

Appendix M

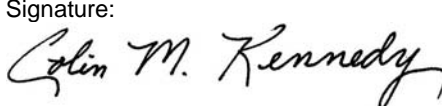
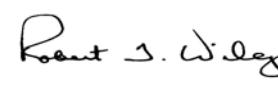


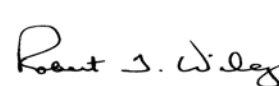
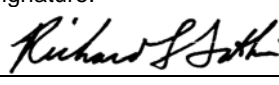
DNR's

ECC/ EODT DNR/NCR Log

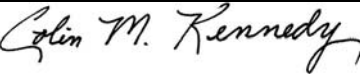
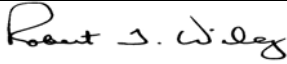

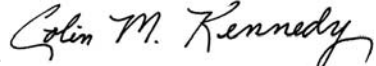
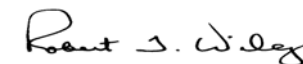
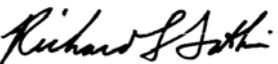
Deficiencies and Non Conformance LOG

(DN)/ NCR No.	DESCRIPTION OF (DN)/ NCR	DATE INITIATED	DATE AND STATUS
001	Inaccurate boundary survey.	21-June-06	10/16/06 Approved by MES
002	A QC blind seed (GeoQC_017) was not targeted in Grid 2AJ10 of UoP SA-AJ09.	9-AUG-06	10/11/06 Approved by MES
003	UXO Team-4 documented a no-find for target 10 at grid 2AV07. A 60MM, practice mortar was discovered during UXOQC of that no-find.	22 Sep 06	10/16/06 Approved by MES
004	Geo QC seed not recovered by Dig Team 4 in SA grid 2AP07	10 Oct 06	1/8/07 Approved by MES
005	Surface clearance teams at MRS-1 left surface metal in several grids. Metal was identified by GEO mapping teams.	9 Oct 06	10/31/06 Approved by MES
006	Intrusive UXO Team-4 failed to find a QA seed located in a data gap (trench)	31 Oct 06	11/15/06 Approved by MES
007	Intrusive UXO Team-6 missed a MEC item (37MM, unfired with cartridge case) at target 16/33.	21 Nov 06	11/28/06 Approved by MES
008	Matrix, Grid failure, 5AA87	28 Feb 07	Approved by MES 20 Mar 07
009	Intrusive Team-6, missed seed, grid 5BC96	5 Mar 07	Approved by MES 20 Mar 07
10	Reacquisition Team, did not target QC seed in grid 5BH98	5 Mar 07	Approved by MES 7 Mar 07
11	Intrusive Team-2 missed QA seed in data gap	12 Apr 07	Approved by MES 18 Apr 07
12	Intrusive Team-5 missed Smoke grenade in DGM Gap (Ditch)	25 April 2007	Approved by MES 25 Apr 07
13	Back hoe missed a 3" stokes in grid 5AO97 anomaly 49	25 April 2007	Approved by MES 14 May 07
14	Item found on confirmation remap "3" Stokes"	10 May 2007	Approved by MES 15 May 07
15	MES reported a MKII Prac. Grenade left in Data. Gap Team 2 grid 2AR26	11-May-07	Approved by MES 17 May 07
16	Expended 37mm found in grid C5AU99 Team 7	24 May 07	Approved by MES 29 May 07
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18			
19			
20			


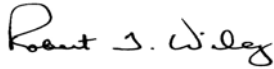
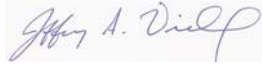

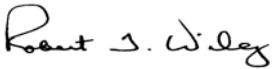

Deficiency Notice Report (DNR) Survey Team 1 - McClellan

1 - D-N- Number	2 - Activity	3 - Date
001	Southern Alpha Boundary Survey	6/21/06
4 - Describe Condition		
<p>Survey team 1 has been working on staking out the Southern Alpha Boundary. During this operation, the team went to double check previously emplaced points to make sure that they could repeat coordinate locations. It was found that after shooting points from known survey control monuments that the team was unable to repeat the previously recorded coordinate locations. Some points were found to be up to 6 feet off from their expected locations. The survey teams, as a result, have spent many working hours to find the cause of the problem and to remedy the situation.</p>		
5 - Root Cause Analysis		
<p>An angular error occurred at point #CPMT9. While operating the TOPCON Total Station, the angle display on the reference station screen did not update at a fast enough rates to keep up with the actual calculated angles. This angular error resulted in an initial 0.22' error that compounded as survey team 1 progressed utilizing staked position, after point #CPMT9, as reference positions.</p>		
6 - Recommended Corrective Action		
<p>Ensure that angle measurements are displayed properly on the reference Total Station screen by rotating the "reference gun" slowly so that angle measurements displayed on the Total Station reference screen are representing the actual angle calculations being made within the Total Station computing device.</p>		
Identified By: Colin M. Kennedy	Signature: 	Corrective Action Due Date: 06/21/06
QCM Review: Bob Wiley	Signature: 	Date: 7/18/06
Responsible Manager: Jeff Viebrock	Signature: 	Date: 7/19/06
7 - Corrective Action Taken		
<p>After finding the angular error, the control loop closed 1:25,500 feet, which exceeds <i>Standards of Practice in Alabama</i>. Survey team 1 has been instructed on the proper use of the TOPCON Total Station and how to identify and correct angular errors on the display screen.</p>		
Taken By: Sain Associates Inc.	Signature:	Date:
8 - Closeout Action		
Responsible Manager: Colin M. Kennedy	Signature: 	Date: 8/29/06
QCM Comments: Sain Associates survey team replaced by MACTEC survey team.		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 8/29/06
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: October 16, 2006


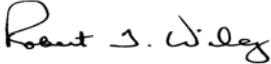

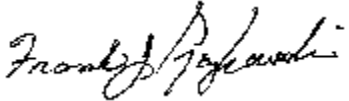


**Deficiency Notice Report (DNR) #002
McClellan - Geo Team 1**

1 - D-N- Number	2 - Activity	3 - Date
002	Southern Alpha Geophysical Mapping	8/9/06
4 - Describe Condition		
<p>A QC blind seed (GeoQC_017) was not targeted in Grid 2AJ10 of UoP SA-AJ09. The data for this grid was collected traversing in a north-south direction by Geo Team #1 on July 31, 2006. The seed item was a 37mm APT buried horizontal at a depth of six inches with a north/south orientation. The GeoQCS and the NAEVA lead site geophysicist visited the location where the seed was emplaced to determine the cause of why this seed item was not detected above the established mV threshold and thereby not warranted for target selection by the data analyst.</p>		
5 - Root Cause Analysis		
<p>During the course of the root cause investigation, it was found that a tree was present approximately 4 ft south of the seed location. However, the geophysical map did not represent the location of this tree in the form of a standard data gap. Because this tree was situated directly between data collection lines, NAEVA's geo team 1 veered around the tree slightly deviating from the straight line data acquisition path. This slight deviation in line path resulted in the instrument not passing directly over the seed item. This slight lane path deviation resulted in a seed item mV response being lower than the target mV threshold of 5mV in EM61 channel 2, and as such, the seed item was not targeted.</p>		
6 - Recommended Corrective Action		
<p>Inform the geophysical data collection teams of this incident and explain how this problem occurred. Instruct field geophysical data collection teams of the importance of walking straight data acquisition lines at all times even if obstacles are encountered at the edge of acquisition paths.</p>		
<p>Due to the fact that it is physically impossible for the geophysical teams to survey 100% of the grids and areas adjacent to vegetative and topographical features, a secondary corrective action is to generate an FCR that will amend the work plan so that once all the geophysical anomalies in a grid have been investigated the intrusive teams will then search a 4 ft radius around each tree (using hand held metal detectors) to further verify that the grid has been cleared successfully. This secondary operation is currently not in the work plan; however, Section 10.8.3 - Bullet #4 of the Work Plan states that one of the potential remedies to be considered for corrective action is the implementation of new procedures or modification of already existing procedures. Thus it is ECC's view that a viable potential corrective action, in response to this type of explainable discrepancy, is the modification of the work plan accordingly, and to wait to see if the intrusive / reacquisition teams find the seed item in question using this 4 ft inspection radius around each tree.</p>		
Identified By: Colin M. Kennedy GEOQCS	Signature: 	Created on: 08/09/06
QCM Review: Robert T. Wiley	Signature: 	Date: 09/01/06
Responsible Manager:	Signature: 	Date: 01 Sep 2006
7 - Corrective Action Taken		
<p>NAEVA's geophysical teams were informed of the discrepancy and were further instructed in correct field survey techniques by the ECC GEOQCM (Colin Kennedy) and NAEVA's Geophysical lead (Alex Kostera). FCR#4 is currently being generated that will amend section 2.5.3 of the work plan to specifically discuss that a 4 ft radius around each tree is to be verified to be cleared by either the reacquisition team with an EM61 or the intrusive investigation team with a Vallon.</p>		
Taken By: Colin Kennedy	Signature: 	Date: August 10, 2006
8 - Closeout Action		
<p>QCM concurs with the corrective action and will review the FCR.</p>		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 09/01/06
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: October 11, 2006


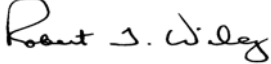


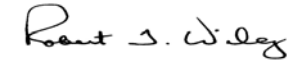

**Deficiency Notice Report (DNR) #003
McClellan – UXO Team-4**

1 – D-N- Number	2 - Activity	3 - Date
003	Southern Alpha UXO Intrusive Investigation	09-22-06
4 - Describe Condition		
<p>UXO Team-4: Team Leader Michael Brown. Team reported a no find during Intrusive Investigation operations in Southern Alpha, grid 2AV07, Target-10. A pre-dig reading of 21 mV was documented on the reacquisition detail report given to the team prior to operations.</p> <p>During the QC investigation of that grid using the EM61 MK2, we discovered an anomaly at that location that registered a 25mV reading. During our subsequent investigation, an inert M-69, 60MM mortar (drill) was located at a depth of 18 inches, in a horizontal position.</p>		
5 - Root Cause Analysis		
<p>An investigation revealed that the Team was using the ML-1M and the Vallon detection instruments. Weather was not a factor. Team Leader, Michael Brown stated his team checked the target with the ML-1M but wasn't sure the Vallon was used to check that target. He also stated that his team was constantly receiving new people from other teams due to personnel shortages site wide. Furthermore, he had to spend most of his time documenting finds in the personal data assistant (PDA). He also stated he trusted his team member's work and didn't think a follow-up check was needed.</p> <p>Root cause:</p> <ol style="list-style-type: none"> 1. The team didn't make an exploratory dig to check deeper at the target site prior to calling it a no find.. 2. The Team Leader didn't perform a self QC of targets. 3. Closer attention to team actions is needed during target investigations. 4. Team composition was constantly changing. 5. The Team Leader didn't verify the target was checked with a Vallon. 		
6 – Recommended Corrective Action		
<p>Corrective actions for Team:</p> <ol style="list-style-type: none"> 1. Talked with MES/QA and PM and verified the number of targets checked by QA in Team'-4s- grids and revisit any suspect grids. 2. Increased targets selected in new grids to 35% (tightened status) 3. Revisit Team's grids QC'd but not QA'd and check 25% additional targets. 4. Standardize no find procedures for all teams. 		
Identified By: Terry Rutherford	Signature: 	Created on: 10-02-06
QCM Review: Bob Wiley	Signature: 	Date: 10-3-06
Responsible Manager: Jeff Viebrock	Signature: 	Date: 10-3-06
7 - Corrective Action Taken		
<ol style="list-style-type: none"> 1. QC revisited grid 2AH11 that Team-4 completed and wasn't looked at by MES/QA yet. An additional 25% of the targets and 4 ft around all trees were checked. Grid passed. 2. Team's QC status was increased to tightened (35%) until ECC UXO QC and MES/UXO QA agree to lower status. 3. Standardized no find procedures were implemented, i.e.; check with all available instruments and take an exploratory dig if a no find still exists and recheck. 4. Make the EM61 MK2 available for team use when not being used by QC and request 2 additional EM61s for team use. 		
Taken By: Frank Czajkowski	Signature: 	Date: 10-3-06
8 – Closeout Action		
QCM concurs with the corrective action.		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 10-3-06
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: October 16, 2006


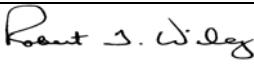

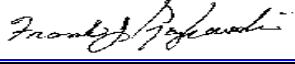
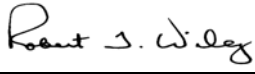

**Deficiency Notice Report (DNR) #004
McClellan – UXO Team 4**

1 – D-N- Number	2 - Activity	3 - Date
004	Southern Alpha UXO Team 4 Intrusive Operations in grid 2AP07	10/10/06
4 - Describe Condition		
<p>A QC blind seed (GeoQC_012) was targeted by the NAEVA geophysical data analyst in Grid 2AP07 of UoP SA-AP07. The data for this grid was collected by Geo Team #2 on July 7, 2006. The seed item was a 37mm APT buried horizontal at a depth of 6.5 inches. After intrusive investigation operations had taken place within grid 2AP07 (Oct. 4 – Oct. 5) the ECC QC team reviewed the intrusive results for this particular grid and recognized that the Geo QC seed was not reported for the target number that pertained to the blind seed (2AP07012) location. On Oct. 10 the UXOQCS assistant and the GeoQCS assistant visited the location where the seed was emplaced to determine the cause of why this seed item was not reported during intrusive investigation operations. Blind seed (GeoQC_012) was recovered by the ECC QC team in a spoils pile near target selections 2AP07012 and 2AP07018.</p>		
5 - Root Cause Analysis		
<p>During the course of the root cause investigation, seed # GeoQC_012 was found in a spoils pile near target selections 2AP07012 and 2AP07018. The seed was tagged and painted. The reason that the seed item was not reported in the intrusive log was that it was not discovered by UXO team #4. It is therefore logically discerned that the UXO team #4 was not properly interrogating spoils piles to ensure that a grid is sanitized to a sufficient degree.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1.) Set measures in place to ensure that UXO intrusive teams perform a self QC check of all targets, spoils piles and geophysical data gaps. The self QC check will be documented in the team field logbook. This effort shall involve rechecking, with metal detectors (Schonstedts, Vallons, and/or EM61 MK2), all excavations before leaving the grid to ensure proper sanitization. Geophysical contour maps shall also be utilized on a regular basis to reasonably ascertain the anomaly source. 2.) Replace Team Leader of UXO team #4 with a qualified EOD Tech III. The replacement member shall be properly trained and fully understand project specific requirements. 3.) Rework 100% of UXO team #4's assigned grids from the point from which the problem occurred until the present time. 		
Identified By: Terry Rutherford UXOQCS	Signature: 	Created on: 10/10/06
QCM Review: Robert T. Wiley	Signature: 	Date: October 11, 2006
Responsible Manager: Jeff Viebrock	Signature: 	Date: November 7, 2006
7 - Corrective Action Taken		
<ol style="list-style-type: none"> 1- Brief all team leaders of the importance of clearing not only the hole, but also the spoils. 2- Review resumes of available Tech IIIs and replace team leader with the most qualified person. 3- Rework all grids completed by Team-4 from date of missed seed. 		
Taken By: Frank Czajkowski	Signature: 	Date: 10/17/06
8 – Closeout Action		
QCM concurs with the corrective action and will review the FCR.		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: November 7, 2006
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: January 8, 2007


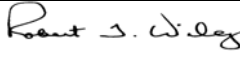

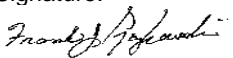
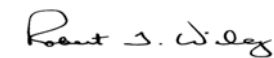

**Deficiency Notice Report (DNR) #005
McClellan – UXO Team 4**

1 – D-N- Number	2 - Activity	3 - Date
005	MRS-1, Bravo area Surface Clearance	10/09/06
4 - Describe Condition		
<p>A GEO Team mapping Grids 5AV99 and 5AV98 discovered 3 inch Stokes mortars stacked near grid stake on Monday, October 9, 2006. They contacted NAEVA/PM who in turn contacted UXO QC. UXO QC investigated the area and found several more 3 inch Stokes as well as several 75MM shrapnel rounds. All items were unfuzed, however, four 3 inch stokes had intact fuze wells and required demo procedures. After this was discovered, the QC team attempted to isolate the area that seemed to be missed during the surface clearance. During this investigation, several MEC/MEC scrap items as well as a lot of scrap metal was discovered in approximately 50 surrounding grids. At this time, we ended the QC investigation and reported the results to the Site Supervisor and SUXOS. After discussion, the PM was notified.</p>		
5 - Root Cause Analysis		
<p>During the surface clearance of MRS-1, all teams were combined and conducted the clearance as a single team. Emphasis by the SUXOS to complete the surface clearance was stressed so intrusive ops by all teams could commence. The data base was checked to determine how many grids and what days they were completed. During the final three days of the surface clearance (2, 3 and 4 Oct), 224 grids were documented as surface swept. This was a higher than normal grid count for surface clearance ops. The teams either missed grids or the level of effort was reduced in an effort to finish. The stacked mortars were left in the grid following a sweep and team forgot to pick them up at the end of the day. The others mortars and 75MMs found in the grid were not discovered by the surface clearance team.</p>		
6 – Recommended Corrective Action		
<ul style="list-style-type: none"> - ECC McClellan PM determined that the entire MRS-1 surface clearance operation be reworked. He felt it was the only way to ensure compliance with the work plan and to lessen the work further down the line (target process/picking, reacquisition, Intrusive, etc.) - Provide an additional QC briefing to the surface clearance team to stress the importance of clearing surface clutter prior to mapping. - Perform additional follow-up QC inspections. - Place UXO QC surface seeds at a minimum of one per UoP and verify their discovery. 		
Identified By: Terry Rutherford UXOQCS	Signature: 	Created on: 10/10/06
QCM Review: Robert T. Wiley	Signature: 	Date: October 16, 2006
Responsible Manager: Jeff Viebrock	Signature: 	Date: October 24, 2006
7 - Corrective Action Taken		
<ul style="list-style-type: none"> - 30 Surface seeds have been placed (approx 50% of area) thus far. - Teams have been briefed 		
Taken By: Frank Czajkowski	Signature: 	Date: 10/13/06
8 – Closeout Action		
QCM concurs with the corrective action.		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: October 16, 2006
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: October 31, 2006






**Deficiency Notice Report (DNR) #006
McClellan – UXO Team 4**

1 – D-N- Number	2 - Activity	3 - Date
006	Southern Alpha UXO Team 4 Intrusive Operations in grid 2AJ14, UoP SA-AJ13	10/31/06
4 - Describe Condition		
<p>After intrusive investigation operation had taken place within grid 2AJ14 (23 and 24 Oct 06.) The ECC QC team was performing a grid QC investigation and located a QA blind seed (MES/QA seed #130, 37MM projectile, painted blue and tagged) in a data gap (trench bank). This seed was not discovered by the Intrusive Team. The area around the seed contained several large nails. The QC team didn't locate the seed until several nails were located and removed. The nails apparently masked the seed in the trench side wall. The trench was partially mapped by a NAEVA GEO Team. The seed was located in an area of the trench that was not mapped or targeted. Teams are required to mag and dig data gaps 4ft around trees and other locations that can not be Geophysically mapped.</p>		
5 - Root Cause Analysis		
<p>The area in the trench, where the seed was located, was investigated and characterized as a nail bed. Other nail beds were previously discovered and excavated at targets 1 through 6. Further review of the QC anomaly tracking log and discussion with the team Leader revealed nails present throughout the grid (49 targets). The team characterized that part of the data gap as a nail bed too quickly based on dig result in this particular grid. There was not a problem with the 4ft data gaps around trees.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> Brief all Team Leaders on the importance of thoroughly checking unmapped data gaps and not characterize an area until the entire has been thoroughly investigated. Since the team had successfully cleared all data gaps associated with trees, the recommended corrective action is to rework only those data gaps not associated with trees in the grids that were completed by Team-4 since 24 Oct. 		
Identified By: Terry Rutherford UXOQCS	Signature: 	Created on: 10/31/06
QCM Review: Robert T. Wiley	Signature: 	Date: November 7, 2006
Responsible Manager: Jeff Viebrock	Signature: 	Date: November 8, 2006
7 - Corrective Action Taken		
<ol style="list-style-type: none"> Briefed all team leaders to thoroughly clear data gaps, and not to characterize an area prematurely. Reviewed grids completed by Team since seed was missed. No data gaps were present in those grids except trees. The team had no problems with tree data gaps, so this corrective action was not needed. 		
Taken By: Frank Czajkowski	Signature: 	Date: 8 Nov 06
8 – Closeout Action		
QCM concurs with the corrective action.		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: November 8, 2006
Matrix Comments: The recommended corrective action and the action implemented is acceptable.		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: November 15, 2006






**Deficiency Notice Report (DNR) #007
McClellan – UXO Team 6**

1 – D-N- Number	2 - Activity	3 - Date
007	MRS-1 UXO Team 6 Intrusive Operations in grid 2AE03, UoP SBG-AD02	20 Nov 06
4 - Describe Condition		
<p>After intrusive investigation operations had taken place in grid 2AE03, UoP SBG-AD02, the ECC QC/NAEVA QC team performed the post excavation QC inspection. At target 16, a live 37MM projectile, unfired with cartridge case attached was discovered. We used the EM-61 initially and got a 13 mV reading. Using a Schonstedt, we pin pointed the 37MM within one foot of target 16. Team-6 was near by, so we called the team leader over to inform him of the find, location and depth. Additionally, Bravo SUXOS was informed of the grid failure and was shown the item and location.</p>		
5 - Root Cause Analysis		
<p>Review of the QC anomaly tracking log for grid 2AE03 revealed another 37MM, unfired with cartridge case was discovered at target 2. Additionally, the tracking log indicated that the team checked targets 16 and 33 and categorized them as SAA at a depth of 1 inch. After discussion with the team leader, it was determined that the team checked both targets and located both brass and bullets then categorized them as small arms ammo. Team leader stated that the EM61 was available and used to check problematic holes only. Other instruments used by the team were the Vallon with small head, Schonstedt and Fisher all metals. Team leader also stated that the holes were checked by team members using the Schonstedt and Vallon while he completed PDA entries. Team leader identified PDA entry procedures as taking too long to document unnecessary pages and did not allow him enough time to properly supervise team members. He personally did not check all targets but verified that they were checked by team members. However, team members failed to adequately clear/check targets and team leader didn't perform a self QC of grid.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. Rework grid 2AE03 2. Direct all teams to use the Vallon with large head for clearing holes and use the small head for tight spaces near and around trees only. 3. Use the EM61 to check all holes following completion of grids. Trained UXO technicians dedicated to the EM61 in Southern Alpha and MRS-1 will coordinate and schedule times between teams to check completed grids and problematic areas. Teams will document in their PDA any targets above the established threshold of 5mV that are categorized as nails, SAA, rusted material, etc. where items are left in place. 4. SUXOS will perform follow-up training to all team-6 members in proper intrusive investigation techniques and hole clearing procedures. 5. Perform daily follow up QC surveillances of team-6 for the next five days starting 28 Nov 06. 6. Streamline PDA entry steps by eliminating unnecessary pages.(Complete) 7. Inform Team Leader that future failures will result in more stringent corrective actions. 		
Identified By: Terry Rutherford UXOQCS	Signature: 	Created on: 27 Nov 06
QCM Review: Robert T. Wiley	Signature: 	Date: November 27, 2006
Responsible Manager: Jeff Viebrock	Signature: 	27 November 2006
7 - Corrective Action Taken		
<p>I agree with all recommended corrective actions and will direct implementation immediately. I will make the determination whether to dedicate a UXO tech full time with each EM61 after consultation with PMs</p>		
Taken By: Frank Czajkowski	Signature: 	Date: 11/27/06
8 – Closeout Action		
<p>QCM concurs with the corrective action and will review the FCR.</p>		
QCM Review: <input type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: November 27, 2006
Matrix Comments: Matrix PM concurs with the corrective actions.		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: November 28, 2006






Deficiency Notice Report (DNR) #008 McClellan – Former UXO Company

1 – D-N- Number	2 - Activity	3 - Date
008	MRS-1, Former Co. UXO Team, Intrusive Operations in grid 5AA87, UoP SBG AA86	27 Feb 07
4 - Describe Condition		
<p>After intrusive investigation operation, by the former UXO company working the McClellan project, had taken place within grid 5AA87, UoP SBG-AA86, the EODT QC team performed the QC investigation (15% randomly selected targets) and passed the grid. QC completed grid report and e-mailed it to Matrix UXO QA. Matrix UXO QA checked the grid and located metal can debris (two partially rusted cans) at targets 3 and 28 and stated there was a trash pit that was cleared and failed the grid.</p>		
5 - Root Cause Analysis		
<p>EODT UXO QC investigated the grid utilizing an EM-61 with UXO operators and found that target #3 had a 3mV reading and target 28 had a 5mV reading, after QA removed two partial rusted cans. A nail was located between the targets and removed. Both holes were below established threshold. Additionally, EODT QC returned to the grid 28 Feb 07 with a NAEVA EM61 and operator and checked all targets. All targets were below established threshold except: Target 6, 12mV determined to be nails Target 9, 10mV determined to be nails Target 24, 10mV determined to be nails</p> <p>EODT can not determine the root cause of this failure. It occurred during the former UXO company's site operations.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. Check all targets with a NAEVA EM61 and operator (complete, 28 Feb 07) 2. Rework all targets above the established threshold (complete , 28 Feb 07 by QC) 3. Increase the QC inspection status to 25% for remaining grids completed by the former UXO Co. 4. During EODT QC checks of the former UXO Co's grids, three grids (2BA18, 5AE88 & 5AF88) were identified to contain several targets above the established threshold. Discussion with former team leaders reveled that those grids were not fully completed. The final intrusive step of checking target with a UXO EM61 operator never happened due to contract termination. These three grids and any more of the former Co's grids discovered during QC checks will be checked 100% with a UXO EM61 operator and intrusive team. 		
Identified By: Terry Rutherford UXOQCA	Signature: 	Created on: 28 Feb 07
QCM Review: Billy Capstick	Signature:  Signature: Billy Capstick, UXOQCS	Date: 14 Mar 07
Responsible Manager Tom Hinote, EODT Site Manager	Signature: 	Date: 14 Mar 07
7 - Corrective Action Taken		
Agree with recommended corrective actions		
Action taken By: Tom Hinote EODT Site Manager	Signature: 	Date: 14 Mar 07
8 – Closeout Action		
QCM concurs with the corrective action		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature:  Signature: Billy Capstick, UXOQCS	Date: 14 Mar Feb 07
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: Richard Satkin, Project Manager	Date: March 20, 2007







**Deficiency Notice Report (DNR) #009
McClellan –UXO Team 6**

1 – D-N- Number	2 - Activity	3 - Date
009	MRS-1 Intrusive Investigation in Grid 5BC96	5 Mar 07
4 - Describe Condition		
<p>After intrusive investigation operations ended in grid 5BC96, the EODT UXO QC team performed post excavation hole checks and discovered that a QC blind seed was missed (#168, 37MM projectile, tagged and painted Orange). This seed was targeted by the NAEVA processors and targeting confirmed by Geo QC, 7.72mV. It was then targeted by the Reacquisition Team, target # 68, 8mV. The Seed was buried 10.5", Horizontal and at a 90 degree orientation from the SW corner stake. The intrusive team dug 4" and identified the anomaly as "geologic". The team leader then called the hole clear (below established threshold). The UXO QC team located and removed the seed item.</p>		
5 - Root Cause Analysis		
<p>The seed was buried prior to raising the established threshold to 7mV. Geologic material was removed from the target area and hole was checked by an UXO EM61 operator. The hole was determined to be below the established threshold (6mV). Removal of the geologic material coupled with the depth of the seed (10.5 inches) caused the seed item to be below the established threshold.</p>		
6 – Recommended Corrective Action		
<p>1. Use the EM61 when placing subsurface seeds to ensure there are no other anomalies/geologic interference near it and to establish that the seed is detectable above the established mV threshold. 2. QC will investigate the remaining buried Geo seeds and determine if they are detectable (above 7mV threshold). If they are not detectable, they will then be selected as QC targets.</p>		
Identified By: Terry Rutherford UXOQCA	Signature: 	Created on: 05 Mar 07
QCM Review: William Capstick	Signature: 	Date: 14 Mar 07
Site Manager: Tom Hinote	Signature: 	Date: 14 Mar 07
7 - Corrective Action Taken		
Concur with recommended corrective actions (section 6)		
Taken By: Tom Hinote	Signature: 	Date: 14 Mar 07
8 – Closeout Action		
QCM concurs with the corrective action.		
QCM Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 14 Mar 07
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: Richard Satkin, Project Manager	Date: March 20, 2007






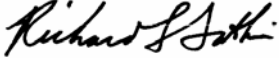
**Deficiency Notice Report (DNR) #010
McClellan – Reacquisition - Team 4**

1 – D-N- Number	2 - Activity	3 - Date
010	MRS-1 Anomaly Reacquisition in Grid 5BH98	5 Mar 07
4 - Describe Condition		
<p>After intrusive investigation operations was completed in grid 5BH98. The EODT QC team was performing post excavation hole checks and discovered a QC blind seed, target 44 (seed #154, 37MM projectile, tagged and painted Orange) was missed within the extents of the same mapped compound anomaly. This seed was not targeted by the Reacquisition Team (Flag was 5' from the seed item). The processed data however, placed the flag within 2.5' of the seed location. The Seed was buried 8", Horizontal and at 240 degree orientation from SW corner stake. The area around the seed contained multiple 37mm fragments. The QC team located and removed the seed item.</p>		
5 - Root Cause Analysis		
<p>The reacquired area near the seed contained multiple 37mm Fragments. The reacquisition team moved the flag from its original targeted location, 5' East, to a peak response (18mV) which was a 37mm fragment @ 2". That response was greater than the seed (11mV) 37MM @ 8 ". The reacquisition team consisted of Dan Hennessy and Joel Masselink. Dan (EM61 operator) was certified at the GPO grid and has been on the reacquisition team since early Nov 06.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. Brief all Reacquisition Teams on the importance of thoroughly checking for and targeting daughter anomalies. If additional anomalies are detected greater than 2.5' from the original flag location, those anomalies will be picked and flagged as daughter anomalies. 2. Review all reacquisition data that has not been intrusively investigated to see if "multiple targets exist" comments are listed. If so, ensure "mag and dig the extent of footprint" is on the dig sheet. If not, add it to the dig sheets so teams know to mag and dig the footprint. 3. Brief all UXO team leaders to check PDA/dig sheets for Reacquisition Team comments for multiple targets and mag and dig the extent of footprint. 		
Identified By: Brian Gentry UXOQC	Signature: 	Created on: 05 Mar 07
QCM Review: William Capstick	Signature: 	Date: 14Mar 07
Site Manager: Tom Hinote	Signature: 	Date: 14 Mar 07
7 - Corrective Action Taken		
<p>As stated in DNR 009, in the future we will use the EM61 prior to placement of any subsurface seeds and record mV readings of seeds.</p>		
Taken By: Tom Hinote	Signature: 	Date: 14 Mar 07
8 – Closeout Action		
<p>QCM concurs with the corrective action.</p>		
QCM: Reviewed by: Billy Capstick <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 14 Mar 07
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: Richard Satkin, Project Manager	Date: March 21, 2007







**Deficiency Notice Report (DNR) #011
McClellan – UXO Team 2**

1 – D-N- Number	2 - Activity	3 - Date
011	Southern Alpha, UXO Team 2 Intrusive Investigation in grid 2AY24, UoP SA-AX24	12 Apr 07
4 - Describe Condition		
<p>UXO Team-2 performed intrusive investigation operation in grid 2AY24, UoP SA-AX24, 14/15 Mar 07 and the EODT QC team completed QC Step V, post excavation hole check on 4 Apr 07. On 11 April 07, Matrix QA informed EODT that a data gap QA seed (#103, MK-2 grenade) was placed in this grid on 15 Aug 06 but not recovered. This grid was surface cleared on 10 Aug 06 by the previous Contractor.</p>		
5 - Root Cause Analysis		
<p>Team-2 team leader was interviewed and stated that his team performed data gap operations as briefed during the QC preparatory briefing, check within 2 ft of all trees and check all other data gaps (creek, slope log, ditch, etc.) located within a grid. His only explanation was that a team member was not paying attention to detail during the data gap check.</p> <p>Jason Soth, UXO QCA performed QC Step V, post excavation hole check and was interviewed. He stated that during the QC check of a grid, approximately 25% of tree data gaps are randomly checked. He suspects that the tree gap in question was not QC checked.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. Brief all team leaders on the importance of performing quality data gap checks around trees and other non mapped areas. 2. Rework all tree data gaps in UoP SA-AX24 		
Identified By: Terry Rutherford UXOQCS	Signature: 	Created on: 12 Apr 07
QCS Review: Billy Capstick	Signature: 	Date: 12 Apr 07
Site Manager Tom Hinote	Signature: 	Date: 12 Apr 07
7 - Corrective Action Taken		
Implemented recommended corrective actions, 16 Apr 07		
Taken By: Tom Hinote	Signature: 	Date: 16 Apr 07
8 – Closeout Action		
QCS Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 16 Apr 07
Matrix Comments: Matrix concurs with the recommended corrective action.		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: April 18, 2007







**Deficiency Notice Report (DNR) #012
McClellan – UXO Team 5**

1 – D-N- Number	2 - Activity	3 - Date
012	Southern Alpha, UXO Team 5 Intrusive Investigation in grid 2AN26, UoP SA-AL26	24 Apr 07
4 - Describe Condition		
<p>UXO Team-5 performed intrusive investigation operations in grid 2AN26, UoP SA-AL26, on 29 Mar 07. The EODT QC team completed QC Step V, post excavation hole check on 18 Apr 07. On 24 April 07, Matrix QA informed EODT that an expended smoke grenade was found in this grid in a data gap during Matrix QA process of the grid.</p>		
5 - Root Cause Analysis		
<p>Team-5 team leader is no longer with EODT. Team 5 worked 4 of the 7 grids over a one week period in the UoP, Team 8 worked 1 (partial grid), and the remaining 2 are yet to be completed. The ditch in the northwest corner of the grid was partially mapped leaving a data gap approximately 20 feet in length. The gap was overlooked by the team.</p>		
<p>DJ Moore, UXO QCA performed QC Step V, post excavation hole check and was interviewed. He stated that during the QC check of a grid, approximately 25% of tree data gaps and non DGM areas are randomly checked.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. Brief all team leaders on the importance of performing quality data gap checks around trees and other non DGM areas. 2. Rework all data gaps in UoP SA-AL26 that were intrusively completed by Team 5 (4 total). 		
Identified By: Jason Soth UXOQCA	Signature: 	Created on: 24 Apr 07
QCS Review: Brian Gentry	Signature: 	Date: 25 Apr 07
Site Manager Tom Hinote	Signature: 	Date: 25 Apr 07
7 - Corrective Action Taken		
<p>Implemented recommended corrective actions, 25 Apr 07</p>		
Taken By: Tom Hinote	Signature: 	Date: 25 Apr 07
8 – Closeout Action		
QCS Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 25 Apr 07
Matrix Comments: MES concurs with the proposed corrective action.		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: April 25, 2007







Deficiency Notice Report (DNR) #013 McClellan – UXO Team 6

1 – D-N- Number	2 - Activity	3 - Date
013	MRS-1, UXO Backhoe Team: Intrusive Investigation in grid 5A097, UoP SBG-AN95	25 Apr 07
4 - Describe Condition		
Grid 5A097 was assigned to UXO Team 6 on 5 March 07. Team Leader Henry Wallace worked the intrusive op's, identified targets as backhoe digs and turned the grid over to the backhoe team. The backhoe team cleared the remaining anomalies but failed to dig target 49. During QC Step V, a 3" Stokes mortar (Sand Filled) was discovered 3.5 feet deep at target 49.		
5 - Root Cause Analysis		
<p>At the time, the process of turning anomalies over to a backhoe team was as follow:</p> <ul style="list-style-type: none"> • The Intrusive team investigates to a depth of approximately 18 inches. • If the anomaly is deeper, the team leader would write the target number on a backhoe dig sheet. • This backhoe dig sheet is then turned over to the backhoe team, along with the entire grid folder. • The backhoe dig team proceeds to the grid and clears (to depth) all targets listed on the backhoe dig sheet. • Backhoe anomaly information is documented on the backhoe dig sheet and subsequently entered into the data base by the NAEVA data base manager. • The grid is then goes through the QC process. <p>Root Cause: The intrusive team entered data in the PDA for all targets in the grid. Some targets had anomalies within 18 inches of the surface that were recorded. Additional anomalies (in the same holes) deeper than 18 inches were listed on the backhoe dig sheet as "BH" next to the target number on the dig sheet. That backhoe dig sheet and the entire grid folder were turned over to the backhoe team for BH investigation/clearance. It is suspected that the backhoe team checked the intrusive results and saw anomalies recorded and failed to clear the listed targets. It is apparent the backhoe team did not dig target 49 where the 3 inch Stokes (Sand Filled) was discovered because no backhoe excavation was present. Following a review of the grid folder for 5A097, QC determined that anomalies 21, 29, 36,43,49,84, and 86 may not have been cleared by the backhoe team. The backhoe dig sheet listed targets 29, 34, 49 and 86 as "in the road". The other three targets had no information listed. However, when QC investigated the grid, all targets listed as BH, showed evidence of backhoe excavations except target 49. The backhoe team must have inadvertently missed that target.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. UXO teams are responsible for clearing their own backhoe anomalies. This took effect on 02 Apr 07 because of missing data in the database. Current procedures are as follows: Intrusive teams are assigned a grid, any anomalies requiring a backhoe are cleared by the same team that was assigned the grid and all intrusive information is input into the PDA by the team leader assigned that grid. 2. Rework grid 5A097 to ensure all targets are clear. 3. Check data base for any backhoe digs that have no intrusive results during the period of 12 Feb thru 1 Apr 07. As a result of this check, the QC team investigated 9 anomalies in grids 2BB18 (anomalies 18, 38 and 54), 2BB20 (5) and 5AR96 (15, 24, 37, 39 and 47) that either had no dig results from the backhoe team or stated that the hole was cleared by the backhoe team without reporting any results. 		
Identified By: Jason Soth UXOQCA	Signature: 	Created on: 25 Apr 07
QCS Review: Brian Gentry	Signature: 	Date: 26 Apr 07
Site Manager Tom Hinote	Signature: 	Date: 26 Apr 07
7 - Corrective Action Taken		
Implemented recommended corrective actions, 25 Apr 07		
Taken By: Tom Hinote	Signature: 	Date: 1 May 07
8 – Closeout Action		
I feel this was an isolated incident and concur with corrective action. All backhoe digs that are left blank are checked by the QC team in the field.		
QCS Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 1 May 07
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: May 14, 2007

Deficiency Notice Report (DNR) #014 McClellan – Former UXO Company

1 – D-N- Number	2 - Activity	3 - Date
014	MRS-1, Former Co. UXO Team, Intrusive Operations in grid 5AH95 UoP SBG AH93	10 May 07
4 - Describe Condition		
<ul style="list-style-type: none"> - UXO intrusive ops were completed on grid 5AH95 by the former company working the McClellan project on 16 Jan 07. - Following the new contract awarded EOD Technology (EODT), the grid was QC'd by their personnel on 21 Feb 07. - The grid was scheduled for confirmation remapping and remapped by NAEVA on 16 Apr 07. - NAEVA reacquired targets in grid C5AH95 on 1 May 07. - EODT UXO Team-1 performed intrusive investigations on 3 May 07 <p>During the intrusive phase on this confirmation remapped grid, the team discovered a 3" Stokes Practice mortar at target 8.</p>		
5 - Root Cause Analysis		
<p>EODT UXO QC investigated the grid's history and found:</p> <ul style="list-style-type: none"> - The original intrusive target was #29, with a 13mV pre-dig reading. - The intrusive team reported Small Arms Ammunition (SAA) and metal debris at a depth of 4 inches, total weight .5 lbs. - EODT QC's random generator picked targets 13, 16, 25, 28, 35 and NW corner to hole check (15%). Those targets were checked 21 Feb 07 by Jason Soth (UXO) and Will Donaldson (NAEVA). The grid passed the QC process. - NAEVA remapped the grid on 1 May and reacquired new targets on 3 May 07. - Target 8 (following remapping) had a 30 mV pre-dig reading and was within one foot of the original target 29. - The intrusive team located the 3" Stokes Practice Mortar at a depth of 23 inches. <p>EODT can not determine the root cause of this failure because the grid was originally investigated during the former UXO company's site operations. EODT QC didn't check that specific target because it was not a randomly generated pick and was not picked during QC Step VI (mV comparison) based on other targets reported with similar readings/depths/finds.</p>		
6 – Recommended Corrective Action		
Ensure all targets are checked with an EM61.		
Identified By: Terry Rutherford UXOQCA	Signature: 	Created on: 8 May 07
UXO QCM Review: Brian Gentry	Signature: 	Date: 8 May 07
Responsible Manager Tom Hinote, EODT Site Manager	Signature: 	Date: 10 May 07
7 - Corrective Action Taken		
Agree with recommended corrective actions		
Action taken By: Tom Hinote EODT Site Manager	Signature: 	Date: 10 May 07
8 – Closeout Action		
QCM concurs with the corrective action		
QCM Review: Brian Gentry <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 10 May 07
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: May 15, 2007

**Deficiency Notice Report (DNR) #015
McClellan – UXO Team 2**

1 – D-N- Number	2 - Activity	3 - Date
015	Southern Alpha, UXO Team 2 Intrusive Investigation in grid 2AR26, UoP SA-AR26	11 May 07
4 - Describe Condition		
<p>UXO Team-2 performed intrusive investigation operation in grid 2AR26, UoP SA-AR26, 25 Apr 07 and the EODT QC team completed QC Step V, post excavation hole check on 8 May 07. On 11 May 07, Matrix QA informed EODT that a MK-2 Practice Grenade was recovered in a data gap (dry creek bed).</p>		
5 - Root Cause Analysis		
<p>QC findings. It was evident that during the data gap clearance, team 2 team members failed to clear the entire data gap. Furthermore, the team leader failed to adequately supervise team members during the data gap clearance. QC also failed to check the data gap during QC Step V, post excavation hole check.</p> <p>DJ Moore, UXO QCA, performed QC Step V, the post excavation hole check. He was interviewed and stated during QC of this grid, that the dry creek bed data gap was over looked.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. Have Team-2 rework all data-gaps in grid 2AR26 and all grids completed by team 2 from 5/7/07 thru 5/11/07. (23 grids total) 2. QC to develop and implement an SOP (attached) for data gap clearance procedures. Implemented on 5/15/07. 3. Re-brief all team leaders and QC personnel how to locate data gaps on geophysical maps. 4. QC tightened follow-up surveillances (minimum 35%) of all data gap inspections. 5. QC will provide real time QC surveillance checks during all rework of data gaps until procedures are performed satisfactorily. 6. All Teams will utilize an EM61 on areas that cannot be cleared with the Vallons and if the mV readings are below 15 but above the established threshold EODTQC will be notified. If the mV reading is above 15 and the anomaly cannot be cleared, the intrusive team will notify EODT QC who will notify MES QA and an MES QA person will be present to verify the area is clear of possible MEC. 7. Notify EODT QC prior to investigation of non-tree data gaps. 8. Team leaders will provide direct supervision of personnel during non-tree data gap clearances (creeks, slopes, downfall, gullies, trenches, etc.). 		
Identified By: Terry Rutherford UXOQCS	Signature: 	Created on: 11 May 07
QCS Review: Brian Gentry	Signature: 	Date: 15 May 07
Site Manager Tom Hinote	Signature: 	Date: 15 May 07
7 - Corrective Action Taken		
<p>Implemented recommended corrective actions, 14 May 07. Our intent of interviewing the entire team was to identify any procedural short-falls (upward or downward) and for the team to offer recommendations. Our intent was fulfilled and those recommendations incorporated to fully eliminate any further data-gap errors. As a follow-on to identify and rectify procedural short-falls, the field staff held a briefing to discuss the lessons learned and incorporate these via established guidelines.</p>		
Taken By: Tom Hinote	Signature: 	Date: 15 May 07
8 – Closeout Action		
<p>After interviewing the entire team, I believe that every person on Team 2 is very competent and reliable. I visited the grid containing the data gap and feel this incident was an isolated event. However, the cause can only be attributed to a lack of attention to detail. Investigation of the middle section of the data gap was started but never completed. Commo Wire was identified but not removed or cleared underneath. The Implementation of new quality controls measures should prevent future data gap intrusive problems. It is also important to note that as of 5/15/07 the team leader in charge of team 2 is no longer working at this site.</p>		
QCS Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 15 May 07
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: May 17, 2007

SOP – DATA GAP CLEARANCE PROCEDURES – 14 MAY 07

Reference: Several areas associated with the McClellan remediation project were inaccessible to conduct thorough geophysical mapping using the EM61 MK2. Additionally, most areas are forested and areas around trees are difficult to map. To effectively clear these data gaps, the following guidance is provided.

GENERAL

1. The Vallon, all-metals detector, will be used for all data gap clearances. Mag and dig techniques will be used.
2. NAEVA will conduct training for all team leaders on how to identify data gaps on their geophysical maps.
3. QC will incorporate a data gap briefing during preparatory/initial QC inspections.
4. Investigate and clear reacquired targets prior to clearing data gaps.
5. Team Leader will directly supervise all data gap operations.
6. Document all data gap information (trees, creek, slope, log, stump, etc.) on a single line PDA entry. Include team, date, location (MRS# and grid), MEC/Non-MEC scrap weight, description of items recovered and number of digs.

TREE DATA GAPS

1. Check around the base of all trees to a distance of two feet. Clear any anomaly discovered to depth in the same manner as a normal targeted anomaly.
2. When a tree is clear, mark the trunk with a paint dot on the North side, approximately waist high.
3. If a tree gap anomaly can't be cleared with the Vallon, see QC Procedures 1 and 2 below.

NON-TREE DATA GAPS

1. Ensure the entire data gap is checked.
2. Where possible and dependant on size, use lines and establish approximately four foot lanes through the gap. Conduct a standard mag and dig operation.
3. After completing data gaps, the team leader will initial all non-tree data gaps shown on the geophysical map.
4. For anomalies that can't be cleared with a Vallon, see QC procedures 1 and 2 below.

NOTE: Complete the entire data gap prior to contacting QC







QC Procedure -1: If an anomaly can't be cleared with a Vallon and it is accessible, check it with an EM61. Continue clearing and checking until the mV reading is below threshold.

QC Procedure -2: If the anomaly is accessible with an EM61 and the mV reading is below 15 but above threshold, contact QC for real-time inspection and document QC comments in the comments column of the PDA. **If the mV reading is above 15 or the anomaly is not accessible or clearable, contact QC and they will arrange joint QC/QA of that data gap. Document QC/QA's comments in the comment block of the PDA.**



Approved by: Brian Gentry
EODT UXO QCS

**Deficiency Notice Report (DNR) #016
McClellan – UXO Team 7**

1 – D-N- Number	2 - Activity	3 - Date
016	Southern Alpha, UXO Team 7 Intrusive Investigation in grid C5AU99, UoP SBG-AT98	24 May 07
4 - Describe Condition		
<p>UXO Team-7 performed intrusive investigation operations in grid C5AU99, UoP SBG-AT98, 22 May 07 and the EODT QC team completed QC Step VI, post excavation hole check on 22 May 07. On 23 May 07, Matrix QA informed EODT that an expended intact 37mm projectile (MEC Scrap) approximately 4 to 6 inches deep was found under flag 14. QCA Terry Rutherford was notified by MES QA Kent Tibbits and went over to inspect the item found. QCA Terry Rutherford did a visual inspection only on the item found. Surface clearance, original investigation and confirmation investigation produced over two hundred and ten pounds of MEC Scrap from this grid.</p>		
5 - Root Cause Analysis		
<p>QC findings. It was evident that during the reinvestigation of grid C5AU99, team 7 and the EM61 operator failed to clear anomalies to depth. The southeast corner of this grid contained a very large quantity of spoils which is believed to have made it difficult to obtain an accurate mV reading of the residual target response due to the large footprint of the EM61.</p> <p>Brian Gentry, UXOQCS, performed QC Step VI, the mV comparison check. He stated that during step VI comparison of this grid, the intrusive findings for anomaly 14 (2 halves of a 37mm at 1") were in fact representative of the mV reported by the reacquisition team.</p>		
6 – Recommended Corrective Action		
<ol style="list-style-type: none"> 1. Have Teams rework all grids in UoP that have not passed QA (2 grids). 2. QC will provide real time QC checks during all rework of grids. 		
Identified By: Terry Rutherford UXOQCS	Signature: 	Created on: 24 May 07
QCS Review: Brian Gentry	Signature: 	Date: 24 May 07
Site Manager Tom Hinote	Signature: 	Date: 24 May 07
7 - Corrective Action Taken		
Taken By: Tom Hinote	Signature: 	Date: 24 May 07
8 – Closeout Action		
QCS Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: 24 May 07
Matrix Comments:		
Matrix Review: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Signature: 	Date: May 29, 2007



QC Memorandum #2

**Missed Seed Item by Geophysical Investigation Team
Alpha and Bravo Munitions Response Areas of McClellan
Anniston, Alabama.**

ECC Huntsville Office

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Huntsville, Alabama
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Date: January 3, 2006

To: Richard Satkin, Matrix Environmental Services Ltd.

From: Colin Kennedy, ECC Geophysical QC Specialist

RE: Missed QC Seed in Grid 5AD88

On December 11, 2006 NAEVA's data acquisition Team #4 collected data set 5AD874 which included Grids 5AD87 and 5AD88. On December 21, 2006 ECC's GeoQCS informed NAEVA that a QC Seed Item in Grid 5AD88 was neither sufficiently detected nor targeted. The seed item in question was a 37 mm APT projectile buried 10.5 inches below ground surface in a horizontal (E-W) orientation (approximate location: X: 674587.7, Y:1167341.4 SP NAD 83 AL East U.S. Survey Feet). As part of the root cause analysis process, NAEVA's Geo Lead went to the grid in question to not only gather field information regarding the cause of the discrepancy, but also to verify that the seed item was accurately located by the QC team during its installation. Using the same EM61 MK2 that had originally been used during the geophysical data collection for that grid, the NAEVA Geo Lead determined that the recorded position of the QC seed was accurate.

Root-Cause Analysis

After determining that the QC Seed Item was accurately located and detectable using the same methodologies proven effective by NAEVA in the GPO, the second step of the root cause analysis was to look for a systematic error in the geophysical data collection process. To do this, the NAEVA Geo Lead verified the locations of the other targeted anomalies in the grid using an EM61 MK2 in conjunction with the contour map for Grid 5AD88. It was established that the target locations depicted on the map and target list coincided with those found at the grid with the EM61 MK2. A comparison was then made of the tree gaps and field data collection notes and it was found that these also coincided with the actual locations of trees in the grid.

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Using the EM61 MK2 in automatic mode (the method used for reacquisition), the operator was able to achieve a maximum response of approximately 17 mV with the long axis of the instrument oriented north-south. Changing the long axis of the instrument to an east-west orientation reduced the maximum response to approximately 10 mV. NAEVA's field personnel then utilized tape measures and pin flags to reestablish the locations of the north-south lanes used by the data collection team. Segments of four lanes were marked in the field, two on either side of the Seed Item's location. The locations of two trees adjacent to the data collection lanes were confirmed, suggesting that the field data were correctly positioned. The original instrument was then used to replicate the data collection lanes while monitoring its response in the vicinity of the seed item. The maximum observed response was found to be 6 mV above background (peak of 8 mV with a local background of 2 mV).

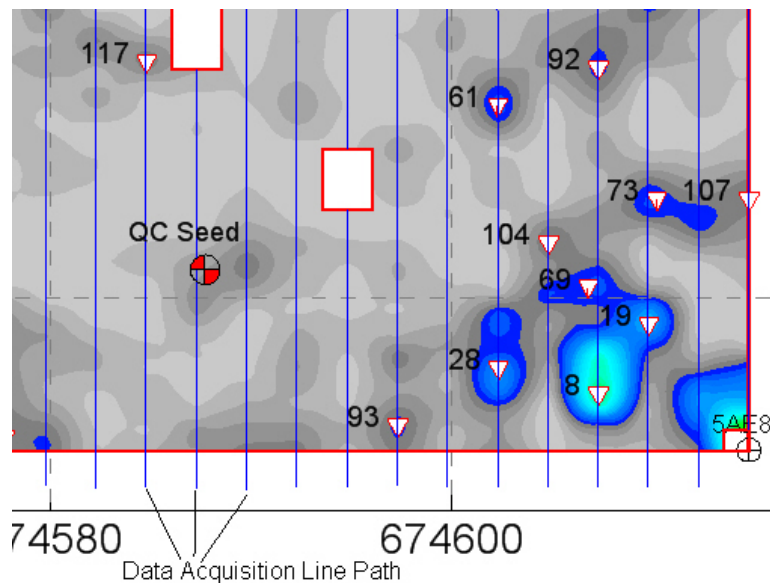


Figure 1: Detail of Grid 5AD88

Because of the seed item's buried depth, its orientation perpendicular to data acquisition paths, and the unclear physical state of the item itself, this blind QC seed item was not targeted by the data analyst. Based on the investigation conducted at this seed location, it is believed that this seed item was likely untargeted due to its very subtle EM response above the surrounding area background. The processed data set for this grid revealed only a 4.7 (channel 2) mV response at the seed location.

Corrective Action

Section 10.7.4.3 of the Work Plan states that "upon finding a failure (i.e., missed seed item), the QC staff will conduct a root cause analysis to determine the extent of the failure and why it occurred. All the factors will be evaluated and corrective action will be based on the root cause analysis. Rework (if required) will be completed from the point at which the problem occurred, as identified through the root cause analysis."

Proposed Corrective Action: On January 3, 2007, the untargeted blind QC seed of grid 5AD88 was discussed between NAEVA and the ECC QC team. It was agreed upon by both parties that a deficiency and/or a non-conformance in work effort was not the cause resulting in the untargeted seed item and therefore not a “QC failure”. Because the location of the seed item is only known by the ECC QC team and the NAEVA Geo Lead, it is suggested that this seed location be targeted by the GeoQCS. This action should allow for this blind seed to be successfully recovered by the dig team assigned to excavate this grid as the reacquisition team will be able to establish an above-threshold-mV-response at this target location.



QC Memorandum #1

**Missed Seed Item by Geophysical Investigation Team
Alpha and Bravo Munitions Response Areas of McClellan
Anniston, Alabama.**

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Date: August 09, 2006

To: Richard Satkin, Matrix Environmental Services Ltd.

From: Colin Kennedy, ECC Geophysical QC Specialist

RE: Missed QC Seed in Grid 2AJ10

On July 31, 2006 NAEVA's data acquisition Team #1 collected data set 2AJ101 which included Grids 2AJ10 and 2AJ11. On August 8, 2006 ECC's GeoQCS informed NAEVA that a QC Seed Item in Grid 2AJ10 was not targeted. The seed item in question was a 37 mm APT projectile buried 6 inches below ground surface in a horizontal (N-S) orientation. As part of the root cause analysis process, ECC's GEOQCS and NAEVA's Geo Lead went to the grid in question to not only gather field information regarding the cause of the discrepancy, but also to verify that the seed item was accurately located by the QC team during its installation. Using an EM61 MK2, they determined that the recorded position of the QC seed was accurate and that its maximum EM61 MK2 response was approximately 22mV in Channel 2. It should be noted that this maximum mV response is collected by hovering the EM61 directly over the target and that the collection of data while the EM61 is in motion would produce a lower mV response.

Root-Cause Analysis

After determining that the QC Seed Item was accurately located and detectable using the same methodologies proven effective by NAEVA in the GPO, the second step of the root cause analysis was to look for a systematic error in the geophysical data collection process. To do this, the GEOQCS and the NAEVA Geo Lead verified the locations of the other targeted anomalies in the grid using an EM61 in conjunction with the contour map for Grid 2AJ10. Both parties agreed that the target locations depicted on the map and target list coincided with those found at the grid with the EM61. A comparison was then made of the tree gaps and field data collection notes and it was found that these also coincided with the actual locations of trees in the grid. However, during the course

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of investigating tree gap locations it was noticed that a 4-5 inch diameter tree was located approximately 4 feet south of the QC Seed in question, and that there was no corresponding gap shown on the contour map. A tape measure stretched along the Grid's southern boundary revealed that the tree was located directly between data collection lines 42.5 and 45 (See Figure 1 below).

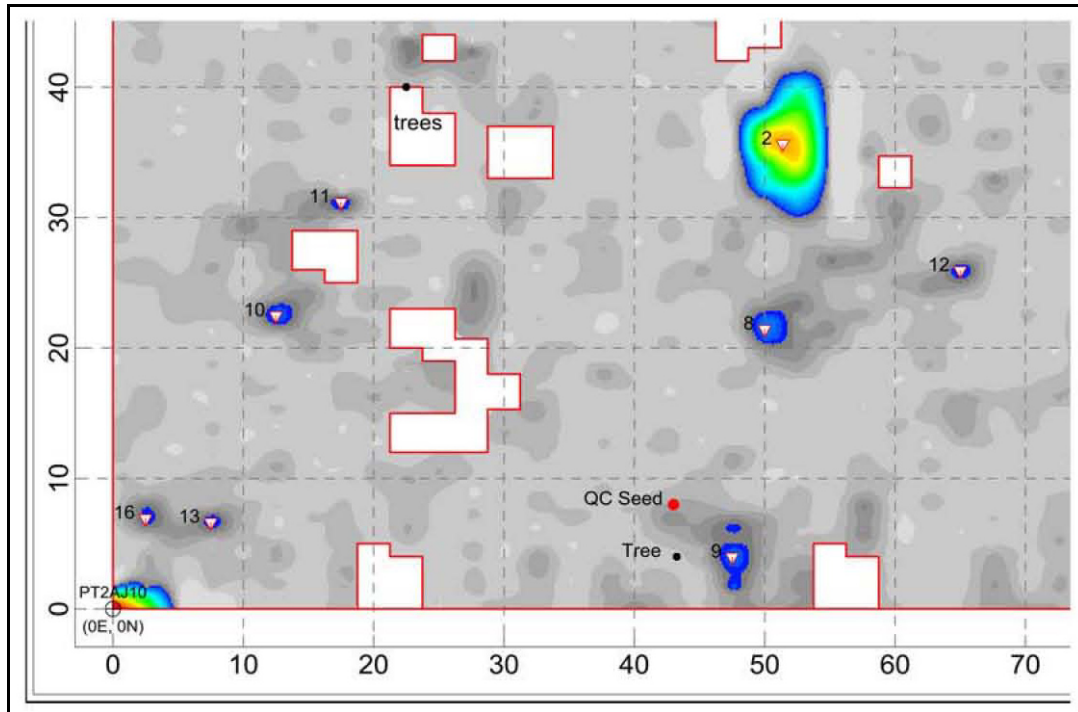


Figure 1: Detail of Grid 2AJ10

During data acquisition, NAEVA's field teams routinely stop data collection whenever an obstruction (i.e. trees) is encountered. Their standard operating procedure is to stop data collection, go around the obstruction, and then continue data collection on the other side of the obstacle. However, in this case, a relatively small tree was encountered directly between two acquisition lanes. Rather than break the acquisition line into separate segments thereby creating a data-gap the geophysical team deviated slightly from the straight lane path on either side of the tree. This relatively small lane variance resulted in the instrument not passing directly over the seed, therefore not attaining sufficient response to generate a target selection. Furthermore, the seed item was oriented parallel to the direction of data collection. Field observations revealed that a change in the EM61's position of 3-4 inches laterally relative to the seed location caused a change in the instrument's response from that of two times the anomaly selection threshold to a response below the anomaly selection threshold.

Corrective Action

Section 10.7.4.3 of the Work Plan states that "upon finding a failure (i.e., missed seed item), the QC staff will conduct a root cause analysis to determine the extent of the failure and why it occurred. All the factors will be evaluated and corrective action will be based on the root cause

analysis. Rework (if required) will be completed from the point at which the problem occurred, as identified through the root cause analysis.”

Proposed Corrective Action #1: Inform and instruct the geophysical data collection teams.

A cursory inspection of processed contour maps reveals that NAEVA's field teams are routinely pausing their data collection for obstructions as is evidenced by the large number of gaps that exist in their geophysical data sets and maps. The geophysical field teams confirmed that deviations such as this are not a common practice, however, data collection judgment calls are made in the field as to the best way to collect geophysical data as dictated by local vegetation, topography and other such factors. On August 8, the discrepancy was discussed with NAEVA's geophysical mapping teams who were shown maps annotated with the seed location, tree location, and line paths. They were instructed that every effort is to be made so that there are no deviations in line path regardless of the size of the obstruction or its position relative to a data collection line.

Proposed Corrective Action #2: Amendment to the intrusive investigation process.

Due the fact that it is physically impossible for the geophysical teams to survey 100% of the grids and areas adjacent to vegetative and topographical features, an amendment to the work plan may be in order in which once all the geophysical anomalies have been investigated in a grid, the intrusive teams will then search a 4 ft radius around each tree to further verify that the grid has been cleared successfully. Although the intrusive teams have been instructed to clear all DGM data gaps and have been doing so since the beginning of the project, this secondary operation is currently not in the work plan; however, it is a viable potential corrective action to this type of explainable discrepancy. This being said, the immediate corrective action may be to modify the work plan accordingly and see if the intrusive / reacquisition teams uncover the seed item.

A Deficiency Notice Report is currently being generated and will be submitted ASAP.