Appendix G

FCRs

Applicable approved FCRs for the period from the PWP to the 2014 Exception Area clearance are included here.

ONIS "TREY" GLENN, III
DIRECTOR

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July 27, 2009

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, AL 36205

RE: ADEM Review and Concurrence: Field Change Requests #5 and #6 to *Revision 1 to Final Program Level Work Plan*
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has completed its review of Field Change Requests (FCR) #5 and #6. FCR #5 is a request to alter the current practice of using Unexploded Ordnance (UXO) Technicians to perform quality control (QC) inspections of cleared excavations using the EM61MK2 sensor by substituting a trained geophysicist to perform this function while the dig teams are still in the field. Currently this function is being performed by a UXO technician who is not trained to use the EM61 FCR#6 is a request to alter the current practice of using digital geophysical mapping (DGM) to perform surveys in step-out areas in eastern MRS-3 and instead use analog sensors to detect and investigate anomalies to dept of detection. Since all of the step-outs were triggered by items that were not designed to penetrate the ground, the use of analog methods is sufficient to detect further items.

ADEM concurs with the requests and the signed original documents are attached for your records.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Governmental Hazardous Waste Branch
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mr. Robin Scott/MDA
Mrs. Brandi Little/ADEM

Attachment

Birmingham Branch
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FCR #5

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 5	**Date: 7/15/09**
LOCATION: McClellan	**Matrix Representative: Richard Satkin**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Conduct contemporaneous QC hole inspections while dig teams are still in the grid.

2. Reason for Change (Use continuation sheet if necessary)

Several Deficiency Notices were generated for the intrusive operations in MRS-2 as a result of the dig teams not properly clearing holes utilizing the EM61-MK2. One of the lessons learned was that the UXO Contractors had difficulty finding/training enough UXO Technicians with sufficient aptitude/expertise/experience in the operation of the EM61MK2 to reliably verify clearance of the more problematic and complicated geophysical anomalies. Consequently, there was not consistent hole-check expertise for all dig teams. Contractor corrective actions to DNRs generally resulted in the shuffling the strong performers and training up new operators who had the same experience/consistency issues. An experienced NAEVA or Matrix geophysicist/geologist should be employed to conduct a real-time QC inspection of the digs to ensure that targets have been adequately excavated and cleared and to give the dig teams more consistent and reliable feedback.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

Change Revision 1 to Final Program-Level Work Plan, Section 2.5.6 last paragraph, to read: A trained QC geophysicist will be provided to work with each intrusive team. After the initial prosecution of excavations by the dig team, each area will be checked for source removal using the same geophysical instrument used for the DGM surveys (EM61 MK2). The QC EM operator will maneuver the instrument over the open hole while monitoring the data logger for any residual anomalous response. If the instrument response indicates that the source of the anomaly has been removed, the dig will be considered complete and the hole can be backfilled. For locations where an elevated residual response remains, the peak response will be marked on the ground and the dig team will return to that location to continue excavation. This process will be repeated until all excavations in a grid are free of residual anomalous response. Excavation QC is discussed in greater detail in Section 10.

Preparer of FCR (Print name and sign) Richard Satkin	Preparer's Title Project Manager	Date 7/15/09
UXOQCS - Reviewed (Print name and sign) Jason Soth	Accepted (Y/N) Yes UXOQCS	Date 7/15/09
Operations Manager- Reviewed (Print name and sign) Cecil Taylor	Accepted (Y/N) Yes Site Operations Manager	Date 7/15/09
Matrix PM - Reviewed (Print name and sign) Richard Satkin	Accepted (Y/N) Yes Project Manager	Date 7/15/09
ADEM - Reviewed (Print name and sign) Julie Ange	Accepted (Y/N) Yes Project Manager	Date 7/27/09

FCR #6

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 6	Date: 7/10/09
LOCATION: McClellan	Matrix Representative: Richard Satkin

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Section 2.5.6.1 Step-out Approach: Modification/exemption to existing step-out procedures to allow for an aggressive hand-held magnetometer clearance operation to depth of detection for MEC items identified as either Discarded Military Munitions (DMM) or those types designed not to penetrate the ground (trip flares, hand grenades, etc.) where earth-moving (cut/fill) activities have not altered the ground surface.

2. Reason for Change (Use continuation sheet if necessary)

Section 2.4, Project Execution: the last paragraph states: "As alternative approaches/technologies are identified that will shorten the schedule or improve efficiency through site-specific experience, they will be employed where feasible to complete remaining work."

The origination of the step-out process was first presented in the Army EE/CA documents as a means to ensure that no targets or impact areas were missed during remediation. The intent of this procedure was to identify MEC that was either launched, projected, or air dropped on targets.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

There are a total of twenty-four MEC items (21 grenade fuzes, 2 practice grenades and 1 slap flare) recovered located within 200 feet of the easternmost MRS-3 boundary which result in a 3.3-acre step. Each of these items are identified as either DMM or those types not designed to penetrate the ground (trip flares, slap flares, hand grenades etc.). The resulting step-out at this location will be conducted through a 100% hand-held magnetometer geophysical detector clearance to the depth of detection followed by a (minimum) 25% QC check of the cleared area. Similarly, if other DMM are recovered during the intrusive operations within 200 feet of the MRS boundary step-outs will be conducted through a 100% hand-held magnetometer geophysical detector clearance to the depth of detection followed by a (minimum) 25% QC check of the cleared area. In addition, ADEM will be notified of all DMM-driven step-outs during the bi-weekly QC conference call.

A map of the step-outs and information related to the DMM finds in the referenced grids are attached.

Preparer of FCR (Print name and sign) Richard Satkin	Preparer's Title Project Manager	Date 7/10/09
UXOQCS - Reviewed (Print name and sign) Jason Soth	Accepted (Y/N) Yes UXOQCS	Date 7/10/09
Operations Manager- Reviewed (Print name and sign) Cecil Taylor	Accepted (Y/N) Yes Site Operations Manager	Date 7/10/09
Matrix PM - Reviewed (Print name and sign) Richard Satkin	Accepted (Y/N) Yes Project Manager	Date 7/10/09
ADEM - Reviewed (Print name and sign) Julie Anger	Accepted (Y/N) Yes Project Manager	Date 7/27/09

ONIS "TREY" GLENN, III
DIRECTOR

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August 31, 2009

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, AL 36205

RE: ADEM Review and Concurrence: Field Change Request #7 to *Revision 1 to Final Program Level Work Plan*
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has completed its review of Field Change Request (FCR) #7. FCR #7 is a request to modify the target reacquisition procedures for removal of digital geophysical mapping (DGM) targets, raising the peak amplitude required to excavate an anomaly at reacquisition from 7mV to 10mV. The anomaly targeting criteria will remain the same. During reacquisition, the EM61-MK2 is located directly over the source that caused a target to be selected during mapping. The result is that the response during reacquisition is generally higher than during mapping. Evidence from both the geophysical prove-out (GPO) and data collected in the field indicate that the use of a 10mV threshold for reacquisition will continue to meet project data quality objectives (DQOs).

ADEM concurs with the request and the signed original document is attached for your records.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Governmental Hazardous Waste Branch
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mr. Robin Scott/MDA
Mrs. Brandi Little/ADEM

Attachment

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FCR #7

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 7	Date: 7/28/09
LOCATION: McClellan	Matrix Representative: Richard Satkin

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Section 6.3.3.9 Anomaly Reacquisition: Modification of existing target reacquisition procedures to allow for removal of DGM targets in reacquisition where the reacquired peak amplitude of the anomaly associated with the target does not meet a minimum threshold established for reacquisition. The anomaly targeting criteria does not change. The minimum target reacquisition threshold will be 10 mV on the EM61-MK2 Channel 2.

2. Reason for Change (Use continuation sheet if necessary)

Section 2.4, Project Execution: the last paragraph states: "As alternative approaches/technologies are identified that will shorten the schedule or improve efficiency through site-specific experience, they will be employed where feasible to complete remaining work."

This supplemental reacquisition criteria (eliminating targets reacquired at <10 mV) meets the 95% DGM detection rate DQO of seeded test items in the GPO. Previous reacquisition tests in the GPO demonstrated that all seed items detected and targeted at 7mV were also reacquired at at least 10mV (see attached table of seed item mV comparisons for the original 2006 GPO reacquisition tests).

Because of the DGM sampling density of the EM61-MK2 utilized (10-cm along track spacing and 2.5-ft across track spacing), it is unlikely that a measurement point occurs exactly over the center of a munitions item where the greatest sensor response would (usually) be observed. This is why the peak amplitude of the anomaly, measured during the interrogation of the anomaly during target reacquisition, is usually greater than the targeted amplitude. The targeting criteria are conservatively designed to ensure that munitions items in unfavorable positions or orientations relative to the measurement locations are targeted. Because, we interrogate each target location individually during reacquisition, we can ensure that we collect EM61-MK2 measurements directly over the source of each anomaly. Based on an assessment of over 185,000 DGM targets selected, reacquired, and dug to date, we have concluded that DGM targets (targeted at at least 7mV) which reacquire at less than 10mV represent non-MEC items to the standards of the GPO DQO. This change will allow for greater operational efficiencies in the field.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

Revised Section 6.3.3.9 (Anomaly Reacquisition) to append the following text to the end of the first paragraph. "DGM targets whose peak amplitudes reacquire at less than the demonstrated reacquisition threshold established in the GPO may be excluded from further intrusive investigation during reacquisition. **The reacquisition threshold established in FCR#7 is 10mV on Channel 2.** Any target so excluded will be documented in the reacquisition documentation as 'reacquired at less than the reacquisition threshold.'"

Revised Section 10.7.4.2 (Intrusive Operations). Change "target" to "reacquired target" in defining QC failure criteria.

The reacquisition threshold will also be included in subsequent site-specific work plans.

Preparer of FCR (Print name and sign) Kent Boler	Preparer's Title QA Geophysicist	Date 7/28/09
UXOQCS - Reviewed (Print name and sign) Jason Soth	Accepted (Y/N) Yes UXOQCS	Date 7/28/09
Operations Manager- Reviewed (Print name and sign) Cecil Taylor	Accepted (Y/N) Yes Site Operations Manager	Date 7/28/09
Matrix PM - Reviewed (Print name and sign) Richard Satkin	Accepted (Y/N) Yes Project Manager	Date 7/28/09
ADEM - Reviewed (Print name and sign) Julie Anze	Accepted (Y/N) Yes	Date 8/31/09

MRS	Unique Target ID	Seed Item ID	Seed Item Type	Reac Team ID	Reac Team Leader	Date of Reac	DGM Target Selection mV	Reac Pre- Dig Peak Reading mV	Reac Easting Offset ft	Reac Northing Offset ft	Reacquisition Comments
GPO	0627GPO2001	FTM_59	Mine AT M12A1	Geo_Reac_1	JEL	07-Aug-06	736.04	1000	1.5	.5	Broad Peak.
GPO	0627GPO2002	FTM_52	81mm Mortar WP	Geo_Reac_1	JEL	07-Aug-06	262.92	301	1	-1	* Reconstructed from ECC data
GPO	0627GPO2003	-	-	Geo_Reac_2	RDB	15-Aug-06	149.34	184	0	1	No Comments.
GPO	0627GPO2004	FTM_53	81mm Mortar WP	Geo_Reac_1	JEL	07-Aug-06	125.12	152	1.5	0	No Comments.
GPO	0627GPO2005	FTM_65	4.2" Mortar Frag	Geo_Reac_2	RDB	15-Aug-06	97.83	170	0	0	No Comments.
GPO	0627GPO2006	FTM_46	81mm Mortar Light	Geo_Reac_2	RDB	15-Aug-06	96.48	120	-1	0	Broad Peak.
GPO	0627GPO2007	-	-	Geo_Reac_2	RDB	15-Aug-06	91.3	117	1	1	Same as Anomaly 60.
GPO	0627GPO2008	FTM_74	155 Schrapnel	Geo_Reac_2	RDB	15-Aug-06	91.02	112	1	0	No Comments.
GPO	0627GPO2009	FTM_69	90mm Shrapnel	Geo_Reac_2	RDB	15-Aug-06	77.33	96	-1.5	0	Broad Peak.
GPO	0627GPO2010	FTM_60	3.5" Rocket	Geo_Reac_1	JEL	07-Aug-06	73.69	72	-1.5	.5	No Comments.
GPO	0627GPO2011	FTM_21	M33 Grenade	Geo_Reac_2	RDB	15-Aug-06	72.32	105	0	1	No Comments.
GPO	0627GPO2012	FTM_10	Rifle Grenade	Geo_Reac_1	JEL	07-Aug-06	65.53	81	1	-2	Same as Anomaly 27.
GPO	0627GPO2013	FTM_62	3.5" Rocket	Geo_Reac_1	JEL	07-Aug-06	59.35	49	.5	1	Broad Peak.
GPO	0627GPO2014	FTM_43	M48 Trip Flare	Geo_Reac_2	RDB	15-Aug-06	58.51	182	1.5	-1.5	Same as Anomaly 18.
GPO	0627GPO2015	-	-	Geo_Reac_1	JEL	07-Aug-06	53.97	60	0	2	Control Point
GPO	0627GPO2016	FTM_16	37mm HE	Geo_Reac_2	RDB	15-Aug-06	52.8	75	0	0	No Comments.
GPO	0627GPO2017	FTM_34	2.36" Rocket	Geo_Reac_2	RDB	15-Aug-06	51.22	78	-1	-1.5	No Comments.
GPO	0627GPO2018	FTM_43	M48 Trip Flare	Geo_Reac_2	RDB	15-Aug-06	49.48	182	-.5	-2.5	Same as Anomaly 14.
GPO	0627GPO2019	FTM_61	3.5" Rocket	Geo_Reac_2	RDB	15-Aug-06	46.64	88	0	0	No Comments.
GPO	0627GPO2020	FTM_36	60mm Mortar	Geo_Reac_1	JEL	07-Aug-06	46.42	46	.5	-1.5	No Comments.
GPO	0627GPO2021	FTM_34	2.36" Rocket	Geo_Reac_2	RDB	15-Aug-06	45.46	70	0	-1.5	No Comments.
GPO	0627GPO2022	FTM_18	37mm HE	Geo_Reac_1	JEL	07-Aug-06	44.81	67	-1.5	0	No Comments.
GPO	0627GPO2023	FTM_38	60mm Mortar	Geo_Reac_1	JEL	07-Aug-06	44.64	62	-1	-1	Same as Anomaly 33.
GPO	0627GPO2024	FTM_27	Smoke Grenade	Geo_Reac_2	RDB	15-Aug-06	43.02	69	0	1	No Comments.
GPO	0627GPO2025	FTM_20	37mm HE	Geo_Reac_2	RDB	15-Aug-06	38.82	64	1	0	No Comments.
GPO	0627GPO2026	FTM_15	37mm HE	Geo_Reac_2	RDB	15-Aug-06	37.72	70	0	0	No Comments.
GPO	0627GPO2027	FTM_10	Rifle Grenade	Geo_Reac_1	JEL	07-Aug-06	37.40	81	-2	2.5	Same as Anomaly 12.
GPO	0627GPO2028	FTM_37	60mm Mortar	Geo_Reac_2	RDB	15-Aug-06	36.67	47	.5	0	No Comments.
GPO	0627GPO2029	FTM_12	Rifle Grenade	Geo_Reac_1	JEL	07-Aug-06	36.44	31	-1	0	Broad Peak.
GPO	0627GPO2030	FTM_04	M67 Grenade	Geo_Reac_2	RDB	15-Aug-06	35.81	52	.5	0	No Comments.
GPO	0627GPO2031	FTM_42	60mm Mortar	Geo_Reac_2	RDB	15-Aug-06	32.51	44	0	0	No Comments.
GPO	0627GPO2032	FTM_70	105 HE Frag	Geo_Reac_2	RDB	15-Aug-06	31.06	41	0	0	No Comments.
GPO	0627GPO2033	FTM_38	60mm Mortar	Geo_Reac_1	JEL	07-Aug-06	30.96	62	1.5	1	Same as Anomaly 23.
GPO	0627GPO2034	FTM_48	81mm Mortar Light	Geo_Reac_2	RDB	15-Aug-06	30.91	36	-.5	0	No Comments.
GPO	0627GPO2035	FTM_14	37mm HE	Geo_Reac_2	RDB	15-Aug-06	30.54	35	.5	-.5	No Comments.
GPO	0627GPO2036	FTM_51	3" Stokes	Geo_Reac_1	JEL	07-Aug-06	30.28	42	0	-1	No Comments.
GPO	0627GPO2037	FTM_68	90mm Shrapnel	Geo_Reac_2	RDB	15-Aug-06	29.51	42	-.5	0	Broad Peak.
GPO	0627GPO2038	FTM_06	M67 Grenade	Geo_Reac_1	JEL	07-Aug-06	27.50	31	0	1.5	No Comments.
GPO	0627GPO2039	FTM_56	81mm Mortar Teardrop	Geo_Reac_1	JEL	07-Aug-06	30.67	32	0	0	* Reconstructed from ECC data
GPO	0627GPO2040	FTM_11	Rifle Grenade	Geo_Reac_2	RDB	15-Aug-06	25.89	57	.5	1	Same as Anomaly 41.
GPO	0627GPO2041	FTM_11	Rifle Grenade	Geo_Reac_2	RDB	15-Aug-06	24.19	57	-1	0	Same as Anomaly 40.
GPO	0627GPO2042	FTM_22	MK2 Grenade	Geo_Reac_2	RDB	15-Aug-06	24.19	26	0	-.5	No Comments.

MRS	Unique Target ID	Seed Item ID	Seed Item Type	Reac Team ID	Reac Team Leader	Date of Reac	DGM Target Selection mV	Reac Pre- Dig Peak Reading mV	Reac Easting Offset ft	Reac Northing Offset ft	Reacquisition Comments
GPO	0627GPO2043	FTM_75	155 HE	Geo_Reac_1	JEL	07-Aug-06	23.99	31	1	-1	No Comments.
GPO	0627GPO2045	FTM_71	105 HEP	Geo_Reac_1	JEL	07-Aug-06	23.65	26	-.5	-1	No Comments.
GPO	0627GPO2046	FTM_72	105 HEP	Geo_Reac_1	JEL	07-Aug-06	22.29	26	0	0	No Comments.
GPO	0627GPO2047	FTM_23	MK2 Grenade	Geo_Reac_2	RDB	15-Aug-06	21.53	36	0	0	No Comments.
GPO	0627GPO2048	FTM_39	60mm Mortar	Geo_Reac_2	RDB	15-Aug-06	21.06	60	0	0	No Comments.
GPO	0627GPO2049	FTM_17	37mm HE	Geo_Reac_1	JEL	07-Aug-06	20.76	26	.5	0	No Comments.
GPO	0627GPO2050	FTM_29	37mm APT	Geo_Reac_2	RDB	15-Aug-06	20.42	33	0	0	No Comments.
GPO	0627GPO2051	FTM_07	M67 Grenade	Geo_Reac_2	RDB	15-Aug-06	20.3	32	2	-1	No Comments.
GPO	0627GPO2052	FTM_01	40mm Practice	Geo_Reac_2	RDB	15-Aug-06	20.21	30	0	0	No Comments.
GPO	0627GPO2053	-	-	Geo_Reac_2	RDB	15-Aug-06	19.02				DO NOT DIG! (Survey Nail).
GPO	0627GPO2054	FTM_28	37mm APT	Geo_Reac_1	JEL	07-Aug-06	18.17	30	-.5	-.5	No Comments.
GPO	0627GPO2055	FTM_55	81mm Mortar WP	Geo_Reac_2	RDB	15-Aug-06	16.84	10	0	0	No Comments.
GPO	0627GPO2056	FTM_44	75mm Shrapnel	Geo_Reac_2	RDB	15-Aug-06	16.81	13	.5	.5	No Comments.
GPO	0627GPO2057	FTM_08	M67 Grenade	Geo_Reac_2	RDB	15-Aug-06	16.55	25	0	0	No Comments.
GPO	0627GPO2058	FTM_09	M67 Grenade	Geo_Reac_1	JEL	07-Aug-06	16.32	19	.5	-1	No Comments.
GPO	0627GPO2059	FTM_67	75mm Shrapnel	Geo_Reac_1	JEL	07-Aug-06	16.23	20	0	1	No Comments.
GPO	0627GPO2060	FTM_63	3" 50	Geo_Reac_2	RDB	15-Aug-06	16.22	110			Same as Anomaly 7.
GPO	0627GPO2061	FTM_49	81mm Mortar Light	Geo_Reac_1	JEL	07-Aug-06	15.92	16	-1.5	.5	No Comments.
GPO	0627GPO2062	FTM_33	37mm APT	Geo_Reac_1	JEL	07-Aug-06	15.74	25	-.5	-1.5	No Comments.
GPO	0627GPO2063	FTM_05	M67 Grenade with fuze	Geo_Reac_2	RDB	15-Aug-06	15.72	40	-1.5	0	No Comments.
GPO	0627GPO2064	-	-	Geo_Reac_2	RDB	15-Aug-06	15.39	28	-1	-1.5	Same as Anomaly 68.
GPO	0627GPO2065	FTM_45	75mm Shrapnel	Geo_Reac_2	RDB	15-Aug-06	14.94	26	0	0	No Comments.
GPO	0627GPO2066	FTM_19	37mm HE	Geo_Reac_2	RDB	15-Aug-06	14.75	18		1	Same as Anomaly 88.
GPO	0627GPO2067	FTM_58	81mm Mortar Teardrop	Geo_Reac_1	JEL	07-Aug-06	14.52	52	-1	.5	No Comments.
GPO	0627GPO2068	FTM_54	81mm Mortar WP	Geo_Reac_2	RDB	15-Aug-06	14.01	28	1.5	1.5	Same as Anomaly 64.
GPO	0627GPO2069	FTM_25	MK2 Grenade	Geo_Reac_2	RDB	15-Aug-06	13.46	31	0	0	No Comments.
GPO	0627GPO2070	FTM_30	37mm APT	Geo_Reac_1	JEL	07-Aug-06	13.35	29	.5	0	No Comments.
GPO	0627GPO2071	-	-	Geo_Reac_2	RDB	15-Aug-06	13.16				DO NOT DIG! Terrain Induced Response.
GPO	0627GPO2072	FTM_02	40mm Practice	Geo_Reac_1	JEL	07-Aug-06	12.67	21	1	0	No Comments.
GPO	0627GPO2073	FTM_13	Rifle Grenade	Geo_Reac_2	RDB	15-Aug-06	12.38	32	-.5	-1	No Comments.
GPO	0627GPO2074	-	-	Geo_Reac_2	RDB	15-Aug-06	11.98				DO NOT DIG! Terrain Induced Response.
GPO	0627GPO2075	FTM_03	40mm Practice	Geo_Reac_1	JEL	07-Aug-06	11.76	17	.5	-.5	No Comments.
GPO	0627GPO2076	FTM_31	37mm APT	Geo_Reac_1	JEL	07-Aug-06	11.40	18	.5	-.5	Same as Anomaly 77.
GPO	0627GPO2077	FTM_31	37mm APT	Geo_Reac_1	JEL	07-Aug-06	11.32	18	-.5	1	Same as Anomaly 76.
GPO	0627GPO2078	FTM_40	60mm Mortar	Geo_Reac_1	JEL	07-Aug-06	11.31	18	0	-1.5	No Comments.
GPO	0627GPO2079	-	-	Geo_Reac_1	JEL	07-Aug-06	11.08	20	-2	0	Anomaly Sourced In Adjacent Grid.
GPO	0627GPO2080	FTM_26	M26 Grenade with fuze	Geo_Reac_1	JEL	07-Aug-06	11.02	16	1.5	.5	No Comments.
GPO	0627GPO2081	FTM_66	81mm Mortar Light	Geo_Reac_1	JEL	07-Aug-06	10.74	18	1	1	No Comments.
GPO	0627GPO2082	FTM_64	75mm Shrapnel	Geo_Reac_2	RDB	15-Aug-06	10.53	21	.5	-.5	No Comments.
GPO	0627GPO2083	FTM_24	MK2 Grenade	Geo_Reac_1	JEL	07-Aug-06	9.72	18	-1	1	No Comments.
GPO	0627GPO2084	-	-	Geo_Reac_1	JEL	07-Aug-06	9.11	13	0	-1	Influence From Adjacent Anomaly 36.
GPO	0627GPO2085	-	-	Geo_Reac_1	JEL	07-Aug-06	9.03	18	0	0	No Comments.

MRS	Unique Target ID	Seed Item ID	Seed Item Type	Reac Team ID	Reac Team Leader	Date of Reac	DGM Target Selection mV	Reac Pre- Dig Peak Reading mV	Reac Easting Offset ft	Reac Northing Offset ft	Reacquisition Comments
GPO	0627GPO2086	FTM_50	3" Stokes	Geo_Reac_2	RDB	15-Aug-06	8.82	14	0	-1.5	Same as Anomaly 97.
GPO	0627GPO2087	-	-	Geo_Reac_2	RDB	15-Aug-06	8.74	17	0	0	No Comments.
GPO	0627GPO2088	FTM_19	37mm HE	Geo_Reac_2	RDB	15-Aug-06	8.59	18	.5	0	Same as Anomaly 66.
GPO	0627GPO2089	-	-	Geo_Reac_2	RDB	15-Aug-06	8.39	17	0	0	Suspected Terrain Induced Response.
GPO	0627GPO2090	FTM_57	81mm Mortar Teardrop	Geo_Reac_2	RDB	15-Aug-06	8.18	14	0	.5	No Comments.
GPO	0627GPO2091	FTM_47	81mm Mortar Light	Geo_Reac_1	JEL	07-Aug-06	8.03	13	1	0	No Comments.
GPO	0627GPO2092	FTM_35	2.36" Rocket	Geo_Reac_1	JEL	07-Aug-06	7.51	16	-.5	2	Broad Peak
GPO	0627GPO2093	-	-	Geo_Reac_1	JEL	07-Aug-06	7.31	11	-1	1.5	MAG ME! (To the Extent of the Footprint).
GPO	0627GPO2094	-	-	Geo_Reac_1	JEL	07-Aug-06	7.30	8	1.5	1.5	MAG ME! (To the Extent of the Footprint).
GPO	0627GPO2095	-	-	Geo_Reac_1	JEL	07-Aug-06	7.21	8	.5	1.5	No Comments.
GPO	0627GPO2096	FTM_73	105 HEP	Geo_Reac_2	RDB	15-Aug-06	6.84	20	-1.5	0	No Comments.
GPO	0627GPO2097	-	-	Geo_Reac_2	RDB	15-Aug-06	5.95	13	2.5	0	Same as Anomaly 86.
GPO	0627GPO2098	-	-	Geo_Reac_1	JEL	07-Aug-06	5.94	21	.5	1	Broad Response Area. Influence Outside of the
GPO	0627GPO2099	-	-	Geo_Reac_2	RDB	15-Aug-06	5.89	9	0	-1.5	No Comments.
GPO	0627GPO2100	-	-	Geo_Reac_1	JEL	07-Aug-06	5.73	4	0	0	DO NOT DIG! Terrain Induced Response.
GPO	0627GPO2101	-	-	Geo_Reac_1	JEL	07-Aug-06	5.58	0	0	0	DO NOT DIG! Terrain Induced Response.
GPO	0627GPO2102	-	-	Geo_Reac_1	JEL	07-Aug-06	5.53	10	2	-2	No Comments.
GPO	0627GPO2103	-	-	Geo_Reac_2	RDB	15-Aug-06	5.2	12	0	0	No Comments.

Notes:

Data were taken from the 2006 GPO target reacquisition demonstration testing.

Baseline DGM data were the Geo_Team_2 6/27/2006 GPO dataset which was targetd at 5 mV on Channel 2.

Geo_Reac_1 reacquired the north halh of the GPO grid targets and Geo_Reac_2 reacquired the south half of the GPO grid targets.

73 or 75 GPO seeds were detected and targeted (97.3%). Seed items FTM_32 and FTM_41 were not detected /targeted.

All seed items which were detected were reacquited at >= 10 mV. Using a reacuisition threshold or 10 mV (also) gives a detection rate or 73 or 75 seeds (97.3%).

DGM target reacquired at less than 10 mV on Ch 2. None were associated with seed item locations.

ONIS "TREY" GLENN, III
DIRECTOR

BOB RILEY
GOVERNOR

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November 5, 2009

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, AL 36205

RE: ADEM Review and Concurrence: Field Change Requests #8 and #9 to *Revision 1 to Final Program Level Work Plan*
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has completed its review of Field Change Requests (FCR) #8 and #9. FCR #8 is a request to use X-ray imaging to determine whether or not certain munitions and explosives of concern (MEC) are inert or explosively loaded. This will reduce the number of unneeded explosive operations. FCR#9 is a request to add the White's DFX 300 geophysical sensor to the list of sensors approved for surface, near surface, and 1-ft. MEC clearance. The equipment has been tested on the geophysical prove-out area (GPO) and it successfully detected all of the seeded items buried to a depth of 1-ft.

ADEM concurs with the requests and the signed original document is attached for your records.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Governmental Hazardous Waste Branch
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mr. Robin Scott/MDA
Mrs. Brandi Little/ADEM

Attachment

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FCR #8

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 8	**Date: 8/26/09**
LOCATION: McClellan	**Matrix Representative: Richard Satkin**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Appendix E paragraph 7.5 Located MEC Procedures: Modification to existing procedures to allow for the use of a portable x-ray to assist with demolition operations in determining whether an item is live or practice.

2. Reason for Change (Use continuation sheet if necessary)

Section 2.4, Project Execution: the last paragraph states: "As alternative approaches/technologies are identified that will shorten the schedule or improve efficiency through site-specific experience, they will be employed where feasible to complete remaining work."

For some MPPEH, the 2.36-inch rocket in particular, it is difficult /impossible to determine the explosive hazard from the exterior characteristics of the items in the field. This results in numerous blow-in-place operations on non-explosively hazardous practice rounds. The utilization of the X-Ray will help identify munitions as live or practice. This will allow for a more efficient and cost effective manner in which demolition operations are conducted by allowing the Demo team to only spend time and materiel on live items. Down time for contractors will also be reduced by not having to move out of the area for would be demolition operations.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

A new section will be added to the Programmatic Work Plan – Section 2.5.9 X-Ray Operations. MES may periodically subcontract or otherwise make available an X-Ray munitions inspection device with a qualified operator to field inspect 2.36-in rockets and other MPPEH which are difficult to positively identify from exterior characteristics. The X-Ray operator will be a qualified UXO technician who will be designated as essential personnel for the purposes of the inspection. If an X-Ray munitions inspection device with a qualified operator is available, a Team Leader may request X-Ray inspection of any MPPEH which cannot be positively identified. Standard operating procedures for X-Ray operations and for team procedures for items to be X-Rayed are described in SOP – X-Ray Operations (attached).

Three additional entries will be available in the "Anomaly Disposition Selection" menu in the PDA to the DEMO Supervisor. The new selections are: "X-Rayed Inert, "X-Rayed BIP" and "X-Rayed Consolidation". At the end of each day the X-Ray technician will remit his accountability paperwork to the Demo Supervisor. The Demo Supervisor will reconcile the Anomaly Disposition Status of each X-Rayed item in the Demo PDA to reflect its status post X-Ray. As the X-Ray technician determines an item to be inert, he will remove the nose cone from the item, or otherwise make it readily identifiable as inert, keep possession of it and bring all the inert items he/she X-Rayed for the day into the scrap processing area for turn in.

Preparer of FCR (Print name and sign) Jason Soth	Preparer's Title UXOQCS	Date – 9/29/09
UXOQCS - Reviewed (Print name and sign) Jason Soth	Accepted (Y/N) Yes UXOQCS	Date – 9/29/09
Operations Manager- Reviewed (Print name and sign) Cecil Taylor	Accepted (Y/N) Yes Site Operations Manager	Date - 10/5/09
Matrix PM - Reviewed (Print name and sign) Richard Satkin	Accepted (Y/N) Yes Project Manager	Date – 10/9/09
ADEM - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date 11/5/09

FCR #9

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 9 **LOCATION: McClellan**	**Date: 9/21/09** **Matrix Representative: Kent Boler**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

The White's DFX 300 electromagnetic metal detector is approved for use as a handheld detector for clearance to one foot, aggressive surface/near surface clearance, and surface sweep operations.

2. Reason for Change (Use continuation sheet if necessary)

Section 2.4, Project Execution: the last paragraph states: "As alternative approaches/technologies are identified that will shorten the schedule or improve efficiency through site-specific experience, they will be employed where feasible to complete remaining work."

The new White's DFX 300 electromagnetic metal detector was evaluated in the GPO during the week of 31 August 2009 where it was demonstrated detection and location at least 95% of all GPO items buried one foot or less. The DFX 300 was utilized using the McClellan UXO program settings previously developed for the Whites XLT with the hot rock rejection function enabled. The DFX 300 detected 36 of 36 GPO seed items buried one foot or less (and 16 of the 30 buried deeper than one foot) with 141 false positives.

This change will allow for greater operational efficiencies in the field as the White's DFX 300 more reliable for items buried 0.5-1.0 feet than the Whites XLT (which has not been approved for one foot clearance) is lighter and easier to swing than the Vallon metal detector and is less sensitive to hot rock than the Schonstedt gradiometer.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

The Whites DFX 300 is approved for use as a handheld detector for clearance to one foot, aggressive surface/near surface clearance, and surface sweep operations using the McClellan UXO program settings and the hot rock rejection function enabled.

Updated list of approved **handheld** detectors based on GPO evaluation:
Surface Sweep: Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, **Whites DFX 300**/XLT
Aggressive Surface/Near Surface Clearance (6-in Sweep): Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, **Whites DFX 300**/XLT
One Foot Clearance: Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, **Whites DFX 300**
Clearance to Depth: Vallon VMH (large & small head), Schonstedt GA-92XT/52CX

No text changes are required for the Programmatic Work Plan, Revision 1 however, the list of approved handheld detectors will be included in subsequent site-specific work plans.

Preparer of FCR (Print name and sign) Kent Boler [signature]	Preparer's Title QA Geophysicist	Date 9/21/09
UXOQCS - Reviewed (Print name and sign) Jason Soth [signature]	Accepted (Y/N) Yes UXOQCS	Date 9/22/09
Operations Manager- Reviewed (Print name and sign) Cecil Taylor [signature]	Accepted (Y/N) Yes Site Operations Manager	Date 9/22/09
Matrix PM - Reviewed (Print name and sign) Richard Satkin [signature]	Accepted (Y/N) Yes Project Manager	Date 9/23/09
ADEM - Reviewed (Print name and sign) Julie Ange [signature]	Accepted (Y/N) Yes	Date 11/5/09

LANCE R. LEFLEUR
DIRECTOR

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November 2, 2010

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, AL 36205

RE: ADEM Review and Concurrence: Field Change Request #10 to *Revision 1 to Final Program Level Work Plan*
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has completed its review of Field Change Request (FCR) #10. FCR #10 allows the Geonics EM61 MK2 operated in analog mode to be added to the approved list of primary detection instruments to be used in areas being cleared to a depth of one foot. The instruments and experienced operators will be certified in the geophysical prove-out (GPO) or other test area. The Standard Operating Procedure (SOP) – Intrusive Operations using the EM61 in Analog Mode for One-Foot Clearance will be followed and quality control (QC) surveillance will be performed and documented in accordance with Table 10-3 of the approved work plan. The Department concurs with the request and the signed original document is attached for your records.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Governmental Hazardous Waste Branch
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mr. Robin Scott/MDA
Mrs. Brandi Little/ADEM

Attachment

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FCR #10

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 10	Date: 10/08/10
LOCATION: McClellan	Matrix Representative: Kent Boler

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

The Geonics EM61 MK2 operated in analog mode is approved as a primary detection tool in areas being cleared to a depth of one foot.

2. Reason for Change (Use continuation sheet if necessary)

Section 2.4, Project Execution: the last paragraph states: "As alternative approaches/technologies are identified that will shorten the schedule or improve efficiency through site-specific experience, they will be employed where feasible to complete remaining work."

The analog metal detectors currently approved for use in one foot clearance areas are the Vallon VMH (large & small head), Schonstedt GA-52CX and 92XT and the Whites DFX 300. Even with this set of instruments a large number of unproductive digs are being prosecuted without recovering MEC or MEC-sized metallic objects because of the presence of areas of hot rocks, small arms and dispersed metallic debris. The EM61 MK2 in DGM mode has repeatedly demonstrated detection of at least 95% of all GPO items buried. Using the EM61 MK2 in analog mode with the same coverage criteria (2.5-ft across track spacing) as is used during DGM and a threshold of 10mV on Channel 2 will be demonstrated to detect at least 95% of all GPO items buried at one foot or less. Areas where an EM61 MK2 cannot get 100% coverage will be contemporaneously marked in the field for clearance with approved handheld instruments.

This change will allow for greater operational efficiencies in the field as the EM61 MK2 with a 10 mV threshold in analog mode has the potential to eliminate unnecessary digs compared to the current suite of handheld instruments.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

The EM61 MK2 in analog mode is approved for use as a primary detection instrument for clearance to one foot using a 10mV threshold on Channel 2. The instruments and operators will be certified in the GPO or other test area prior to being utilized, and QC inspection points and surveillances will be performed and documented in accordance with Table 10-3 of the Approved Programmatic Work Plan, Revision 1. The Standard Operating Procedure (SOP) – Intrusive Operations using the EM61 in Analog Mode for One-Foot Clearance will be followed during the performance of the EM61 analog detection of MEC in the clearance of one foot areas.

Updated list of approved detection instruments based on GPO evaluation:
One Foot Clearance: Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, Whites DFX 300, **EM61 MK2**

No text changes are required for the Programmatic Work Plan, Revision 1 however, the list of approved handheld detectors will be updated in subsequent site-specific work plans. EM61-specific monitoring criteria (passed inspection, operator experience, warm-up, nulling, etc.) will be evaluated in the preparatory and follow-on QC inspections. No specific new form requirements or QA/QC procedures are anticipated.

Preparer of FCR (Print name and sign)	Preparer's Title	Date
Kent Boler KW Boler	QA Geophysicist	11/1/10
UXOQCS - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Jason Soth Jason Soth	UXOQCS	11/1/10
Operations Manager- Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Cecil Taylor Cecil L Taylor	Site Operations Manager	11/1/10
Matrix PM - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Richard Satkin Richard S Satkin	Project Manager	11/1/10
ADEM - Reviewed (Print name and sign)	Accepted (Y/N)	Date
Julie Ange Julie Ange	Yes	11/2/10

SOP

Intrusive Operations using the EM61 in Analog Mode for One-foot Clearance

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to establish basic procedures for the analog mode (non-DGM) utilization of the Geonics EM61MK2 1m x 0.5m (EM61) metal detector during Intrusive Operations in clearance to one foot areas. Adjustments to the procedure must be approved by the Contractor Project Manager, Matrix Management Staff and ADEM.

2.0 SCOPE

The procedures in this document are applicable to all UXO employees of Contractor utilizing the EM61 during intrusive operations.

3.0 MINIMUM REQUIREMENTS

All employees executing MEC operations at Fort McClellan will comply with the following procedures for operating the EM61 in support of Intrusive Operations. The objective of these procedures is to ensure that the equipment is functioning properly and it also outlines the required steps the instrument operators will follow during intrusive operations with the EM61.

Because the EM61 is a more complicated sensor, EM61 operators will be qualified geophysicists or geologists/UXO technicians with at least six months previous operational experience with an EM61. All EM61 operators and EM61s will be certified by Matrix QC for use for one-foot clearance either in the GPO or by equivalent field test prior to utilization. Matrix QC will document the operators experience and certifications which will be kept in the project files and included in the After Action Report.

3.1 PRE-OPERATIONAL TEST

It is important to conduct and document the daily pre-operational tests to verify the equipment is functioning correctly and to identify any possible equipment issues up front before starting the daily production work. The pre-operational test takes place each morning in the operational areas at a null point in close proximity to the grids that will be worked during that day. The following steps will be utilized to test the EM61 when it will be used as a geophysical instrument on the intrusive team.

1. Verify correct equipment settings. (Setting "4" on the backpack, 1 x 0.5 meter coil selected on allegro, Null Plug installed, Low Power Setting).
2. Check cable connections and handle and wheel mounts for proper tight fit. Waterproof connections and tape up cables as needed.
3. Check the battery voltage (should be a minimum of 12 volts).
4. Conduct the EM61 warm up.
    a. The warm up needs to be a minimum of 10 minutes each time the instrument is turned on.
5. The instrument is then "Nulled" in the cleared area to establish background reading with the coil position level to the ground with wheels attached.
6. Conduct the Static Test
    a. Position the EM61 over test item.
    b. Note mV values on 2nd channel (366us). These values should be the same every time this procedure is performed, +/- 10%.

c. If values are different, make sure the test item is positioned properly and recheck mV values. If still not correct, re-null, and recheck test item.
d. If still not correct, call for technical support from Contractor or Matrix Geophysicist.

7. A "cable shake" test then takes place to verify that there are no fluctuations in the allegro readings. If there are, then the cable systems need readjustment.
8. Document all of the test results along with the specific location of the test and null point utilized in log book.
9. Monitor and record battery levels of both the main battery of the backpack and the Allegro battery reading LED at noon time and at the end of day.

3.2 Operational Use of the EM61 during Intrusive Operations

The following steps outline the operational use of the EM61 when utilized as a geophysical instrument on the intrusive team.

1. Ropes will be utilized to lay out 2.5 feet or 5-foot wide lanes, depending on grid terrain conditions, to facilitate total coverage of the grid.
2. Warm up EM61 for minimum of 10 minutes.
   a. Repeat warm-up period if you turn the EM-61 off for any period of time.
   b. **Check background readings in a quiet area near grids worked.** Find area where EM61 values don't vary much when moving the EM61 around. The values do not have to be equal to zero, but they shouldn't vary much during movement.
3. Place a colored stake at that nulling location and write the null point ID on the stake with permanent ink (NP-Grid Number-01). A grid may contain multiple null points.
4. Document the approximate location of the nullpoint within the grid and the specific orientation of the EM61 when nulled on the map.
5. Null the EM61.
   a. Renull at an appropriate location any time the background response appears to have drifted or when the background response within the grid is suspect to have changed.
6. Fully investigate the complete lane (100% coverage) with the EM61in analog mode while looking for any subsurface contact greater than 10 mV (action level) on the 2nd channel (366us time gate). Full coverage will be achieved by ensuring that all accessible areas of the lane are covered by the EM61 and that all obstructions are interrogated by running the EM61 as close as possible to it/them from all directions.
7. When a metallic anomaly is identified, it will be interrogated from multiple directions to locate the center of the anomaly. Flag each peak location exceeding the action level for further investigation. If areas are delineated above the action level which are larger than the critical radius of 2.5 feet, then the boundary of the area to be cleared will be delineated (painted) or flags will be placed on every sub-peak such that all areas above the action level will be cleared. The team leader shall bend the flag after the anomaly is removed or cleared to one foot.
8. Once the location is excavated, if the excavation is less than 1 foot in depth, the EM61 operator will recheck the location and the surrounding 2.5-foot critical radius with the EM61 to ensure mV readings are below the action level.

9. If obstructions (trees, brush, rocks, large metallic targets, fringe areas of fences, concrete, etc.) prevent adequately covering the area with the EM61 (and cannot be removed) the boundary of the uncovered area will be contemporaneously marked with spray paint for clearance by alternative instruments/techniques. MES QC will be consulted for alternative clearance of metallic anomalies associated with subsurface utilities or beneath unmovable trees or structures. Approved analog instruments (i.e. Schonstedt GA-92XT/52CX, Whites DFX 300, Vallon VMH large and small head) will be used to check and clear these marked areas in accordance with MES Guidance.

3.3 ADDITIONAL INSTUMENT CHECKS

At the first indication of a negative mV value while checking the anomaly location conduct a drift check. The drift check consists of the following steps;

1. Go back to designated nulling location.
2. Check reading;
   a. If reading is a negative value, re-null the EM61 then continue investigating lanes.
      - Ensure adequate equipment warm-up takes place prior to renulling and checking target anomalies.
   b. If reading is not a negative value, then find a new nullpoint representative of the specific geologic background for the area the EM61 is to be utilized. Renull and continue investigating lanes.
3. If you receive a negative mV value after following step 2, recheck the instrument operability and change out the EM61 if necessary, resort to using approved analog Instruments (i.e. Schonstedt GA-92XT/52cX, Whites DFX 300, Vallon VMH large and small head) if necessary for that specific area and annotate on grid sheet.

3.4 Quality Control

EM61-specific monitoring criteria (passed inspection, operator experience, warm-up, cable shake test, nulling, coverage, etc.) will be evaluated in the preparatory and follow-on QC inspections.

LANCE R. LEFLEUR
DIRECTOR

ROBERT J. BENTLEY
GOVERNOR

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June 13, 2011

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, AL 36205

RE: ADEM Review and Concurrence: Field Change Request #11 to *Revision 1 to Final Program Level Work Plan*
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has completed its review of Field Change Request (FCR) #11. FCR #11 is a request to remove specific references to 'UXO Contractor' from the Program Level Work Plan and replace them with the 'UXO Team'. This less restrictive language will allow Matrix to perform one-foot clearance in MRS-12, Tract 12B and step outs in MRS-12 and MRS-13. An independent, third-party contractor under contract directly to MDA (McClellan Development Authority) will perform QA (quality assurance) functions. ADEM concurs with the request and the signed original document is attached for your records.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Governmental Hazardous Waste Branch
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mr. Robin Scott/MDA
Mrs. Brandi Little/ADEM

Attachment

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FCR #11

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 11	**Date: 4/18/11**
LOCATION: McClellan	**Matrix Representative: Richard Satkin**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Modification of terminology in the Program-Level Work Plan, MRS-12 and 13 Site-Specific Work Plan Addendum, and FCR-10, SOP for Intrusive Operations using the EM61 in Analog Mode for One Foot Clearance.

2. Reason for Change (Use continuation sheet if necessary)

This FCR removes specific references to 'UXO Contractor' and replaces it with less restrictive terms thereby providing the flexibility for Matrix to self-perform one-foot clearance if required.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

Matrix will self perform the one foot clearance in MRS-12, Tract 12B and step outs in MRS-12 and MRS-13. The Quality Assurance functions normally performed by Matrix will be performed by an independent third-party contractor under contract directly to the MDA.

Change Revision 1 to Final Program-Level Work Plan, Section 2.5.4 paragraph 4, 1st sentence to read: "The UXO Team will take actions to protect the safety of the personnel on site, the public, and the environment."
Change Revision 1 to Final Program-Level Work Plan, Section 2.5.4 paragraph 4, 3rd sentence to read: "The suspect item will be secured by UXO personnel until relieved by appropriate authority, such as Technical Escort Unit (TEU) or Explosive Ordnance Disposal (EOD) personnel."
Change Revision 1 to Final Program-Level Work Plan, Section 2.5.4 paragraph 5, 1st sentence to read: "The UXO Team will be responsible for entering data from the clearance into their PDAs."
Change Revision 1 to Final Program-Level Work Plan, Section 5.0 paragraph 1, 2st sentence to read: "Before and throughout the field work, performance will be demonstrated at GPO test plot(s) to confirm and certify that personnel and procedures....."
Change MRS-12&13 Site Specific Work Plan Addendum, Section 2.1 paragraph 1, 2nd sentence to read: "To meet this objective, UXO personnel will use the....." Also in Figure 2-1, Project Organization, change "MEC Contractor" to "MEC Team"
Change MRS-12&13 Site Specific Work Plan Addendum, Section 2.5.4 paragraph 3, 6th sentence to read: "The suspect item will be secured by UXO personnel until relieved by appropriate authority, such as Technical Escort Unit (TEU) or Explosive Ordnance Disposal (EOD) personnel."
Change MRS-12&13 Site-Specific Work Plan Addendum, Section 2.5.8.1 paragraph 3, 3rd sentence to read: "The Team Leader will turn over the inspected scrap to the UXOQC staff or designated management personnel whom shall be responsible for inspecting all scrap, verifying that all MEC scrap and Non-MEC scrap is energetic free, and transporting the segregated scrap to the scrap collection area."
FCR #10, SOP for Intrusive Operations using the EM61 in Analog Mode for One Foot Clearance, Section 1.0, 2nd sentence to read: "Adjustments to the procedure must be approved by Matrix Management Staff and ADEM". And Section 2.0, 1st sentence to read:"The procedures in this document are applicable to all personnel utilizing the EM61 during intrusive operations."

Preparer of FCR (Print name and sign)	Preparer's Title	Date
Jason Soth	Task Order Manager	April 18, 2011
UXOQCS - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Harry Wallace	UXOQCS	April 18, 2011
Operations Manager- Reviewed (Print name	Accepted (Y/N) Yes	Date
Cecil Taylor	Site Operations Manager	April 19, 2011
Matrix PM - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Kent Boler	Project Manager	April 19, 2011
ADEM - Reviewed (Print name and sign)	Accepted (Y/N)	Date
Julie Ange	Yes	6/13/11

LANCE R. LEFLEUR
DIRECTOR

ROBERT J. BENTLEY
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June 4, 2012

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, Alabama 36205

RE: **ADEM Review and Concurrence:** *Field Change Request #17 to Revision 1 to Final Program Level Work Plan;* dated May 4, 2012
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has reviewed *Field Change Request #17* (FCR 17). The FCR requests a change to the wording of the MRS-4 (Munitions Response Site – 4) Site Specific Work Plan Section 10.7.3.5, "the QC (quality control) team will assign an experienced EM-61 operator to each dig team to contemporaneously perform excavation sampling inspection in-grid QC". This will be replaced by "the QC team may assign experienced EM-61 operators to dig teams to contemporaneously perform excavation sampling inspection in-grid QC." This will allow the new MEC (munitions and explosives of concern) contractors starting work on site to utilize their experienced EM-61 operators to perform internal in-grid QC. It will also allow them the flexibility to assign EM-61 QC personnel to more than one dig team or to have them trail excavation sampling QC personnel behind the dig teams as needed based on logistical factors and the performance of the individual dig teams. ADEM concurs with this FCR.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Remediation Engineering Section
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mrs. Brandi Little/ADEM
Mr. Robin Scott/MDA

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FCR #17

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 17 MRS-4 SSWP	Date: 5/4/12
LOCATION: McClellan, MRS-4	Matrix Representative: Richard Satkin

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

MRS-4 Site Specific Work Plan **Section 10.7.3.5: QC Step 5, Excavation Sampling Inspection**, last paragraph:

> The QC Team will assign an experienced EM-61 operator to each dig team (as essential QC personnel) to contemporaneously perform excavation sampling inspection in-grid QC.

2. Reason for Change (Use continuation sheet if necessary)

1) Due to instrument interference effects, only one EM-61 may be operated near a grid at any time. For the resumption of MEC clearance work in MRS-4 clearance to depth tracts A and B with new MEC contractors, several of the new contractors have a significant pool of experienced EM-61 operators and we want them to have the flexibility to perform internal in-grid QC with their own EM-61 operators if they are able.
2) For increased operational flexibility, we want to be able to assign EM-61 QC personnel to more than one dig team, or to trail excavation sampling QC behind the dig teams as needed based on logistical factors and the performance of the individual dig teams.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

Change of MRS-4 SSWP **Section 10.7.3.5: QC Step 5, Excavation Sampling Inspection**, last paragraph to read:

> **The QC Team may assign experienced EM-61 operators to dig teams (as essential QC personnel) to contemporaneously perform excavation sampling inspection in-grid QC.**

Change of MRS-4 SSWP Section 2.5.6 Intrusive Operations – Clearance to Depth of Detection, third sentence to read **"If in-grid QC personnel are utilized, they will help confirm that accessible non-DGM areas (data gaps) have been adequately cleared using an EM61 MK."**

Table 10-3. Definable Features of Work – QC Inspection Points/Frequency is not affected.

Preparer of FCR (Print name and sign) Kent Boler	Preparer's Title Project Manager	Date 4/19/12
UXOQCS - Reviewed (Print name and sign) Henry Wallace H. E. Wallace	Accepted (Y/N) Yes UXOQCS	Date 4/20/12
Operations Manager- Reviewed (Print name and sign) Cecil Taylor Cecil L. Taylor	Accepted (Y/N) Yes Site Operations Manager	Date 4/20/12
Matrix PM - Reviewed (Print name and sign) Richard Satkin Richard S Satkin	Accepted (Y/N) Yes Project Manager	Date 4/20/12
ADEM - Reviewed (Print name and sign) Julie Anze Julie Anze	Accepted (Y/N) Yes	Date 6/4/12

LANCE R. LEFLEUR
DIRECTOR

ROBERT J. BENTLEY
GOVERNOR

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December 3, 2012

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, Alabama 36205

RE: **ADEM Review and Concurrence:** *Field Change Request #18 to Revision 1 to Final Program Level Work Plan;* dated September 20, 2012
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has reviewed *Field Change Request #18* (FCR 18). The FCR requests the addition of the Garrett Recon Pro AML-1000/UXO (unexploded ordnance) electromagnetic metal detector as an approved handheld detector for surface sweep, aggressive surface/near surface clearance, clearance to one foot (for both regular and UXO heads), and clearance to depth operations (UXO head only). The request was made based upon an evaluation in the GPO (geophysical prove-out) that demonstrated that the detector was capable of demonstrating detection and location of at least 95% of all GPO items. The Recon Pro detected all items buried one foot or less with each head while only the UXO head was capable of achieving better than the 95% rate required for all the GPO items at all depths. ADEM requested the GPO data to support the FCR and was provided with this data via email October 23. In a conference call on November 6, ADEM verbally concurred with the FCR and this letter is provided to document that decision.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Remediation Engineering Section
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mrs. Brandi Little/ADEM
Mr. Robin Scott/MDA

Attachments

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FCR #18

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 18	**Date: 9/20/12**
LOCATION: McClellan	**Matrix Representative: Jason Soth**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

The Garrett Recon Pro AML-1000/UXO electromagnetic metal detector is approved for use as a handheld detector for surface sweep, aggressive surface/near surface clearance, clearance to one foot (for both regular and UXO heads) and clearance to depth operations (UXO head only).

2. Reason for Change (Use continuation sheet if necessary)

Section 2.4, Project Execution: the last paragraph states: "As alternative approaches/technologies are identified that will shorten the schedule or improve efficiency through site-specific experience, they will be employed where feasible to complete remaining work."

The new Garrett Recon Pro electromagnetic metal detector was evaluated in the GPO during the week of 20 September 2012 where it demonstrated detection and location of at least 95% of all GPO items. The Recon Pro with the UXO head detected 36 of 36 GPO seed items buried one foot or less and 28 of the 30 buried deeper than one foot with 84 false positives. As the Recon Pro with the UXO head detected 98% of the GPO seed items, it is approved for all tasks. Configured with the regular (small) head, it detected 36 of the 36 seed items (100%) buried one foot or less, but testing was stopped when it became apparent it would not detect 95% of the deeper seed items. Accordingly, it is approved for all tasks except clearance to depth in the regular head configuration.

This change will allow for greater operational efficiencies in the field as the Recon Pro can better screen out background and surficial noise clutter than the Vallon. It also operates on multiple frequencies allowing for more instruments to be operated within the same grid. It can also be operated adjacent to large metal objects like fences and foundations while maintaining a high detectability of small metallic items. This unit is less expensive and is more readily available and serviceable within the U.S. than the Vallon, the only other handheld instrument currently approved for clearance to depth.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

The Recon Pro is approved for use as a handheld detector for clearance to one foot and clearance to depth operations.

Updated list of approved handheld detectors based on GPO evaluation:
Surface Sweep: Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, Whites DFX 300/XLT, **Garrett Recon Pro (UXO & regular head)**
Aggressive Surface/Near Surface Clearance (6-in Sweep): Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, Whites DFX 300/XLT, **Garrett Recon Pro (UXO & regular head)**
One Foot Clearance: Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, Whites DFX 300, **Garrett Recon Pro (UXO & regular head)**
Clearance to Depth: Vallon VMH (large & small head), Schonstedt GA-92XT/52CX, **Garrett Recon Pro (UXO head)**

No text changes are required for the Programmatic Work Plan, Revision 1; however, the list of approved handheld detectors will be included in the MRS-7 and all subsequent site-specific work plans.

Preparer of FCR (Print name and sign) Jason Soth	Preparer's Title Site Operations Manager	Date 9/20/12
UXOQCS - Reviewed (Print name and sign) Henry Wallace H. E. Wallace	Accepted (Y/N) Yes UXOQCS	Date 9/20/12
Operations Manager- Reviewed (Print name and sign) Jason Soth	Accepted (Y/N) Yes Site Operations Manager	Date 9/20/12
Matrix PM - Reviewed (Print name and sign) Kent Boler	Accepted (Y/N) Yes Project Manager	Date 9/20/12
ADEM - Reviewed (Print name and sign) Julie Anz	Accepted (Y/N) Yes	Date 12/3/12

GPO ID	Item	Burial Depth (in)	Orientation (deg CW from N)	Dip (deg from horiz)	Garrett UXO head	Garrett regular head
FTM_01	40mm Practice	4	190	Horizontal	Yes	Yes
FTM_02	40mm Practice	6	324	Horizontal	Yes	Yes
FTM_03	40mm Practice	8	330	Horizontal	Yes	Yes
FTM_04	M67 Grenade	4	N/A	Vertical	Yes	Yes
FTM_05	M67 Grenade with fuze	6	N/A	Vertical	Yes	Yes
FTM_06	M67 Grenade	6	N/A	Horizontal	Yes	Yes
FTM_07	M67 Grenade	8	N/A	Horizontal	Yes	Yes
FTM_08	M67 Grenade	10	N/A	Vertical	Yes	Yes
FTM_09	M67 Grenade	12	N/A	Horizontal	Yes	Yes
FTM_10	Rifle Grenade	6	0	Horizontal	Yes	Yes
FTM_11	Rifle Grenade	12	114	20	Yes	Yes
FTM_12	Rifle Grenade	14	301	45	Yes	Yes
FTM_13	Rifle Grenade	18	78	Horizontal	Yes	Yes
FTM_14	37mm HE	6	50	Horizontal	Yes	Yes
FTM_15	37mm HE	8	100	45	Yes	Yes
FTM_16	37mm HE	8	26	60	Yes	Yes
FTM_17	37mm HE	10	72	20	Yes	Yes
FTM_18	37mm HE	12	N/A	Vertical	Yes	Yes
FTM_19	37mm HE	10	0	Horizontal	Yes	Yes
FTM_20	37mm HE	10	N/A	Vertical	Yes	Yes
FTM_21	M33 Grenade	4	160	Horizontal	Yes	Yes
FTM_22	MK2 Grenade	6	70	Horizontal	Yes	Yes
FTM_23	MK2 Grenade	8	30	Horizontal	Yes	Yes
FTM_24	MK2 Grenade	12	120	Horizontal	Yes	Yes
FTM_25	MK2 Grenade	14	N/A	Vertical	Yes	Yes
FTM_26	M26 Grenade with fuze	12	N/A	Horizontal	Yes	Yes
FTM_27	Smoke Grenade	10	114	Horizontal	Yes	Yes
FTM_28	37mm APT	6	58	20	Yes	Yes
FTM_29	37mm APT	8	140	Horizontal	Yes	Yes
FTM_30	37mm APT	10	288	45	Yes	Yes
FTM_31	37mm APT	12	42	60	Yes	Yes
FTM_32	37mm APT	14	25	Horizontal	Yes	Yes
FTM_33	37mm APT	14	N/A	Vertical	Yes	Yes
FTM_34	2.36" Rocket	12	88	Horizontal	Yes	Yes
FTM_35	2.36" Rocket	24	197	20	No	No
FTM_36	60mm Mortar	12	0	Horizontal	Yes	Yes
FTM_37	60mm Mortar	14	2	20	Yes	Yes
FTM_38	60mm Mortar	16	342	45	Yes	Yes
FTM_39	60mm Mortar	18	124	60	Yes	Yes
FTM_40	60mm Mortar	18	176	Horizontal	Yes	Yes
FTM_41	60mm Mortar	18	164	Horizontal	Yes	Yes
FTM_42	60mm Mortar	24	N/A	Vertical	Yes	Yes
FTM_43	M48 Trip Flare	18	N/A	Vertical	Yes	Yes
FTM_44	75mm Shrapnel	30	342	Horizontal	Yes	Yes
FTM_45	75mm Shrapnel	30	N/A	Vertical	Yes	No
FTM_46	81mm Mortar Light	12	46	Horizontal	Yes	Yes
FTM_47	81mm Mortar Light	24	310	45	Yes	Yes
FTM_48	81mm Mortar Light	26	145	30	Yes	Yes
FTM_49	81mm Mortar Light	30	125	45	Yes	Yes
FTM_50	3" Stokes	32	30	Horizontal	Yes	Yes
FTM_51	3" Stokes	32	N/A	Vertical	Yes	Yes
FTM_52	81mm Mortar WP	12	60	45	Yes	Yes
FTM_53	81mm Mortar WP	24	138	60	Yes	Yes
FTM_54	81mm Mortar WP	30	222	Horizontal	Yes	Yes
FTM_55	81mm Mortar WP	30	0	Vertical	Yes	Yes
FTM_56	81mm Mortar Teardrop	20	182	45	Yes	Yes
FTM_57	81mm Mortar Teardrop	26	240	Horizontal	Yes	Yes
FTM_58	81mm Mortar Teardrop	30	N/A	Vertical	Yes	Yes
FTM_59	Mine AT M12A1	12	N/A	Horizontal	Yes	Yes
FTM_60	3.5" Rocket	12	318	20	Yes	Yes
FTM_61	3.5" Rocket	18	336	45	Yes	Yes
FTM_62	3.5" Rocket	18	271	Horizontal	Yes	Yes
FTM_63	3" 50	18	264	45	Yes	Yes
FTM_64	75mm Shrapnel	24	206	Horizontal	Yes	Yes
FTM_65	4.2 Mortar Frag"	26	80	60	Yes	Yes
FTM_66	81mm Mortar Light	30	234	Horizontal	Yes	Yes
FTM_67	75mm Shrapnel	30	N/A	Vertical	Yes	Yes
FTM_68	90mm Shrapnel	24	28	Horizontal	Yes	Yes
FTM_69	90mm Shrapnel	24	N/A	Vertical	Yes	Yes
FTM_70	105 HE Frag	24	124	45	Yes	Yes
FTM_71	105 HEP	30	60	60	Yes	Yes
FTM_72	105 HEP	36	145	45	Yes	No
FTM_73	105 HEP	36	160	30	No	No
FTM_74	155 Schrapnel	30	N/A	Vertical	Yes	No
FTM_75	155 HE	48	50	45	Yes	Yes
FTM_99	12"x1.5" alum rod	12	90	Horizontal	Yes	Yes
				1FT detection rate	35/35	35/35
					100%	100%
				CTD detection Rate	82/84	79/84
					97.6%	94.0%

LANCE R. LEFLEUR
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ROBERT J. BENTLEY
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December 9, 2011

Mr. Richard Satkin
Senior Project Manager
Matrix Environmental Services
283 Rucker Street
Building 3165
Anniston, Alabama 36205

RE: **ADEM Review and Concurrence:** *Field Change Requests #13, 14, 15, and 16 to Revision 1 to Final Program Level Work Plan;* dated October 28, 2011
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL4 210 020 562

Dear Mr. Satkin:

The Alabama Department of Environmental Management (ADEM or the Department) has reviewed *Field Change Requests #13, 14, 15, and 16* (FCRs 13, 14, 15, and 16) documenting changes to the Program Level Work Plan discussed during ADEM's September 13, 2011 site visit and subsequent conference calls. FCR 13 provides a revision of the documentation of the UoP (unit of production) Certification Process via a tracking spreadsheet. FCR 14 revises the three-phase inspection for the Data Management process to clarify current personnel and responsibilities involved. FCR 15 revises the three-phase inspection (TPI) for the MEC-related Scrap Certification/Verification process to clarify that the TPI is not conducted by the individual performing the certification. FCR 16 updates quality control procedures and responsibilities to be used when Matrix is self performing the final work product. ADEM concurs with these FCRs.

For any questions or concerns regarding this matter please contact Ms. Julie Ange of the Remediation Engineering Section at 334-270-5646 or via email at jange@adem.state.al.us.

Sincerely,

Julie Ange
Remediation Engineering Section
Land Division

cc: Mrs. Tracy P. Strickland/ADEM
Mrs. Brandi Little/ADEM
Mr. Robin Scott/MDA

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FCR #13

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 13	**Date: 10/28/11**
LOCATION: McClellan	**Matrix Representative: Richard Satkin**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Revised documentation of UoP Certification Process via a tracking spreadsheet.

2. Reason for Change (Use continuation sheet if necessary)

Agreed upon resolution with ADEM per UXOPro Memo dated 10/12/01 updated after 10/13/11 conference call.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

Added text to Section 10.7.3 (before Section 10.7.3.1) as follows: UoP QC Certification Process tracking will be documented on the UoP Certification Tracking Spreadsheet Log (Appendix D).

Section 10.11 Contractor Forms added as follows:
UoP Certification Tracking Spreadsheet Log

Appendix D: Contractor Forms added as follows (attached):
UoP Certification Tracking Spreadsheet Log

Preparer of FCR (Print name and sign)	Preparer's Title	Date
Kent Boler	Project Manager	10/27/11
UXOQCS - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Henry Wallace H. E. Wallace	UXOQCS	10/28/11
Operations Manager- Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Cecil Taylor Cecil A. Taylor	Site Operations Manager	10/28/11
Matrix PM - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Richard Satkin Richard S. Satkin	Project Manager	10/31/11
ADEM - Reviewed (Print name and sign) Julie Anderson Julie Anderson	Accepted (Y/N) Yes	Date 12/9/11

FCR #14

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 14	**Date: 10/28/11**
LOCATION: McClellan	**Matrix Representative: Richard Satkin**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Revision of three-phase inspection (TPI) for the Data Management process to clarify current personnel and responsibilities involved.

2. Reason for Change (Use continuation sheet if necessary)

Agreed upon resolution with ADEM per UXOPro Memo dated 10/12/01 updated after 10/13/11 conference call.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

Added bullets to Section 10.2.5.4 (Geophysics Site Manager) as follows:

- QC of daily data management tasks performed by the Database Manager (as designated by the GeoQCS).
- Daily email status updates.

Table 10-3 Data Management Definable Feature of Work modified as follows:
Column Sampling Frequency (Intrusive Data Recording...) – replace Data Manager with (NAEVA) Site Manager.
Column Sampling Frequency (Data Backup and Storage...) – replace Data Manager with (NAEVA) Site Manager.
Column QC action (Intrusive Investigation Data ...) – add Follow-on inspection documented on mV comparison tracking spreadsheet.
Column QC Action (Intrusive Data Recording ...) – add Follow-on inspection of completeness verified by email.
Column QC Action (Data Backup and Storage) – add Follow-on inspection of upload verified by email.

Section 10.11 Contractor Forms added as follows:
mV Comparison Tracking Spreadsheet Log

Appendix D: Contractor Forms added as follows (attached):
mV Comparison Tracking Spreadsheet Log

Preparer of FCR (Print name and sign) Kent Boler	Preparer's Title Project Manager	Date 10/27/11
UXOQCS - Reviewed (Print name and sign) Henry Wallace H. E. Wallace	Accepted (Y/N) Yes UXOQCS	Date 10/28/11
Operations Manager- Reviewed (Print name and sign) Cecil Taylor	Accepted (Y/N) Yes Site Operations Manager	Date 10/28/11
Matrix PM - Reviewed (Print name and sign) Richard Satkin	Accepted (Y/N) Yes Project Manager	Date 10/31/11
ADEM - Reviewed (Print name and sign) Julie Anze	Accepted (Y/N) Yes	Date 12/9/11

FCR #15

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 15	**Date: 10/28/11**
LOCATION: McClellan	**Matrix Representative: Richard Satkin**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

Revision of three-phase inspection (TPI) for the MEC-related Scrap Certification/Verification process to clarify that the TPI is not conducted by the individual performing the certification.

2. Reason for Change (Use continuation sheet If necessary)

Agreed upon resolution with ADEM per UXOPro Memo dated 10/12/01 updated after 10/13/11 conference call. As the UXOSO is often tied up with demo at the end of the day and the third party UXOQA is not present every day, the UXOSO or another qualified individual will be designated to perform the TPI.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

Section 2.5.8.1 (last para, 1st line) change "Matrix UXO QA" to "the UXOSO or a qualified designate."

Table 10-3 MEC-Related Scrap Inspection/Certification Definable Feature of Work modified as follows:
Column Sampling Frequency – replace UXOQCS with "UXOSO or qualified designate (not the person doing the certification)".

Preparer of FCR (Print name and sign) Kent Boler	Preparer's Title Project Manager	Date 10/27/11
UXOQCS - Reviewed (Print name and sign) Henry Wallace H. E. Wallace	Accepted (Y/N) Yes UXOQCS	Date 10/28/11
Operations Manager- Reviewed (Print name and sign) Cecil Taylor	Accepted (Y/N) Yes Site Operations Manager	Date 10/28/11
Matrix PM - Reviewed (Print name and sign) Richard Satkin	Accepted (Y/N) Yes Project Manager	Date 10/31/11
ADEM - Reviewed (Print name and sign) Julie Anga	Accepted (Y/N) Yes	Date 12/9/11

FCR #16

FIELD CHANGE REQUEST (FCR) FORM
McClellan: Revision 1 to Final Program Level Work Plan

FCR #: 16	**Date: 10/28/11**
LOCATION: McClellan	**Matrix Representative: Richard Satkin**

1. Description (Items involved, submit sketch, if applicable): (Use continuation sheet if necessary)

When Matrix is self performing a final work product, the SUXOS or qualified designee may perform an internal grid QC to find and correct any deficiencies in intrusive investigations without penalty (analogous to Contractor Internal QC) prior to turnover to the UXOQCS for QC. The SUXOS will document any corrective actions taken and notify the UXOQCS when complete and ready for QC. Any deficiencies found by QC will be reported on a DNR.

2. Reason for Change (Use continuation sheet if necessary)

Agreed up Resolution with ADEM per UXOPro Memo dated 10/12/01 updated after 10/13/11 conference call.

3. Recommended Disposition (Submit sketch, if applicable): (Use continuation sheet if necessary)

The following text will be added to the start of Section 10.7.3.5: The Contractor (or Matrix, if self performing) will have a two working day opportunity from the date of grid (or UoP) completion logged by the UXO Team Leader to perform an internal QC inspection of each grid (or UoP) by the Contractor SUXOS or his designate to find and correct any deficiencies prior to the Step 5 Excavation Sampling Inspection QC. The Contractor SUXOS will document and notify the UXOQCS when each grid (or UoP) is complete and turned over for QC.

No changes to Table 10-3 are required.

Preparer of FCR (Print name and sign)	Preparer's Title	Date
Kent Boler	Project Manager	10/27/11
UXOQCS - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Henry Wallace H. E. Wallace	UXOQCS	10/28/11
Operations Manager- Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Cecil Taylor Cecil L Taylor	Site Operations Manager	10/28/11
Matrix PM - Reviewed (Print name and sign)	Accepted (Y/N) Yes	Date
Richard Satkin Richard S Satkin	Project Manager	10/31/11
ADEM - Reviewed (Print name and sign) Julie Angel Julie Angel	Accepted (Y/N) Yes	Date 12/9/11