCEL 211(7)**

The DFSSFSP proposed the collection of a groundwater sample for chemical analysis from residuum monitoring wells PR-211-MW12 and PR-211-MW13. However, groundwater samples were not collected because the wells were dry.

Identified by: Corey Wallace - Drill Supervisor

Date: 2-10-03

II. Justification for Variance:

During drilling and monitoring well installation activities at residuum well location PR-211-MW12, hollow-stem auger refusal was encountered prior to reaching groundwater. A decision was made to use air rotary drilling techniques to drill deeper for groundwater. During air rotary drilling groundwater was encountered at approximately 79 feet below ground surface and the well was successfully installed. However, during groundwater sampling activities the well was dry. During hollow-stem auger drilling at residuum well location PR-211-MW13, bedrock was encountered at 63 feet below ground surface and groundwater was not present. Based upon previous drilling and well installation activities at Fort McClellan, groundwater tends to migrate along the soil / bedrock interface. Therefore, a decision was made to install the well on top of bedrock with the intent of having groundwater enter the well screen during periods of heavy rainfall. To date, groundwater has been present in the wells, but not enough to collect samples. Currently, both wells are being monitored for the presence of groundwater. When it is determined that these wells contain sufficient groundwater for sampling, samples will be collected for chemical analysis.

III. Applicable Document/Work Plan: (by the person identifying the change)

Draft Final Site-Specific Field Sampling Plan, Site-Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments; Former Toxic Gas Area - Pelham Range; Fort McClellan, Calhoun County, Alabama, August 2002.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Lee Coker, US Army Corps of Engineers
6. Mr. Darryl Stabile, US Army Corps of Engineers

**- Signatures -**

Requested by: *Jeffrey J. Tarr* 2-10-03 Date

Approved by: *Ernest R. McCallh* 4/13/03 Date

Project Manager Approval: *Jeanne Yacoub* 2/12/03 Date

QA Approval: Randy McBride *Randy McBride* 2-19-03 Date



Variance No: PARCEL211(7)APRIL2003.VR1

Linked w/NC No:

Date of Issue: 4-23-2003

Page 1 of 1

Project Name: Fort McClellan

Project Number: 774645.27020300

**-Variance Report -**

**I. Description:** (by the person identifying the change)

**DRAFT-FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, FORMER TOXIC GAS YARD AREA – PELHAM RANGE, PARCEL 211(7)**

The Draft-Final Site-Specific Field Sampling Plan (DFSSFSP) proposed the collection of a groundwater sample from residuum monitoring well PR-211-MW15. However, a groundwater sample was not collected.

Identified by: Jeffrey J. Tarr, PG – Shaw Site Manager

Date: 4-23-2003

**II. Justification for Variance:**

During drilling and monitoring well installation activities competent bedrock was encountered prior to reaching groundwater at residuum monitoring well PR-211-MW15. Based upon previous drilling and well installation activities at Fort McClellan, groundwater tends to migrate along the soil \ bedrock interface. Therefore, a decision was made to install the well on top of competent bedrock with the intent of having groundwater enter the well screen during periods of heavy rainfall. To date, groundwater has been present in the well, but not enough to collect samples. Currently, this well is being monitored for the presence of groundwater. Should this well contain enough groundwater, samples will be collected for chemical analysis.

**III. Applicable Document/Work Plan:** (by the person identifying the change)

Draft-Final Site-Specific Field Sampling Plan, Site-Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments; Former Toxic Gas Yard – Pelham Range, Parcel 211(7); Fort McClellan, Calhoun County, Alabama, August 2002.

Distribution List:

1. Jeanne Yacoub, Shaw Project Manager
2. Steve Moran, Shaw Technical Lead
3. Jeffrey Tarr, Shaw Site Manager
4. Randy McBride, Shaw QA Officer
5. Stanley E. Parrott, US Army Corps of Engineers
6. Lee Coker, US Army Corps of Engineers

**- Signatures -**

Requested by: *Jeffrey J. Tarr* 4/23/03 Date

Approved by: *Stanley E. Parrott* 4/24/03 Date

Project Manager Approval: *Jeanne Yacoub* 5/8/03 Date

QA Approval: *Randy L. McBride* 5-4-03 Date



Shaw Environmental & Infrastructure, Inc.

Variance No: PARCEL207(7)APRIL2003.VR1

Linked w/NC No:

Date of Issue: 4-23-2003

Page 1 of 1

Project Name: Fort McClellan

Project Number: 774645.27020300

### -Variance Report -

**I. Description:** (by the person identifying the change)

**FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, FORMER DECONTAMINATION TRAINING AREA, PARCEL 207(7)**

The Draft-Final Site-Specific Field Sampling Plan (DFSSFSP) proposed the collection of a groundwater sample from residuum monitoring wells DTA-207-MW01, DTA-207-MW02, and DTA-207-MW03. However, a groundwater sample was not collected from residuum monitoring well DTA-207-MW03.

Identified by: Jeffrey J. Tarr, PG – Shaw Site Manager

Date: 4-23-2003

**II. Justification for Variance:**

During drilling and monitoring well installation activities competent bedrock was encountered prior to reaching groundwater at residuum monitoring well DTA-207-MW03. Based upon previous drilling and well installation activities at Fort McClellan, groundwater tends to migrate along the soil \ bedrock interface. Therefore, a decision was made to install the well on top of competent bedrock with the intent of having groundwater enter the well screen during periods of heavy rainfall. To date, groundwater has been present in the well, but not enough to collect samples. Currently, this well is being monitored for the presence of groundwater. Should this well contain enough groundwater, samples will be collected for chemical analysis.

**III. Applicable Document/Work Plan:** (by the person identifying the change)

Draft-Final Site-Specific Field Sampling Plan, Site-Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments; Former Decontamination Training Area South of the Toxic Gas Yard, Parcel 207(7); Fort McClellan, Calhoun County, Alabama, July 2002.

Distribution List:

1. Jeanne Yacoub, Shaw Project Manager
2. Steve Moran, Shaw Technical Lead
3. Jeffrey Tarr, Shaw Site Manager
4. Randy McBride, Shaw QA Officer
5. Stanley E. Parrott, US Army Corps of Engineers
6. Lee Coker, US Army Corps of Engineers

**- Signatures -**

Requested by: *Jeffrey J. Tarr* 4/23/03 Date

Approved by: *Stanley E. Parrott* 4/24/03 Date

Project Manager Approval: *Jeanne Yacoub* 5/8/03 Date

QA Approval: *Lee Coker* 5-4-03 Date

**RESPONSE TO COMMENTS ON  
DRAFT-FINAL WORK PLAN**

**Response to ADEM and EPA Comments on the Draft-Final Work Plan  
Former Toxic Gas Area, Parcel 211(7)  
Fort McClellan, Calhoun County, Alabama**

(Page 1 of 2)

<b>Alabama Department of Environmental Management (ADEM) Comments</b>	
<b>Comment</b>	<b>Response</b>
Under Site Description on page 1-2, the text states Station No. 3 included electric blasting caps, dud chemical shells, shell simulators, simulated machine-gun fire, and “tubes of chloropicrin and phosgene”. Based on historical chemical usage and/or handling, it appears that sediment and surface water sampling is warranted in and around Station No. 3. Additional surface soil sampling may also be warranted for this area.	Comment noted. However, sufficient data were collected during the SI to determine that this site requires further investigation. Additional sampling will be conducted in the remedial investigation phase, as appropriate.
Fort McClellan has identified areas of the site where training activities have taken place. In several of these areas, Fort McClellan is not proposing to collect groundwater samples. Additional monitoring wells should be included in Fort McClellan’s sampling plan to determine if groundwater in these areas has been adversely impacted. ADEM recommends that additional monitoring wells be located in the following locations: northwestern portion of the site near physical feature 24, northeastern portion of the site near physical feature 29, southeastern portion of the site near physical feature 18, and the southwestern portion of the site near physical feature 38.	Comment noted. However, sufficient data were collected during the SI to determine that this site requires further investigation. Additional sampling will be conducted in the remedial investigation phase, as appropriate.
The Former Toxic Gas Area is located in its entirety inside Pelham Range. Due to the potential presence of small arms target training, Fort McClellan should determine if significant concentrations of lead bullets are present throughout the area.	This issue will be addressed during the remedial investigation.
Page 1-3/Site Description: The acronym HC is used in Line 2. This acronym is not addressed here or in the acronym list.	Agree. The acronym was defined in the text and added to the acronym list.
Page 2-2/Summary of Studies: Line 29 - The word “a” should be deleted.	Agree. However, this text was not included in the SI report.
Page 2-2/Summary of Studies: Line 33 – The words “As a result of the” should be deleted.	Agree. However, this text was not included in the SI report.
Table 3-1: Under the “Conceptual Site Model” column, “Receptors” is misspelled. Under the “Data Types” column, “explosives” is repeatedly misspelled. Please add PSSC and its descriptive text to the acronym list at the bottom of the table.	Agree. However, this table was not presented in the SI report.
Table 4-1: The text on page 1-7 indicates that a total of 17 surface soil samples, 13 subsurface soil samples, 1 drum sample, and 10 groundwater samples will be collected. According to the descriptions on Table 4-1, there will only be 11 subsurface soil samples collected. Please correct this discrepancy. Also, in the description column beside PR-211-GP07, the text implies that only one surface soil sample will be collected. Table 4-1 should be modified to include all subsurface soil locations.	Agree. The table (Table 3-1 in the SI report) was revised to indicate the correct number of samples collected.

**Response to ADEM and EPA Comments on the Draft-Final Work Plan  
Former Toxic Gas Area, Parcel 211(7)  
Fort McClellan, Calhoun County, Alabama**

(Page 2 of 2)

<b>U.S. Environmental Protection Agency (EPA) Region 4 Comments</b>	
<b>Comment</b>	<b>Response</b>
Page ES-2, First paragraph. A total organics scan should be performed on the drum(s) with any contents. The soil and subsurface soil underneath each drum should be sampled. Also, the purpose for a Site Investigation is not to collect data for risk assessment purposes. Rather, it is to determine the presence or absence of a CERCLA release.	The drum contents were sampled and analyzed for potential site-specific chemicals consistent with the other media sampled under the work plan. Following waste characterization, the drum was removed from the site and transported to an approved facility for disposal as nonhazardous waste.
Page 1-1, Line 23. This line states that part of the Toxic Gas Area extends into parts of Training Areas 9A, 9B, and 10A (Figure 1-2). However, the Site Map (Figure 1-2) does not indicate which portions of the study area are in Training Areas 9A, 9B, and 10A. These areas should be identified.	Agree. Figure 1-2 was revised to show these areas.
Page 1-5, Line 5. The heading of this section is "Soils". This is confusing since it is not separated from an immediately preceding list of unrelated subsection headings (SPB, HD, CG, DM, etc.). This section should have a title which clearly separates it from the preceding list of subsection titles.	Agree. The section on soils was presented separately in Chapter 4 of the SI report.
Figure 4-1. The text should provide an explanation as to why physical feature 45 (four circular depressions) was selected for sample collection while other depressions (physical features 5, 6, 7, 8, 10, 11, 13, 14, 20, 21, 43, and 46) were not selected for sample collection and why no soil sampling is proposed in the vicinity of physical features 1, 2, and 3 (mounds) and 38 (possible ground scar). In addition, an explanation should be provided as to why the collection of groundwater samples is not proposed in the vicinity of the drums which were located (physical features 25, 26, and 36).	Samples were collected from areas most likely to be contaminated, based on site reconnaissance and with consideration given to the size of the parcel and the phase of the investigation. The SI sampling locations and rationale were discussed and approved by the BCT at the May 2002 project team meeting. Sufficient data were collected during the SI to determine that this site requires further investigation. Additional sampling will be conducted in the remedial investigation phase, as appropriate.