

Appendix F
Contractor Forms

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Quality Control Forms Matrix

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QUALITY CONTROL PROJECT CHECKLIST
(Page 1 of 4)

Project Name/ Contract No. _____

Date (Start): _____ **Date (End):** _____

1. Review Scope of Work (DO/TO) & WP	YES	NO	N/A	COMMENTS
a. Objectives Clearly Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Check for changes to WP & Up to Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Proper Depth of Clearance Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Proper Target Ordinance Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Detection & Target Depth(s) Specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Exclusion Zone Identified in WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Documentation Requirements	YES	NO	N/A	COMMENTS
a. Notice to Proceed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Approval Letter for Work Plan/ SSHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Approval AHAs (Workers briefed on procedures prior to start of operations)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Approval Letter for UXO Personnel Identified by Name and Position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. UXO personnel certifications (EOD, HAZWOPER, 8-HR, etc.) in date and on-site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Site Specific Training (example ATV training)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Approval Letter, FAA (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Explosive Safety Submission (ESS) approval letter on file (if required).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Certificate of Grounding, Lightning Protection (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Explosive Permits/ Licenses (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k. GFE Transfer Documentation (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
l. Approval Letter, Public/Personnel Withdraw Distance 1 Frag in 800 sq. ft.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m. Dig Permits for Utilities (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. QC Files Established	YES	NO	N/A	COMMENTS
a. Daily/ Weekly Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Daily reports need to document all relevant inspections/surveillance conducted on site to include health and safety inspections conducted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Weekly reports summarize daily reports.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Three Phase Inspection Conducted on all definable features of work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Final Acceptance of Product conducted on Surveillance Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Sampling Inspection Log maintained on all acceptance sampling.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Copies of all QC reports (QIRs, NCRs, Surveillances) maintained and sent to QC Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Approval Letters (NTP, Personnel & WP/SSHP) For Subcontractor Operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Daily/ Weekly Subcontractor Reports (If Provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Accident Prevention Plan & Site-Specific Safety & Health Plan (SSHP)	YES	NO	N/A	COMMENTS
a. Emergency Notification List Posted & Available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Emergency Routes/Maps Available & Issued to Each Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Emergency drills conducted within first week then periodic afterwards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Work Task Identified in Hazard Analysis. Approved SSHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. MSDS(s) On-Site. Approved SSHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Visitors/Safety Briefing Log Current and Updated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. All Personnel in the Proper PPE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Minimum of Two Personnel On-site First Aid/CPR Trained, EM 385-1-1, Section 3, Page 19, Paragraph 03.A.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. AED on-site with personnel properly trained and certified in its application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. 16-Unit First Aid Kits Approved by a Licensed Physician in the Ratio of one for every 25 persons or less. EM 385-1-1 Section 3, Page 19, Paragraph 03.A.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Technical Management Plan	YES	NO	N/A	COMMENTS
a. Procedures Established for the Discovery of RCWM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Procedures Developed for Discovery of MEC Which Cannot Be Destroyed in Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Project Grid Size, Layout, Lane Width (5' or Less) Established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Established Procedures for Changed Site Conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Organizational chart Current and Indicates Assignment, Duties, Responsibilities to Include Geophysical Teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

QUALITY CONTROL PROJECT CHECKLIST
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f. Procedures for Reporting and Disposition of MPPEH(Material Potentially Presenting an Explosive Hazard)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Procedures Established for Disposal of MEC in Populated/Sensitive Areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Additional Task and Procedures being Followed (e.g. PAO, Community Relations, Weekly & Monthly Project Status reports)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Procedures Established for Recording, reporting and implementing Lessons Learned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Limitations Posed and Ability of Detection System(s) Chosen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k. Proper use of Geophysical Detection Systems used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Facilities Reference EM 385-1-1	YES	NO	N/A	COMMENTS
a. Adequate Work Space & Facilities (Restrooms etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Good Housekeeping (No Fire Hazards, Tripping Hazards etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Approved and Suitable Containers for Flammable Toxic or Explosive Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Approved/Adequate Explosive Storage Facilities (Sited in ESS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Fire/Emergency Exits Clear & Unbarred	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Personnel Limits Maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Site Security Adequate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Toilets, EM 385-1-1, Section 2, Page 14, Paragraph 02.B Toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Washing Facilities, EM 385-1-1, Section 2, Page 16, Paragraph 02.C Washing Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Equipment. Reference Approved WP/ Operators Manual	YES	NO	N/A	COMMENTS
a. Tools Appropriate and Serviceable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Proper Personnel Protective Equipment (PPE) Present, Serviceable & Utilized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Equipment Calibrated (Last cal Date _____ Next cal Date _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Approved Survey Equipment Inspected & Serviceable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Heavy Equipment Inspected & Serviceable IAW EM 385-1-1, Section 16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Are Equipped with at Least One Dry Chemical or CO2 Fire Extinguisher - Minimum rating of 5-BC - IAW EM 385-1-1, Section 16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Adequate means of Communications, Radio(s)/Cell Phone, Land Lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Approved Geophysical Equipment On-Hand & Serviceable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Explosive Storage Requirements. Reference EP 1110-1-1-18	YES	NO	N/A	COMMENTS
a. Proper Storage Containers Type 2 Magazines that meet DOD Requirements on DOD Sites. Explosive storage requirements on Non-Federal property will be governed by ATF and State requirements (Sited by ESS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Placards. Each magazine will display the placards required by governing regulations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Explosive Compatibility Groups. Segregated into the appropriate hazard divisions criteria listed in Chapter 3, DOD 6055.9-STD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Physical Security. Contractor shall conduct and document physical security survey, the survey is to determine if fencing or guards are required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Locks. Shall meet the applicable standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. A key controls system will be documented in the Work Plan, EP 1110-1-18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Lightning Protection. Magazine grounded in Accordance with Service Directives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Lightning Protection. If fence is closer than 6.5 feet it needs to be joined to the Magazine ground. DDSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Lightning Protection. BRAC, IRP and Active Installation will meet with the provisions of DOD 6055.9-STD. Army installations will also meet the provisions of DA Pamphlet 385-64.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Fire Protection. Extinguishers of appropriate size (minimum 10 BC) and type will be located in all explosives storage facilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k. Fire Protection. State and Local Fire Marshall has to be notified of any non military explosive storage locations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
l. Explosive Limits Maintained (NEW Limit as per siting in ESS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m. Waiver. MACOM approval for storage of commercial of explosives on-site (if required).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Explosive Management Plan. Reference Approved WP/ 49 CFR	YES	NO	N/A	COMMENTS
a. Signature Authority On-Hand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Copy of ATF License on Hand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Weekly Inventories Conducted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Weekly Inspection on Magazine conducted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Lost/Stolen Reporting Procedures In Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Final Disposition Procedures Documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Accountability Records Maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Key Control/Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Quality Control Project Checklist

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QUALITY CONTROL PROJECT CHECKLIST
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Project Name/ Contract No. _____

Date (Start): _____ Date (End): _____

1. Review Scope of Work (DO/TO) & WP	YES	NO	N/A	COMMENTS
a. Objectives Clearly Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Check for changes to WP & Up to Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Proper Depth of Clearance Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Proper Target Ordnance Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Detection & Target Depth(s) Specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Exclusion Zone Identified in WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Documentation Requirements	YES	NO	N/A	COMMENTS
a. Notice to Proceed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Approval Letter for Work Plan/ SSHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Approval AHAs (Workers briefed on procedures prior to start of operations)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Approval Letter for UXO Personnel Identified by Name and Position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. UXO personnel certifications (EOD, HAZWOPER, 8-HR, etc.) in date and on-site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Site Specific Training (example ATV training)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Approval Letter, FAA (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Explosive Safety Submission (ESS) approval letter on file (if required).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Certificate of Grounding, Lightning Protection (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Explosive Permits/ Licenses (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k. GFE Transfer Documentation (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
l. Approval Letter, Public/Personnel Withdraw Distance 1 Frag in 800 sq. ft.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m. Dig Permits for Utilities (If Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. QC Files Established	YES	NO	N/A	COMMENTS
a. Daily/ Weekly Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Daily reports need to document all relevant inspections/surveillance conducted on site to include health and safety inspections conducted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Weekly reports summarize daily reports.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Three Phase Inspection Conducted on all definable features of work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Final Acceptance of Product conducted on Surveillance Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Sampling Inspection Log maintained on all acceptance sampling.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Copies of all QC reports (QIRs, NCRs, Surveillances) maintained and sent to QC Manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Approval Letters (NTP, Personnel & WP/SSHP) For Subcontractor Operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Daily/ Weekly Subcontractor Reports (If Provided)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Accident Prevention Plan & Site-Specific Safety & Health Plan (SSHP)	YES	NO	N/A	COMMENTS
a. Emergency Notification List Posted & Available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Emergency Routes/Maps Available & Issued to Each Team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Emergency drills conducted within first week then periodic afterwards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Work Task Identified in Hazard Analysis. Approved SSHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. MSDS(s) On-Site. Approved SSHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Visitors/Safety Briefing Log Current and Updated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. All Personnel in the Proper PPE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Minimum of Two Personnel On-site First Aid/CPR Trained, EM 385-1-1, Section 3, Page 19, Paragraph 03.A.02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. AED on-site with personnel properly trained and certified in its application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. 16-Unit First Aid Kits Approved by a Licensed Physician in the Ratio of one for every 25 persons or less. EM 385-1-1 Section 3, Page 19, Paragraph 03.A.03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Technical Management Plan	YES	NO	N/A	COMMENTS
a. Procedures Established for the Discovery of RCWM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Procedures Developed for Discovery of MEC Which Cannot Be Destroyed in Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Project Grid Size, Layout, Lane Width (5' or Less) Established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Established Procedures for Changed Site Conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Organizational chart Current and Indicates Assignment, Duties, Responsibilities to Include Geophysical Teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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f. Procedures for Reporting and Disposition of MPPEH(Material Potentially Presenting an Explosive Hazard)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Procedures Established for Disposal of MEC in Populated/Sensitive Areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Additional Task and Procedures being Followed (e.g. PAO, Community Relations, Weekly & Monthly Project Status reports)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Procedures Established for Recording, reporting and implementing Lessons Learned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Limitations Posed and Ability of Detection System(s) Chosen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k. Proper use of Geophysical Detection Systems used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Facilities Reference EM 385-1-1	YES	NO	N/A	COMMENTS
a. Adequate Work Space & Facilities (Restrooms etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Good Housekeeping (No Fire Hazards, Tripping Hazards etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Approved and Suitable Containers for Flammable Toxic or Explosive Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Approved/Adequate Explosive Storage Facilities (Sited in ESS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Fire/Emergency Exits Clear & Unbarred	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Personnel Limits Maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Site Security Adequate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Toilets, EM 385-1-1, Section 2, Page 14, Paragraph 02.B Toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Washing Facilities, EM 385-1-1, Section 2, Page 16, Paragraph 02.C Washing Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Equipment. Reference Approved WP/ Operators Manual	YES	NO	N/A	COMMENTS
a. Tools Appropriate and Serviceable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Proper Personnel Protective Equipment (PPE) Present, Serviceable & Utilized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Equipment Calibrated (Last cal Date _____ Next cal Date _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Approved Survey Equipment Inspected & Serviceable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Heavy Equipment Inspected & Serviceable IAW EM 385-1-1, Section 16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Are Equipped with at Least One Dry Chemical or CO2 Fire Extinguisher - Minimum rating of 5-BC - IAW EM 385-1-1, Section 16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Adequate means of Communications, Radio(s)/Cell Phone, Land Lines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Approved Geophysical Equipment On-Hand & Serviceable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Explosive Storage Requirements. Reference EP 1110-1-1-18	YES	NO	N/A	COMMENTS
a. Proper Storage Containers Type 2 Magazines that meet DOD Requirements on DOD Sites. Explosive storage requirements on Non-Federal property will be governed by ATF and State requirements (Sited by ESS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Placards. Each magazine will display the placards required by governing regulations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Explosive Compatibility Groups. Segregated into the appropriate hazard divisions criteria listed in Chapter 3, DOD 6055.9-STD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Physical Security. Contractor shall conduct and document physical security survey, the survey is to determine if fencing or guards are required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Locks. Shall meet the applicable standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. A key controls system will be documented in the Work Plan, EP 1110-1-18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Lightning Protection. Magazine grounded in Accordance with Service Directives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Lightning Protection. If fence is closer than 6.5 feet it needs to be joined to the Magazine ground. DDSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Lightning Protection. BRAC, IRP and Active Installation will meet with the provisions of DOD 6055.9-STD. Army installations will also meet the provisions of DA Pamphlet 385-64.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Fire Protection. Extinguishers of appropriate size (minimum 10 BC) and type will be located in all explosives storage facilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
k. Fire Protection. State and Local Fire Marshall has to be notified of any non military explosive storage locations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
l. Explosive Limits Maintained (NEW Limit as per siting in ESS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m. Waiver. MACOM approval for storage of commercial of explosives on-site (if required).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Explosive Management Plan. Reference Approved WP/ 49 CFR	YES	NO	N/A	COMMENTS
a. Signature Authority On-Hand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Copy of ATF License on Hand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Weekly Inventories Conducted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Weekly Inspection on Magazine conducted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Lost/Stolen Reporting Procedures In Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Final Disposition Procedures Documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Accountability Records Maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Key Control/Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

QUALITY CONTROL PROJECT CHECKLIST

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10. Transportation of OE. Reference EP1110-1-1-18 Chapter 15/49 CFR	YES	NO	N/A	COMMENTS
a. Hazardous Waste Manifest(EPA Form 8700-22) (if required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Hazard Classification of OE IAW TB 700-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Training of Transporting OE IAW 49 CFR, Part 172 & State Applicable State Requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Documented Organizational Responsibilities for Transportation of OE. Must include packaging requirements, Interim Hazard Classifications and Certificates of Equivalency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Approved Transportation Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Pre-operational Checks of Explosive Vehicle Being Conducted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. All Explosive Vehicle Operators have Explosive Driver Training and Licensed for Vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Fire Fighting & First Aid Equipment On Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Cargo Properly Segregated/Blocked and Braced and in Proper Container	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
j. Proper DOT Placards/Fire Fighting Symbols Used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. UXO Operational Plan. Reference Approved WP & EP1110-1-18	YES	NO	N/A	COMMENTS
a. Contractor Following Methodology Defined in WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. SUXO Conducted Physical Check Prior to Sweep Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Daily Safety Meeting Conducted by SUXO/SSHO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Geophysical Detection Magnetometer Used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Pre-operation Checks Performed Prior to Sweep Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Operational Condition Annotated in Log Book	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. UXO Teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Quality Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Quality Assurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Operational Teams Operating IAW WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. UXO Supervisor Conducted Physical Check Prior to Sweep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Pre-Sweep Operational/Safety Brief Conducted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Individual Sweep Lanes/Transects Marked IAW WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Contacts Marked & Investigated Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Results of Sweep Operation Recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. All OE, Inert Items & Scrap Examined by at Least Two UXO Personnel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(a.) AEDA (Range Residue IAW SOW and Properly Addressed in WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. All UXO's Clearly Marked and not moved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. QC Operations IAW WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Non-OE Scrap Being Collected (as Required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. OE Scrap Inspected/Vented/Segregated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Geophysical Test Grids Appropriate and IAW SOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Disposal Operations Planned On-Site IAW the Approved WP and 60A-1-1-31/60A-1-1-22	YES	NO	N/A	COMMENTS
a. Disposal Method IAW WP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Adequate Security for Disposal Operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Disposal Notification List Available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. All Necessary Notification Made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Movement or consolidation of OE items if approved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Engineering Controls (Protective Measures/Tamping Being Used/Appropriate for OE Being Destroyed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Limits of the Exclusion Zone Established. Utilize enough personnel to maintain exclusion zones. Ensure all Personnel Aware of Limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
h. Disposal Procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Misfire Procedures Properly Performed (Electric)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Misfire Procedures Properly Performed (Non-Electric)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Location Survey & Mapping Plan. Reference Contract	YES	NO	N/A	COMMENTS
a. Professional Land Surveyor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Surveyors Received Safety Briefing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. UXO Escort Provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Grid Stake, Locations Swept with Geophysical Equipment Prior to Driving Stakes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Survey Notes Being Recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



QUALITY CONTROL PROJECT CHECKLIST
(Page 4 of 4)

14. Quality Control Plan. Reference SOW/DID(s)	YES	NO	N/A	COMMENTS
a. QC Operational Checks Being Conducted IAW W/P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. QC Grid/Transect Established IAW W/P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Results of QC Checks Being Recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Pass/Daily Criteria Clearly defined IAW SOW/DID OE-005-05.01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Vegetation Removal. Reference W/P/SSHP & OSHA Req.	YES	NO	N/A	COMMENTS
a. Vegetation Removal & Localized, if Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Equipment Operated to Prevent Impact with Possible MEC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Cutting Does Not Present Impalement Hazard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. UXO Personnel Monitoring Cutting Operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. MEC Discovered Marked/Handled Appropriately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Equipment Being Operated Safely & IAW Equipment Operator Manual/W/P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. Munition Constituents (MC) Sampling and Analysis Plan, if required	YES	NO	N/A	COMMENTS
a. Key Personnel Identified and Trained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Quality Assurance Responsibilities Identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Procedures for Collection of Samples	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PERSONS PERFORMING THE CHECKLIST				
Name:(Print)	Sign:		Date:	
Name:(Print)	Sign:		Date:	
MANAGEMENT REVIEW				
Project/Site Manager(Print)	Sign:		Date:	
Comments:				
Quality Manager(Print)	Sign:		Date:	
Comments:				

**Preparatory Phase
Inspection Checklist**

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Preparatory Phase Inspection Checklist

Report Number: FTM QCP - 0001

Project Name/Contract Number:	Fort McClellan Ordnance and Explosive Response / DACAS7-99-D-0010 (2215)	Location: Anniston Alabama	Date: 06/07/2005
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I. Definable Feature of Work:

- Project Management
- Geophysical Investigation
- Data Management
- Brush Cutting/Clearing
- Intrusive Investigation
- UXO Avoidance
- Demolition
- Survey
- Surface Clearance
- Anomaly Reacquisition
- Transect Activity
- Scrap Processing
- GIS Management
- Mobilization/Demobilization
- Acceptance Sampling
- Other:

II. References:

III. Personnel Present

Name	Position	Company

IV. Submittals

1. Review submittals

Submittals Reviewed.	Item No.	Date	Approval Authority

Have all submittals been approved? Yes No

If No, what items have not been submitted?

2. Are all submittals on hand? Yes No

If No, what items are missing?



Preparatory Phase Inspection Checklist

3. Check approved submittals against delivered material. (This should be done as material arrives.)
Comments:
V. Resources
Adequate Resources on hand to effectively conduct work? <input type="checkbox"/> Yes <input type="checkbox"/> No
If No, what action is taken?
VI. Procedures
1. Review contract specification.
2. Discuss procedure for accomplishing the work.
3. Clarify any differences.
VII. Resolve Any Differences
Comments:
VIII. Testing/ Surveillance
1. Identify Tests/ Surveillance to be performed, frequency, and by whom.
2. When required?
3. Where required?



Preparatory Phase Inspection Checklist

4. Review Testing/ Surveillance Plan.		
IX. Safety		
1. Review applicable portion of the Health and Safety Plan.		
2. Activity Hazard Analysis approved? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Results of Inspection		
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Unacceptable	Deficiency #: NCR #:
Name:	Signature:	Date:
QCM Comments		
QCM Review		
<input type="checkbox"/> Concur <input type="checkbox"/> Non-Concur	Signature:	Date
Distribution		
<input type="checkbox"/> PM <input type="checkbox"/> SITE MGR <input type="checkbox"/> SHSS <input type="checkbox"/> SUXOS <input type="checkbox"/> AMMO MGR <input type="checkbox"/> USACE REP		

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**Initial Phase
Inspection Checklist**

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Project Number

Project Name

Initial Phase Inspection Checklist

		Report Number:	
Project Name/Contract Number:		Location:	Date:
I. Definable Feature of Work:			
<input type="checkbox"/> Project Management	<input type="checkbox"/> Geophysical Investigation	<input type="checkbox"/> Data Management	<input type="checkbox"/> Brush Cutting/Clearing
<input type="checkbox"/> Intrusive Investigation	<input type="checkbox"/> UXO Avoidance	<input type="checkbox"/> Demolition	<input type="checkbox"/> Survey
<input type="checkbox"/> Surface Clearance	<input type="checkbox"/> Anomaly Reacquisition	<input type="checkbox"/> Transect Activity	<input type="checkbox"/> Scrap Processing
<input type="checkbox"/> GIS Management	<input type="checkbox"/> Mobilization/Demobilization	<input type="checkbox"/> Acceptance Sampling	<input type="checkbox"/> Other:
II. References:			
III. Personnel Present			
Name	Position	Company	
IV. Identify full compliance with procedures identified at the preparatory phase. Coordinate plans, specifications, and submittals.			
Comments:			
V. Preliminary Work			
1. Ensure preliminary work is complete and correct			
If not, what action is taken?			



Project Number

Project Name

Initial Phase Inspection Checklist

VI. Establish Level of Workmanship		
1. Has previous work been completed in accordance with the plans and specifications?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If No, corrective actions planned.		
2. Procedures and/or work methods witnessed are in strict compliance with the requirements of the contract specifications.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If No, corrective actions planned.		
3. Workmanship is acceptable?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
State areas where improvement is needed.		
VII. Resolve Any Differences		
Comments:		
VIII. Check Safety		
Review job conditions using Health and Safety Plan and Activity Hazard Analysis.		
Comments:		
IX. Results of Inspection		
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Unacceptable	Deficiency #: NCR #:
Name:	Signature:	Date:



TETRA TECH EC, INC.

Project Number

Project Name

Initial Phase Inspection Checklist

X. QCM Comments		
XI. QCM Review		
<input type="checkbox"/> Concur <input type="checkbox"/> Non-Concur	Signature:	Date
XII. Distribution		
<input type="checkbox"/> PM <input type="checkbox"/> SITE MGR <input type="checkbox"/> SHSS <input type="checkbox"/> SUXOS <input type="checkbox"/> AMMO MGR <input type="checkbox"/> USACE REP		

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QC Surveillance Report

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QC SURVEILLANCE REPORT

Project Number

Project Name

I. - Definable Feature of Work			
<input type="checkbox"/> Project Management	<input type="checkbox"/> Geophysical Investigation	<input type="checkbox"/> Data Management	<input type="checkbox"/> Brush Cutting/Clearing
<input type="checkbox"/> Intrusive Investigation	<input type="checkbox"/> UXO Avoidance	<input type="checkbox"/> Demolition	<input type="checkbox"/> Survey
<input type="checkbox"/> Surface Clearance	<input type="checkbox"/> Anomaly Reacquisition	<input type="checkbox"/> Transect Activity	<input type="checkbox"/> Scrap Processing
<input type="checkbox"/> GIS Management	<input type="checkbox"/> Mobilization/Demobilization	<input type="checkbox"/> Acceptance Sampling	<input type="checkbox"/> Other:
II. - Follow up Phase Inspection			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
III. - References			
IV. - Observed Condition/Activities:			
Conducted By:	Signature:	Date:	
V. - Site QC Representative Review			
Comments:			
<input type="checkbox"/> Acceptable <input type="checkbox"/> Unacceptable	Non-Conformance Report #:		
Name:	Signature :	Date:	
VI. - Distribution			
<input type="checkbox"/> PM <input type="checkbox"/> DOM <input type="checkbox"/> CEHNC <input type="checkbox"/> Site Superintendent <input type="checkbox"/> SUXOSS <input type="checkbox"/> Program QC Manager <input type="checkbox"/> Safety			
<input type="checkbox"/> ROIC <input type="checkbox"/> Other:			

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Daily Quality Control
Report Form

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DAILY QUALITY CONTROL REPORT FORM

Contract No:		DAY: S M T W TH F S				Report No:
Project:		Project Number:			Date:	
Location:						
Weather/Precipitation:	Temperature:	High:	Low:	Wind:	Humidity	
T/F/W PERSONNEL ON SITE (REFERENCE/ATTACH SUPERINTENDENT'S DAILY REPORT IF APPLICABLE)						
Work Performed:						
Quality Control Activities (Reference or Attach Inspection / Surveillance Reports):						
Problems Encountered/ Corrective Actions Taken:						
Directions Given/ Received:						
Special Notes/ Other:						
Lessons Learned:						
Visitors:						
Name and Signature			Title/Company		Date	

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Surveillance Checklist

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TETRA TECH EC, INC.						
SURVEILLANCE CHECKLIST						
	Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
	Project Documents/ Submittals					
	Technical Management Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection QCC Surveillance		<p>QC Specialist will</p> <ul style="list-style-type: none"> Utilize document in the 3 Phase Inspection Process Ensure the document is approved by appropriate personnel Document any changes to the document by utilizing the FCR Process. 	<ul style="list-style-type: none"> Document not approved for use by appropriate personnel FCR not completed and signed for changes to the document FCR Log not complete to track changes and the status of the changes
	Explosive Management Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection QCC Surveillance		<p>QC Specialist will</p> <ul style="list-style-type: none"> Utilize document in the 3 Phase Inspection Process Ensure the document is approved by appropriate personnel Document any changes to the document by utilizing the FCR Process. 	<ul style="list-style-type: none"> Document not approved for use by appropriate personnel FCR not completed and signed for changes to the document FCR Log not complete to track changes and the status of the changes
	Explosive Siting Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection QCC Surveillance		<p>QC Specialist will</p> <ul style="list-style-type: none"> Utilize document in the 3 Phase Inspection Process Ensure the document is approved by appropriate personnel Document any changes to the document by utilizing the FCR Process. 	<ul style="list-style-type: none"> Document not approved for use by appropriate personnel FCR not completed and signed for changes to the document FCR Log not complete to track changes and the status of the changes
	Geophysical Investigation Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection QCC Surveillance		<p>QC Specialist will</p> <ul style="list-style-type: none"> Utilize document in the 3 Phase Inspection Process Ensure the document is approved by appropriate personnel Document any changes to the document by utilizing the FCR Process. 	<ul style="list-style-type: none"> Document not approved for use by appropriate personnel FCR not completed and signed for changes to the document FCR Log not complete to track changes and the status of the changes
	Accident Prevention Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection QCC Surveillance		<p>QC Specialist will</p> <ul style="list-style-type: none"> Utilize document in the 3 Phase Inspection Process Ensure the document is approved by appropriate personnel Document any changes to the document by utilizing the FCR Process. 	<ul style="list-style-type: none"> Document not approved for use by appropriate personnel FCR not completed and signed for changes to the document FCR Log not complete to track changes and the status of the changes

 TETRA TECH EC, INC.		SURVEILLANCE CHECKLIST			
Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
Q.C Plan	Periodic Inspection (Monthly)	Q.C Preparatory Inspection Q.C Surveillance		<p>QC Specialist will</p> <ul style="list-style-type: none"> Utilize document in the 3 Phase Inspection Process Ensure the document is approved by appropriate personnel Document any changes to the document by utilizing the FCR Process. 	<ul style="list-style-type: none"> Document not approved for use by appropriate personnel FCR not completed and signed for changes to the document FCR Log not complete to track changes and the status of the changes
Definable Features Of Work			Process Mapped	QC Procedure	Failure Criteria
Project Management Planning	Periodic Inspection	Q.C Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Verify the following documentation is in the project file: <ol style="list-style-type: none"> Task Initiation Procedure (TIP)/Risk Management Plan (RMP) (GR1 Procedure PO-2) Fully executed contract. Project charge numbers Contract Notice Checklist (GR1 Procedure PO-5) Project Readiness Review Meeting (Attachment 2) Client Kickoff Meeting (Attachment 3) Peer-reviewed work plan 	<ul style="list-style-type: none"> Document not approved for use by appropriate personnel Any one of the listed documents not in the project file Where appropriate, a Deficiency Notice will be issued and a causal analysis/corrective action will be developed.
Document Review	Periodic Inspection	Q.C Surveillance Document Review Form	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Verify a Document Review has been conducted on all project Documents. Project documents include, but are not limited to, the TIP, management plans, work plans and procedures, stand alone QA/QC plans, technical reports, specifications, drawings, and test reports. (PO-7) Verify the document review is documented on the document review form 	<ul style="list-style-type: none"> Document Review not Conducted Document Review not Documented (AWP (PO-7)) Where appropriate, a Deficiency Notice will be issued and a causal analysis/corrective action will be developed.
Site Preparation	3 Phase Inspection, Periodic Inspection	Q.C Project Checklist Q.C Preparatory Inspection Q.C Initial Inspection Q.C Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Document that the Project Readiness Review (PRR) meeting has been conducted (AWP PO1 Attach 2) Utilize the Project Checklist during Site Preparation 	<ul style="list-style-type: none"> Any element of the Project Checklist not complete that involves safety A PRR meeting not conducted and documented Where appropriate, a Deficiency Notice will be issued and a causal analysis/corrective action will be developed.
Blind Seeding Items	Periodic Inspection	Q.C Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Conduct Blind Q.C Seeding if required to meet Client or Project Objectives. Bury inter-advance items in known locations where geophysical surveys will be performed and determining whether the items were found as a result of these surveys. 	<ul style="list-style-type: none"> If the seeded item is not detected, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.



TETRA TECH EC, INC.

SURVEILLANCE CHECKLIST

Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
				<ul style="list-style-type: none"> · The seeded items should be painted blue and tagged with a non- biodegradable label identifying the items as inert and providing a contract reference, a point of contact address, phone number, and a target identifier. · The items will be placed at depths and orientations that, when surveyed effectively, will cause instrument responses that indicate the presence of a buried metallic item. · A log will be maintained documenting the exact location, depth, Azimuth and Inclination of every seeded item. 	
Documentation Control	Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist Verify</p> <ul style="list-style-type: none"> · Files will be administered and set up with file numbering or topical index system appropriate for the size of the project. · That documents and records submitted to Project Files are legible, complete · The documentation control plan is communicated at the Project Readiness Review Meeting. · Documents and records listed on the Records Retention Matrix (Attachment b) are maintained. 	<ul style="list-style-type: none"> · A Document Control Plan not implemented on the project · Any element not conforming to the specification of the Document Control Plan · Where appropriate, a Deficiency Notice will be issued and a causal analysis/corrective action will be developed.
GIS	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> · review maps of all areas of concern to ensure completeness. Verify that the areas of concern maps include: legend, scale, north arrow, figure #, revision date, page number, grid corner stakes and perimeter or way point stakes. · Verify that grid corner stakes, perimeter stakes and/or way point stakes are correctly marked on maps. · Geo target anomaly maps are in color, have state plane coordinates, north arrow, distance scale, mV scale and anomaly numbers. 	<ul style="list-style-type: none"> · Any and all deficiencies on the maps will be corrected prior to submission to the Client. · Maps lacking any of the required markings will be returned to the GIS or geophysics department for correction. · Any discrepancies in grid corner stakes, perimeter stakes and/or way point stakes will be corrected. · Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Geodetic Surveying	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> · Verify location consistency between all primary control points and monuments (office and field checks) · Verify coordinate system and units as required from SCOM · Verify field crew knowledge of "relative" coordinate systems if used (North and East +, West and South -) · Require grid corner points from survey subcontractor in the appropriate coordinate system if necessary · Require "true" horizontal and slope distance measurements for control points from survey subcontractor depending upon positioning system used · Visually inspect field work (slope distance between corner stakes) · Verify existence of corner stakes by the emplacement of metal rebar or nails. 	<ul style="list-style-type: none"> · Any element not conforming to the specifications · Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.



TETRA TECH LLC, INC.

SURVEILLANCE CHECKLIST

Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
Surface Clearance	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Verify all metallic debris from the ground surface is removed prior to the geophysical survey Verify all onshore hazards have been removed from the area selected to be cleared Verify field notes and logbooks are accurate, complete and consistent 	<ul style="list-style-type: none"> Any element not conforming to the specifications Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Grid or Transect Construction	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Verify coordinate system and units as required from SOI/M Relative coordinate systems require field sketch map with ~ N provided Verify metal nails are placed at grid corner locations or as required along transects Verify Corner points or transect markers are clearly marked and legible Verify field notes and logbooks are accurate, complete and consistent Verify field acquisition setup (GPS, RTS, Constellation, USRAD5 or relative) by occupying <u>at least</u> one control point NOT used to define acquisition setup Each positioning system (GPS, RTS, Constellation and USRAD5) require special setup parameters depending upon the project objectives that shall be explained to and implemented by the survey field crews (e.g. field guidelines or field requirements) 	<ul style="list-style-type: none"> Any element not conforming to the specifications Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
GPO	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Verification of the following conditions should be performed prior to locating the GPO test grid: <ul style="list-style-type: none"> Similar environmental conditions to the area of interest Similar terrain conditions to the area of interest Similar geological and cultural conditions to the area of interest Proximity to project survey area The specific parameters (i.e. project performance criteria in terms of detection) for the GPO are defined in the SOI/M and for the TEC/WP Verify metal nails are placed at grid corner locations. Inert seeded items are labeled and photographed (with scale) before burial. Other information to include on dry erase board includes item id, hole id, proposed depth and orientation, date, and time. Seeded item is placed in the hole and the depth measured (rigid measuring device preferred) to the center (and each end for larger items) of the item using a bar placed across the hole at ground level for reference. The item orientation (azimuth and inclination of nose), is estimated while in the open hole and recorded. The positioning system should also be used to survey the location of the "centroid" of the inert item, as well as the ends for larger items. This should be performed in the "open hole" environment. The positioning system staff that braces the antenna, prism, or wand should be "shortened" so that human error (e.g., tilting) is minimized while surveying the inert item in the open hole. 	<ul style="list-style-type: none"> Any element not conforming to the specifications Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.

 TETRA TECH EC, INC.		SURVEILLANCE CHECKLIST			
Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
Bush Clearance	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<ul style="list-style-type: none"> - A straight, rigid item (e.g. survey lath, metal bar, etc.) should be placed over the item during backfilling, and a pin flag inserted in its place upon removal. - After backfilling, the surface location (pin flag) should also be surveyed with the positioning system. - Verify field notes and logbooks are accurate, complete and consistent. <p>QC Specialist will</p> <ul style="list-style-type: none"> - Assume and verify that all overhanging branches have been trimmed to allow adequate room for the positioning sensor. (approximately 8ft) - Assume and verify that the ground surface of the grid has been cleared of all trimmings and dead fall. - Verify field notes and logbooks are accurate, complete and consistent. 	<ul style="list-style-type: none"> - Any element not conforming to the specifications - Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Geophysical Data Collection	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> - Communication between the team leaders, processing and interpretation geophysicist(s) and site geophysicist (or manager) is established and maintained - The required daily and weekly equipment checks are performed. - Any pre-project tests are performed and digitally documented. - Equipment is secure in the vehicle and in storage on site. - A safe and effective power charging station is setup and maintained by a designated data collector - Document equipment that is damaged or deemed "not working" by serial number - Ability to properly setup the equipment - Ability to perform TEC standard QC field tests prior to and after each acquisition session - Ability to monitor data prior to and during acquisition to ensure the data is of sufficient quality and quantity to meet the project objectives. - Consistency in navigation (line spacing, data coverage around obstacles) - Speed of VTA platform meets the pre-agreed project requirements - Separation distance between operators is maintained for two man tethered carry - Ability to remedy name acquisition files, download and transfer data - Quality and clarity of field notes - Verify that data transfer protocols are being followed - Verify field notes and logbooks are accurate, complete and consistent. <p>QC Specialist will verify</p> <ul style="list-style-type: none"> - A data acquisition log is maintained (preferably digital) - A processing/interpretation log is maintained (preferably digital) - Ensure file management system includes team id, date, survey area, and file designator so that there are no duplicate file names 	<ul style="list-style-type: none"> - Any element not conforming to the specifications - Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Geophysical Data Processing	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will verify</p> <ul style="list-style-type: none"> - A data acquisition log is maintained (preferably digital) - A processing/interpretation log is maintained (preferably digital) - Ensure file management system includes team id, date, survey area, and file designator so that there are no duplicate file names 	<ul style="list-style-type: none"> - Any element not conforming to the specifications - Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.

TETRA TECH EC, INC.					
SURVEILLANCE CHECKLIST					
Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
Geophysical Data Interpretation	3 Phase Inspection, Periodic Inspection	QC Surveillance		<ul style="list-style-type: none"> - Ensure data are stored by date, and that the original raw data are NEVER compromised; copy raw data to "process" folder prior to processing. - Ensure that files stored by date are "merged" as necessary into grids or transects that are more readily useable by other project personnel (PIM, client, etc.) - Processing and analysis efforts are documented in the appropriate digital files (e.g., TTEC *.chk, Oasis *.log) - Geophysical data is in the coordinate system(s) required by the client - Instrument bias is removed, signal drift is corrected (levelled) and minor instrument positioning (lag and/or latency) corrections applied - Known control points (e.g., grid corners or transect waypoints) show up in the data at the correct coordinate location -- the agreed upon error in the WIP - If data are sent to the centralized processing/interpretation center, a "chain of custody" method should be employed (i.e., email) - Geophysical QC personnel should check that the processing and interpretation scheme is consistent with meeting the objectives as stated in the WIP. - Geophysical QC personnel should also track the version of the TTEC processing software being used and if software modifications occur during project execution. - Any large-scale changes to the processing strategy should be documented as effective by performance on and comparison to the GPO 	<ul style="list-style-type: none"> - Any element not conforming to the specifications - Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Data Management	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> - Data interpretation parameters are defined PRIOR to data acquisition in the WIP or the TTEC field guidelines for that task. - Ensure that the specific interpretation criteria (contours, color scheme, plotting of track path, etc.) and classification scheme are documented and followed by the interpreters, especially when there are multiple interpreters. - A dig sheet is generated including a target information table and graphical representations of the test grid geophysical data. <p>QC Specialist will</p> <ul style="list-style-type: none"> - verify project data is managed in a access database (or equivalent) - Transfers of data to site geophysicist for processing is conducted daily - Verify consistency/separances between interpreted and excavated anomaly's results. - Verify all data is backed up on a daily basis - Compare dig results with geo target anomaly dig sheets and maps to ensure dig results are representative of geophysical anomaly characteristics. (Data Verification Check) - Verify interpreted anomalies have been intrusively investigated (as required) and documented. (Data Verification Check) 	<ul style="list-style-type: none"> - Any element not conforming to the specifications - Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.



TETRA TECH EC, INC.

SURVEILLANCE CHECKLIST

Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
Target Validation/ False Negative Check	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Verify a minimum of 10% (or as directed by PM/client) "no digs" per representative area (i.e., grid, transect, etc.) are converted to "digs". Ensure the selections are re-queried and investigated. QC must review the results from this activity. Compare dig results of the converted digs as specified above. 	<ul style="list-style-type: none"> Any element not conforming to the specifications A grid will require causal analysis/corrective action if a UXO or UXO look-alike is located from a no dig selection. A grid will also require causal analysis/corrective action if an item that is similar in size and mass to the MPM is found. Failed grids will be returned to geo for re-evaluation and where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Anomaly Reacquisition	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will:</p> <ul style="list-style-type: none"> Data is loaded onto the positioning system in the correct format and the filename is consistent with the dig sheet nomenclature. Reacquire at least one known control point prior to reacquiring any anomalies (e.g., grid corner, transect waypoint, geodetic control point, etc.) and check if the off set from the known point is within tolerance specified in W/P. Targets are relocated and flagged in the field with the correct ID from the dig sheet The reacquired location is digitally recorded by the positioning system with the same target id that is present on the dig sheet. Check a % of the reacquired versus interpreted coordinates to ensure within tolerance specified in W/P. Verify Reacquire team are marking the flags and placing them in the ground far enough to prevent them from coming out. There is effective communication between the reacquire team and the site geophysicist or data processing center. 	<ul style="list-style-type: none"> Any element not conforming to the specifications Failure to attain reacquisition accuracy will result in the generation of a Nonconformance report and will require causal analysis/corrective action.
Flagged Anomaly Excavation	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will verify intrusive accuracy as follows:</p> <ul style="list-style-type: none"> Check 10% of holes to ensure holes are clear of OE. If hole is annotated as "left in place", verify description is correct. Check for acceptable back fill of holes. Verify feedback protocols are implemented (intrusive team leaders communicate) Ensure validation of the dig results are being implemented (ensures all anomalies are excavated and validated based on the size of the item recovered compared to the geophysical signature) 	<ul style="list-style-type: none"> Any element not conforming to the specifications A grid will require causal analysis/corrective action if a UXO or UXO look-alike is located above the detectable depth. A grid will also require causal analysis/corrective action if an item that is similar in size and mass to the MPM is found. Failed grids will be returned to the intrusive team for cure. Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed. The SUXOS will be notified if holes are not being backfilled entirely.

 TETRA TECH EC, INC.		SURVEILLANCE CHECKLIST			
Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
Mag and Dig Operation	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will verify intrusive accuracy as follows:</p> <ul style="list-style-type: none"> Check all holes along fence lines to ensure clear of OE. In non fence line mag & dig areas, utilize an "x" or ribbon walk pattern, and check all holes along pattern to ensure clear of OE. Check for acceptable back-fill of holes. 	<ul style="list-style-type: none"> Any element not conforming to the specifications A grid will require causal analysis/corrective action if a UXO or UXO look-alike is located above the detectable depth. A grid will also require causal analysis/corrective action if an item that is similar in size and mass to the MPM is found. Failed grids will be returned to the intrusive team for cure. Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed. The SUXOS will be notified if holes are not being backfilled entirely.
Field Data Entry	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will verify</p> <ul style="list-style-type: none"> That the data entry is complete, accurate, and consistent and meets Data Quality Objectives Data is being recorded in real time not after the fact 	<ul style="list-style-type: none"> Any element not conforming to the specifications Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Logbook Entries	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will verify</p> <ul style="list-style-type: none"> That the data entry is complete, accurate, and consistent and meets Data Quality Objectives Data is being recorded in real time not after the fact 	<ul style="list-style-type: none"> Any element not conforming to the specifications Where appropriate, a Deficiency Notice will be issued and a causal analysis/corrective action will be developed.
Scrap Processing	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Observe the Scrap Processing procedure Inspect a % of the Scrap 	<ul style="list-style-type: none"> Any OE found in the Scrap Processing Area specifications Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Safety Meeting including Tailgate Safety Brief	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>QC Specialist will</p> <ul style="list-style-type: none"> Observe the morning safety meeting Observe the tailgate safety meetings 	<ul style="list-style-type: none"> Safety Meetings not taking place Where appropriate, a Deficiency Notice will be issued and a causal analysis/corrective action will be developed.
Equipment Management	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>QC Specialist will verify</p> <ul style="list-style-type: none"> A Inventory with serial numbers of all equipment to be utilized is completed Components are marked with unique identifiers such as color coded electrical tags for individual acquisition teams 	<ul style="list-style-type: none"> Any element not conforming to the specifications Where appropriate, a Deficiency Notice will be issued and a causal analysis/corrective action

 TETRA TECH EC, INC.		SURVEILLANCE CHECKLIST			
Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Corrective Action Criteria
Equipment Checks	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Equipment Damaged on the Project will have an Incident Report completed on the incident. (EH8 1-7) QC Specialist will Verify All required Equipment Checks are completed Daily Equipment checks are documented	Any element not conforming to the specifications Where appropriate, a Nonconformance report will be issued and a causal analysis/corrective action will be developed.
Acceptance Quality Control	3 Phase Inspection, Periodic Inspection	QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will Ensure that all production work is completed on the areas to be sampled. Ensure all Nonconforming situations are corrected prior to starting Acceptance Sampling. Document the Acceptance Sampling on the appropriate Acceptance Sampling Log.	Any element not conforming to the specifications A Nonconformance report will be issued and a causal analysis/corrective action will be developed if the item fails Acceptance Sampling.
Other	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection QC Initial Inspection QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will perform random surveillance and evaluation of the following activities: As required by the project or client objectives.	Any element not conforming to the specifications Where appropriate, a Nonconformance report or Deficiency Notice will be issued and a causal analysis/corrective action will be developed.



 TETRA TECH FC, INC.		SURVEILLANCE SCHEDULE				
TASK	100%	DAILY	WEEKLY	BI-WEEKLY	AS NEEDED	
Personnel Qualifications	X					
Accident/Incident Reporting	X					
Turn-in of Recovered Ordnance Related Scrap		X				
Preventive Maintenance		X				
Communications Equipment Inspection		X				
Safety Inspections			X			
Medical Support			X			
Communications Effectiveness			X			
Explosives Storage & Accountability			X			
Explosives – UXO/OE Transportation			X			
Physical Security (After hours)			X			
Data Management			X			
Surveying and Mapping Operations			X			
Brush – Vegetation Removal			X			
Geophysical Detection Operations			X			
Excavation Activities			X			
UXO/OE Final Disposal			X			
UXO/OE Accountability			X			
Fire Protection – Prevention			X			
Project Administration			X			
Safety and Health Programs				X		
Management of Project Property				X		
Current status of WP/SSHP				X		
Visitor Briefing					X	
Site – Specific Training					X	



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Monthly Project Quality Control Report

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Client:		Project Number:
Project:		Location:
Type Of Project:		Report No.:
I. Describe QC methods used (or reference where they are documented) and pass/ fail criteria.		
II. Describe any constraints or problems encountered.		
III. Summarize quality control activities performed and describe any special conditions encountered or special circumstances.		
IV. Provide a list of all QC failures and describe corrective action taken.		
V. List/ describe lessons learned.		
VI. Include a final statement that contract requirements are met regarding quality of services provided.		
VII. List supporting data/ references and where they are filed.		
Reference/ Supporting Data:		Location:
Name and Signature	Title/Company	Date

 TETRA TECH FC, INC.		QC MONTHLY CHECKLIST			
1 Review Scope of Work & WP	Yes	No	N/A	COMMENTS	
a. Check for Modifications/Changes & Up To Date					
b. Proper Depth of Clearance Identified					
c. Corrective Action Standards Established					
d. Proper Target Ordnance Identified/Test Sources/Test Plot Established					
e. Most Probable Munitions (MPM) Identified					
f. Exclusion Zone Established & Based on MPM					
g. Standards for Turn-In of Recovered Inert OE and ORDNANCE SCRAP					
2 Documentation Requirements/Publications	Yes	No	N/A	COMMENTS	
a. Approval Letter for Work Plan/Mobilization Letter					
b. Contractor Qualifications, Approval Letter for All UXO Personnel Identified by Name & Position					
c. Certificate of Grounding, Lightning Protection (if Required)					
d. Approval Letter, MSD 1/600					
e. Explosive Safety Submission (ESS) (if Required)					
f. Delivery Order and All Modifications & Change Orders					
g. EM 385-1-1					
h. Work Plan and Site Safety & Health Plan					
3 QC Files Established	Yes	No	N/A	COMMENTS	
a. Daily/Weekly QC Reports					
b. Approval Letter, Contractor Operations					
c. Weekly/Monthly Contractor Reports (If Provided)					
d. CEHNC Form 948 (Copies)					
4. Site-Specific Safety & Health Plan (SSHP)	Yes	No	N/A	COMMENTS	
a. Hazard Analysis & Risk Assessment for All Task & Equipment					
b. Training, General Site Workers HAZWOPER Qualified & Current 8-Hour Refresher					
c. Personnel Protective Equipment (PPE)					
d. First Aid Equipment Shall be Immediately Available					
e. Emergency Eye-washes/showers Comply with ANSI Standards					
f. Fire Extinguishers (Specify Type, Size, and Location)					
g. Established Safety & Health Training Program					
h. Emergency Notification List Posted & Available					
i. Emergency Routes/Maps Available & Issued to Each Team					

j. Work Task Identified in Hazard Analysis				
k. Hazard Analysis for Each Piece of Equipment/Operations				
5. Facilities	Yes	No	N/A	COMMENTS
a. Adequate Work Space & Facilities (Restrooms, etc.)				
b. Good Housekeeping (No Fire Hazards, Tripping Hazards, etc.)				
c. Approved and Suitable Containers for Flammable & Toxic Materials				
d. Approved/Adequate Explosive Storage Facilities				
e. Fire/Emergency Exits Clear & Unbarred				
f. Personnel Limits Maintained				
6. Equipment	Yes	No	N/A	COMMENTS
a. Tools Appropriate and Serviceable				
b. Personnel Protective Equipment (PPE) Present, Serviceable & Utilized				
c. Equipment Calibrated (Last Cal. Date Next Cal Date)				
d. Survey Equipment Inspected & Serviceable				
e. Heavy Equipment Inspected & Serviceable				
f. Two Separate Means of Communications, Radio(s)/Cell Phone, Land Line(s)				
g. Geophysical Equipment on-Hand & Serviceable				
7	Yes	No	N/A	COMMENTS
a. Proper Storage Containers				
b. Lightning Protection System Serviceable & Tested (Test Date)				
c. Explosive Compatibility				
d. Security Locks/Fencing				
e. Fire Fighting/Control Plan				
f. Explosive Placarding/Fire Fighting Symbols				
g. Safety Distance From Potential Targets				
h. Approved Protective Measures Used, If Required				
i. Explosive Limits Maintained				
8. Explosive Management Plan	Yes	No	N/A	COMMENTS
a. Licenses/Permits (If Required)				
b. Each Explosive Item Identified in Equipment Plan (Not Required on FFP Task Orders)				
c. Initial Receipt Procedures & Documentation On-Site				
d. Storage Facilities & Physical Security of Explosives & Key Control				
e. Procedures for Transportation of Explosives				
f. Receipt Procedures Accounting for Each Item of Explosives/Documentation On-Site				

g. Individuals Authorized to Receive, Issue, and Transport Identified				
h. Certification by End User (In Writing)				
i. Reconciliation, Receipt Documents On-site				
j. Inventory Conducted Weekly @ Minimum				
k. Duplicate Magazine Data Cards (Magazine/Facility)				
9. UXO Operational Plan	Yes	No	N/A	COMMENTS
a. Contractor Following Methodology Defined in WP				
1) Daily Safety Meeting Conducted by UXOSO				
b. Geophysical Detection Magnetometer Used				
1) Pre-Operational Checks Performed Prior to Sweep Operations				
2) Operational Condition Annotated in Log Book				
3) UXO Teams				
4) Quality Control				
5) Quality Control Documentation				
c. Operational Teams Operating IAW WP				
1) UXO Supervisor conducted Physical Check Prior to Sweep Operation				
2) Pre-Sweep Operational/Safety Brief Conducted				
3) Individual Sweep Lanes Marked IAW WP				
4) Contacts Marked & Investigated Properly				
5) Results of Sweep Operation Recorded				
6) All OE, Inert Items, & Scrap Examined by at Least Two UXO Personnel				
7) All UXOs Clearly Marked				
d. QC Operations IAW WP				
e. ORDNANCE SCRAP Being Collected (as Required)				
f. ORDNANCE SCRAP Inspected/Vented/Segregated				
g. Geophysical Test Grids Appropriate and IAW SOW				
10. Disposal Operations	Yes	No	N/A	COMMENTS
a. Disposal Method IAW WP				
b. Adequate Security For Disposal Operation				
c. Disposal Notification List Available				
d. All Necessary Notifications Made				
e. Movement of OE Items, or is OE Consolidation Feasible				
f. Protective Measures/Tamping Being Used/Appropriate for OE Being Destroyed				
g. Disposal Procedures IAW 60A-1-1-31/WP				
1) Misfire Procedures Properly Performed				
11. Location Survey & Mapping Plan	Yes	No	N/A	COMMENTS
a. UXO Escort Provided				
b. Grid Stake, Locations Swept With Geophysical Equipment Prior to Driving Stakes				

c. Survey Notes Being Recorded				
12. Quality Control Plan	Yes	No	N/A	COMMENTS
a. QC Operational/Checks Being Conducted IAW WP				
b. QC Grid Sweep Pattern Adequate				
c. Results of QC Checks Being Recorded				
13. Transportation Plan	Yes	No	N/A	COMMENTS
a. Pre-operational Checks of Vehicles Being Conducted				
b. All OperatOrdnance Scrap Licensed For Vehicle				
c. Fire Fighting & First Aid Equipment On Board				
d. Cargo Properly Segregated/Blocked And Braced				
e. Proper DOT Placarding/Fire Fighting Symbols Used				
14. Vegetation Removal	Yes	No	N/A	COMMENTS
a. Equipment Operated To Prevent Impact With Possible Surface UXO				
b. Cutting Does Not Present Implement Hazard				
c. UXO Personnel Monitoring Cutting Operation				
d. UXO Discovered Marked/Handled Appropriately				

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Acceptance Sampling Log

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Deficiency Notice

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DEFICIENCY NOTICE

		Deficiency Notice No.	
Client:		Project Number:	
Project:		Specific Process:	
Description of Process			
I. Description of Deficiency <i>(Items involved, specification, code or standard to which items do not comply, submit sketch if applicable)</i>			
Name and Signature of Person Reporting Deficiency		Title/Company	Date
II. Root Cause Analysis			
Name and Signature of Person Conducting RCA		Title/Company	Date
III. Corrective Action			
Name and Signature of Person Recommending CA		Title/Company	Date
Re-Inspection Results			
IV. Re-Inspection		Reissued Under:	
<input type="checkbox"/> Accepted		Deficiency Notice Number:	
<input type="checkbox"/> Rejected		Non-Conformance Report Number:	
Name and Signature of Person Re-Inspection		Title/Company	Date
V. <input type="checkbox"/> Responsible Organization		<input type="checkbox"/> QA/QC	<input type="checkbox"/> Site Manager
<input type="checkbox"/> Project Manager			
Name (Signature)	Name (Signature)	Name (Signature)	Name (Signature)
Date	Date	Date	Date
<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected
<input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted with Comments

Root Cause Analysis

DEFICIENCY NOTICE

Both the deficiency and nonconformance report forms contain an area for the entry of information regarding the cause of the problem and proposed resolution. Determining the root cause of a deficiency or nonconformance is an integral part of the QC process. The depth and extent of the root cause analysis depends on the situation; it may be as simple (minor) as an overlooked step or procedure, or it may be quite complicated. Root cause analysis is the responsibility of the UXOQC for quality related items. Input can be obtained as necessary from field personnel and technical advisors in order to identify the factors that led to the problem. RCA is a tool designed to help identify not only *what* and *how* an event occurred, but also *why* it happened. Only when investigators are able to determine why an event or failure occurred will they be able to specify workable corrective measures that prevent future events of the type observed. Understanding why an event occurred is the key to developing effective recommendations and identifying prevention strategies.

Root causes are specific underlying causes.

- The investigator's goal should be to identify specific underlying causes. The more specific the investigator can be about why an event occurred, the easier it will be to arrive at recommendations that will prevent recurrence.

Root causes are those that can reasonably be identified.

- Occurrence investigations must be cost beneficial. It is not practical to keep valuable manpower occupied indefinitely searching for the root causes of occurrences. Structured RCA helps analysts get the most out of the time they have invested in the investigation.

Root causes are those management has control to fix.

- Avoid using general cause classifications such as operator error, equipment failure or external factor. Such causes are not specific enough to allow management to make effective changes. Management needs to know exactly why a failure occurred before action can be taken to prevent recurrence.

Root causes are those for which effective recommendations for preventing recurrences can be generated.

- Recommendations should directly address the root causes identified during the investigation. If the investigator arrives at vague recommendations such as, "Improve adherence to written policies and procedures," then they probably have not found a basic and specific enough cause and need to expend more effort in the analysis process.

The RCA is a four-step process involving the following:

1. Data collection.

- The first step in the analysis is to gather data. Without complete information and an understanding of the event, the causal factors and root causes associated with the event cannot be identified. The majority of time spent analyzing an event is spent in gathering data.

2. Causal factor charting.

- Causal factor charting provides a structure for investigators to organize and analyze the information gathered during the investigation and identify gaps and deficiencies in knowledge as the investigation progresses. The causal factor chart is simply a sequence diagram with logic tests that describes the events leading up to an occurrence, plus the conditions surrounding these events. Preparation of the causal factor chart should begin as soon as investigators start to collect information about the occurrence. They begin with a skeleton chart that is modified as more relevant facts are uncovered. The causal factor chart should drive the data collection process by identifying data needs.

3. Root cause identification.

- After all the causal factors have been identified, the investigators begin root cause identification. This step involves the use of a decision diagram called the Root Cause Map to identify the underlying reason or reasons for each causal factor. The map structures the reasoning process of the investigators by helping them answer questions about why particular causal factors exist or occurred. The identification of root causes helps the investigator determine the reasons the event occurred so the problems surrounding the occurrence can be addressed.

DEFICIENCY NOTICE

4. Recommendation generation and implementation.

- The next step is the generation of recommendations. Following identification of the root causes for a particular causal factor, achievable recommendations for preventing its recurrence are then generated. The root cause analyst is often not responsible for the implementation of recommendations generated by the analysis. However, if the recommendations are not implemented, the effort expended in performing the analysis is wasted. In addition, the events that triggered the analysis should be expected to recur. Organizations need to ensure that recommendations are tracked to completion.

Root Cause Analysis Checklist

Activity or Factor	Comment	Completed or N/A
Client Input		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Evidence of previous occurrence		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Documentation		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Schedules and Project Plans		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Equipment / Machinery		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Personnel / Staff		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Measuring / Test Instruments		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Material		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Environment / workspace		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Communication		<input type="checkbox"/> Completed <input type="checkbox"/> N/A

The Root Cause Analysis Checklist provides an overall framework to guide your analysis so you don't overlook an area that contributed to the final solution. The Checklist has 3 columns: 1) Activity or factor, 2) Comment and 3) Completed or not applicable.

As you start to analyze the problem, it determines which activities or factors have any possible bearing on the problem/ Mark the rest as "Not Applicable."

Work your way through the remaining items. For instance, under "client input," you would look into client requirements, complaints, purchase orders, etc., searching for breakdown and causes.

Under "personnel," investigate if workers made a mistake, if they had proper procedures, training, etc.

In the "comments" column, record the findings under each activity or factor and check the completed box.

Additional RCA Tools:

The Five WHYS is a very simple technique that requires the investigator / analyst to ask "WHY?" five consecutive times. This forces the investigation deep into the problem area.

DEFICIENCY NOTICE

When Useful:

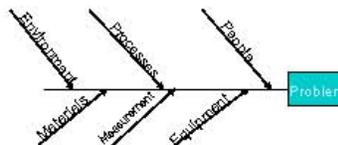
1. At the beginning of an investigation asking five WHYS can get the investigator started.
2. When events are known, but conditions and causal factors are not clear, asking five WHYS can help the investigator / analyst to understand factors relating to the event.
3. When human performance problems are suspected, asking five WHYS forces the investigator / analyst to look deep into the situation for factors associated with inadequate performance or human error.
4. State the problem, causal factor, condition, or other information to be analyzed. Ask WHY that problem, causal factor, condition, or information exists or occurred. Answer the WHY question. Ask WHY the answer is so. Repeat the process until WHY has been asked five times through the sequence. Ask more WHY questions if there is reason to expect useful information in the answers.
5. Continue asking the “WHY” sequences until all problems, causal factors, conditions or other information of interest is analyzed.

Remember the following cautions in using The Five WHYS:

- Answers could become silly. Ensure you are answering the questions properly.
- Be sure you do not follow one track to the exclusion of others. If a WHY question has more than one answer follow each answer separately with follow up WHY questions.
- Don't stop at five WHY questions if the answer indicates further useful information can be obtained. Five is a recommendation not a maximum.

Cause and Effect Diagram

- Cause and Effect Diagram Defined
 - The cause and effect diagram is also called the Ishikawa diagram or the fishbone diagram.
 - It is a tool for discovering all the possible causes for a particular effect.
 - The major purpose of this diagram is to act as a first step in problem solving by creating a list of possible causes.
- Constructing a Cause and Effect Diagram
 - First, clearly identify and define the problem or effect for which the causes must be identified. Place the problem or effect at the right or the head of the diagram.
 - Identify all the broad areas of the problem. Typical starting points are People, Processes, Environment, Equipment, and Materials.
 - Write in all the detailed possible causes in each of the broad areas.
 - Each cause identified should be looked upon for further more specific causes. Use the five whys.
 - Why is that a problem
 - Why is that a problem? and so on until you have done this five times for each step.
 - View the diagram and evaluate the main causes.
 - Set goals and take action on the main causes.



Nonconformance Report

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NONCONFORMANCE REPORT

		Report No.	
Client:		Project Number:	
Project:		Specific Process:	
Description of Process			
I. Description of Nonconformance <i>(Items involved, specification code or standard to which items do not comply, submit sketch if applicable)</i>			
Name and Signature of Person Reporting Nonconformance		Title/Company	Date
II. Root Cause Analysis			
Name and Signature of Person Conducting RCA		Title/Company	Date
III. Recommended Disposition <i>(Submit sketch, if applicable)</i>			
Name and Signature of Person Recommending Disposition		Title/Company	Date
IV. Evaluation of Disposition by Tetra Tech EC, Reason for Disposition			
V. Corrective Action <input type="checkbox"/> Required <input type="checkbox"/> Not Required			
VI. <input type="checkbox"/> QA/QC	<input type="checkbox"/> Project Manager	<input type="checkbox"/> Client <i>(if applicable)</i>	<input type="checkbox"/> Other
Name <i>(Signature)</i>	Name <i>(Signature)</i>	Name <i>(Signature)</i>	Name <i>(Signature)</i>
Date	Date	Date	Date
<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected
<input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted with Comments
VII. Verification of Disposition <input type="checkbox"/> Required <input type="checkbox"/> Not Required			
By	Signature	Title	Date

NONCONFORMANCE REPORT

Root Cause Analysis

Both the deficiency and nonconformance report forms contain an area for the entry of information regarding the cause of the problem and proposed resolution. Determining the root cause of a deficiency or nonconformance is an integral part of the QC process. The depth and extent of the root cause analysis depends on the situation; it may be as simple (minor) as an overlooked step or procedure, or it may be quite complicated. Root cause analysis is the responsibility of the UXOQC for quality related items. Input can be obtained as necessary from field personnel and technical advisors in order to identify the factors that led to the problem. RCA is a tool designed to help identify not only *what* and *how* an event occurred, but also *why* it happened. Only when investigators are able to determine why an event or failure occurred will they be able to specify workable corrective measures that prevent future events of the type observed. Understanding why an event occurred is the key to developing effective recommendations and identifying prevention strategies.

Root causes are specific underlying causes.

- The investigator's goal should be to identify specific underlying causes. The more specific the investigator can be about why an event occurred, the easier it will be to arrive at recommendations that will prevent recurrence.

Root causes are those that can reasonably be identified.

- Occurrence investigations must be cost beneficial. It is not practical to keep valuable manpower occupied indefinitely searching for the root causes of occurrences. Structured RCA helps analysts get the most out of the time they have invested in the investigation.

Root causes are those management has control to fix.

- Avoid using general cause classifications such as operator error, equipment failure or external factor. Such causes are not specific enough to allow management to make effective changes. Management needs to know exactly why a failure occurred before action can be taken to prevent recurrence.

Root causes are those for which effective recommendations for preventing recurrences can be generated.

- Recommendations should directly address the root causes identified during the investigation. If the investigator arrives at vague recommendations such as, "Improve adherence to written policies and procedures," then they probably have not found a basic and specific enough cause and need to expend more effort in the analysis process.

The RCA is a four-step process involving the following:

1. Data collection.

- The first step in the analysis is to gather data. Without complete information and an understanding of the event, the causal factors and root causes associated with the event cannot be identified. The majority of time spent analyzing an event is spent in gathering data.

2. Causal factor charting.

- Causal factor charting provides a structure for investigators to organize and analyze the information gathered during the investigation and identify gaps and deficiencies in knowledge as the investigation progresses. The causal factor chart is simply a sequence diagram with logic tests that describes the events leading up to an occurrence, plus the conditions surrounding these events. Preparation of the causal factor chart should begin as soon as investigators start to collect information about the occurrence. They begin with a skeleton chart that is modified as more relevant facts are uncovered. The causal factor chart should drive the data collection process by identifying data needs.

3. Root cause identification.

- After all the causal factors have been identified, the investigators begin root cause identification. This step involves the use of a decision diagram called the Root Cause Map to identify the underlying reason or reasons for each causal factor. The map structures the reasoning process of the investigators by helping them answer questions about why particular causal factors exist or occurred. The identification of root causes helps the investigator determine the reasons the event occurred so the problems surrounding the occurrence can be addressed.

NONCONFORMANCE REPORT

4. Recommendation generation and implementation.

- The next step is the generation of recommendations. Following identification of the root causes for a particular causal factor, achievable recommendations for preventing its recurrence are then generated. The root cause analyst is often not responsible for the implementation of recommendations generated by the analysis. However, if the recommendations are not implemented, the effort expended in performing the analysis is wasted. In addition, the events that triggered the analysis should be expected to recur. Organizations need to ensure that recommendations are tracked to completion.

Root Cause Analysis Checklist

Activity or Factor	Comment	Completed or N/A
Client Input		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Evidence of previous occurrence		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Documentation		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Schedules and Project Plans		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Equipment / Machinery		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Personnel / Staff		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Measuring / Test Instruments		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Material		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Environment / workspace		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Communication		<input type="checkbox"/> Completed <input type="checkbox"/> N/A
Statistical Data, SPC Charts, or Trend Analysis		<input type="checkbox"/> Completed <input type="checkbox"/> N/A

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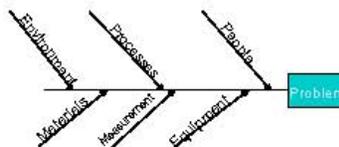
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Corrective Action Request

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CORRECTIVE ACTION REQUEST

Project/Location		CAR No.:	
		CAR Issue Date	
Responsible Organization		Discussed With	
Response Assigned to		Response Due Date	
Requirement Violated/Finding			
Recommended Corrective Action			
Initiated by	Date	Approved By	Date
Remedial Action to Correct Condition (<i>Include Cause</i>):			
Scheduled Completion Date:			
Corrective Action to Prevent Recurrence			
Response Submitted By:		Date:	
Evaluation Comments:		<input type="checkbox"/> Accept	<input type="checkbox"/> Reject
Verification Comments:		<input type="checkbox"/> Accept	<input type="checkbox"/> Reject
Evaluated By	Date	Verified By	Date

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Car Status Log

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Quality Incident Report

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QUALITY INCIDENT REPORT

<i>PART I</i>			
<i>DATES & LOCATION</i>			
Date of Incident:		Date of Investigation Report:	
Office/Project Location:		Organization Or Department:	
<i>TYPE OF INCIDENT/DEVIATION</i>			
<input type="checkbox"/> Corporate Procedure Deviation <input type="checkbox"/> Project Plan/Procedure Deviation <input type="checkbox"/> Project Plan/Procedure Not In Place <input type="checkbox"/> Quality System Failure <input type="checkbox"/> Performance Failure <input type="checkbox"/> Other, please describe-			
<i>INCIDENT DESCRIPTION & INVESTIGATION</i>			
Means Of Identification:			
<input type="checkbox"/> Client Concern <input type="checkbox"/> Nonconformance Report <input type="checkbox"/> Audit Report <input type="checkbox"/> Corrective Action Request <input type="checkbox"/> Supervisory Review <input type="checkbox"/> Peer Review <input type="checkbox"/> Project Review <input type="checkbox"/> Other, please describe-			
Incident Cost (e.g., Cost of Rework)		Estimated: \$	Actual: \$
Client Impact:			
Issue Summary: Summarize the concern, problem, or situation that needs to be addressed. Identify who was involved and their role (e.g., performer, inspector, auditor).			
<i>PART II</i>			
<i>CAUSE ANALYSIS</i>			
Immediate Cause(s): What immediate actions and/or conditions contributed to this incident (see guidance, below)?			
Basic Cause(s): What personnel, job and/or management system factors contributed to the deficiency (see guidance, below)?			
<i>ACTION PLAN</i>			
Remedial Actions – What has been and/or should be done to control each of the causes listed above?			
Action	Person Responsible	Target Date	Completion Date
<i>PERSONS PERFORMING THE REVIEW</i>			
Investigator's Name: (Print)	Sign:	Date:	
Investigator's Name: (Print)	Sign:	Date:	
Investigator's Name: (Print)	Sign:	Date:	
<i>MANAGEMENT REVIEW</i>			
Project/Office Manager (Print)	Sign:	Date:	
Comments:			
Quality Manager (Print)	Sign:	Date:	
Comments:			



QUALITY INCIDENT REPORT

Cause Analysis

Immediate Causes: Determine the immediate causes, using the example on the following page. If one or more of the examples fits the circumstance, use those words in the cause description. This facilitates statistical analysis of the incident database for program evaluation/modification. However, do not confine your cause determination to the guide-words. Be sure that the incident description is sufficiently detailed to support the causal analysis. An assumption of cause (e.g., improper execution of a procedure) from the incident (deviation from quality spec) is not sufficient.

Basic Causes: Like the Immediate Causes, use the guide-words in the attachment whenever appropriate and explain. For example, improper motivation may be because the correct way takes more time or effort; short cutting standard procedure is tolerated or positively reinforced; or the person thinks there is no personal benefit to always doing the job correctly.

Investigators should determine if a change in the work conditions, scope, methods or personnel contributed to the incident. This may occur due to inadequate assessment of hazard potential or inadequate application of hazard controls. If "Change" was contributing, it will most likely be identified in combination with other basic causes.

Note: The investigator is encouraged to review the *Practical Loss Control Leadership* chapters on *Causes and Effects of Loss* and *Accident/Incident Investigation* before doing the causal analysis. The investigation team should refer to the S.C.A.T. Chart available from the PESM when analyzing causes of high loss potential incidents, especially where motivation is suspected of being a Basic Cause.

Remedial Actions: Include all actions taken or those that should be taken to prevent recurrence. Be sure that actions address the causes. For example, training (safety meetings) may be a necessary response for lack of knowledge, but may be inadequate for improper motivation. If completion dates exceed the 72 hours reporting period, a revised report must be submitted when all remedial actions are complete.

Persons Performing Investigation: The primary investigator is the FWENC Supervisor in charge of the work where the incident occurred. Others participating in the investigation, such as the Project Manager, ESS, QC, site engineer, foreman, etc. should also sign the report.

Management Review: The Project or Office Manager and the Project QA/QC Manager or office QA/QC Manager must sign the report indicating their satisfaction with thoroughness of the investigation and the report, and their concurrence that the action items address the identified causes. This constitutes the peer review, and the report, particularly the description, should be clear to readers not familiar with the project or incident.

The Project QA/QC Manager or office QA/QC Manager should add the following statement in the comment box: "The causal analysis is appropriate and is supported by the facts presented in this report, and the action plan adequately addresses the immediate and basic causes."



QUALITY INCIDENT REPORT

EXAMPLES OF IMMEDIATE CAUSES	
<u>SUBSTANDARD ACTIONS</u>	<u>SUB STANDARD CONDITIONS</u>
<ol style="list-style-type: none"> 1. Personnel Not Properly Qualified 2. Failure to Communicate 3. Improper Execution of Specified Procedures 4. Operating Equipment Outside of Specified Parameters 5. Making Equipment Function(s) Inoperable 6. Failure to Provide Proper Specs to Vendor 7. Failure to Check Equipment Prior to Acceptance 8. Acceptance of Defective Equipment 9. Failure to Provide Proper Equipment 10. Improper Placement of Equipment 11. Improper Servicing/Maintenance of Equipment 12. Under Influence of Alcohol/Drugs 13. Horseplay 	<ol style="list-style-type: none"> 1. Guards Or Barriers 2. Protective Equipment 3. Tools, Equipment, Or Materials 4. Congestion 5. Warning System 6. Fire And Explosion Hazards 7. Poor Housekeeping 8. Noise Exposure 9. Exposure To Hazardous Materials 10. Extreme Temperature Exposure 11. Illumination 12. Ventilation 13. Visibility

EXAMPLES OF BASIC CAUSES	
<u>PERSONAL FACTORS</u>	<u>JOB FACTORS</u>
<ol style="list-style-type: none"> 1. Capability 2. Knowledge 3. Skill 4. Stress 5. Motivation 	<ol style="list-style-type: none"> 1. Supervision 2. Engineering 3. Purchasing 4. Maintenance 5. Tools/Equipment 6. Work Standards 7. Wear And Tear 8. Abuse Or Misuse 9. Change (Conditions, scope, work methods, personnel)

MANAGEMENT PROGRAMS/SYSTEMS FOR CONTROL OF INCIDENTS	
<ol style="list-style-type: none"> 1. Leadership And Administration 2. Management Training 3. Planned Inspections 4. Task Analysis And Procedures 5. Task Observation 6. Emergency Preparedness 7. Organizational Rules 8. Accident/Incident Analysis 9. Personal Protective Equipment 	<ol style="list-style-type: none"> 10. Health Control 11. Program Audits 12. Engineering Controls 13. Personal Communications 14. Group Meetings 15. General Promotion 16. Hiring And Placement 17. Purchasing Controls

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Field Change Request (FCR) Form

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Field Change Request (FCR) Form

Project Name:		Project Number:	
Client:		Request Number: FCR-	
Field Change Request Title:			
I. Description			
II. Reason for Change			
III. Recommended Disposition			
Field Operations Lead (or designee)		Signature	Date
IV. Disposition			
V. <input type="checkbox"/> PESM	<input type="checkbox"/> QC Manager	<input type="checkbox"/> TtEC Project Manager	<input type="checkbox"/> Client Project Manager
Name (Signature)	Name (Signature)	Name (Signature)	Name (Signature)
Date	Date	Date	Date
<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments
Comments:	Comments:	Comments:	Comments:
VI. Distribution			
Client Project Manager Project Manager QA/QC Field Operations Lead Project File		Other:	

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Lessons Learned Report Form

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LESSONS LEARNED REPORT FORM

Client:	Project Number:	
Project:	Location:	
Type Of Project:		
I. TOPIC		
II. DESCRIPTION (Narrative of relevant events, problem, impact)		
III. LESSON(S) LEARNED (e.g. Project Specific, Location Specific, Company-wide):		
IV. RECOMMENDED FUTURE ACTION (e.g., Revise Project Procedures, Company Procedures, Additional Training):		
V. EVALUATION BY DEPARTMENT HEAD (e.g., Support Recommendation, Alternate Recommendation):		
VI. List supporting data/ references (if applicable)		
Reference/ Supporting Data:	Location:	
VII. <input type="checkbox"/> PM	<input type="checkbox"/> QCM	<input type="checkbox"/> Director of UXO Operations
Name (<i>Signature</i>)	Name (<i>Signature</i>)	Name (<i>Signature</i>)
Date	Date	Date
<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments Comments:	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments Comments:	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments Comments:
VIII. Forward Approved Lessons Learned Report to VP of Support Services		
Name (<i>Signature</i>)	Date	<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Accepted with Comments Comments:

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QC Performance Factors

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QC PERFORMANCE FACTORS

Employee Name: _____ Employee Number: _____

Project: _____ Period: (From) _____ (To) _____

*Rating: (1) Exceeds Performance Requirements, (2) Meets Performance Requirements, (3) Needs Improvement, (N/A) Not Applicable

Item No.	Performance Factors	Rating*				Comments
		1	2	3	N/A	
QUALITY CONTROL AWARENESS						
1.	Maintains communication with QC Management on QC issues					
	a. Team work with QCM					
2.	Awareness and understanding of the Quality Program					
3.	Awareness of the Project Quality Procedures					
4.	(Required Reading) on TIFWI Corporate QC Procedures completed: QP-1 thru QP-13					
5.	Documented Training in Quality Control to Project Personnel					
6.	Daily QC Reports completed for projects with accuracy, completeness and traceability					
7.	Plans and documents Inspection Reports for all definable features of work. Inspection reports are complete and accurate.					
8.	QIRs, NCRs or Deficiency Reports complete and provided to QCM					
9.	QIRs, NCR or Deficiency Reports closed in timely fashion. (open reports?)					
10.	Surveillance Reports documenting field work. (Number performed)					
11.	Maintains QC records (i.e. Daily QC Reports, Inspections or Surveillance Reports) for ease of project retrieval and in accordance with CRL A-2.					
12.	Performs project documents reviews and documents results. (number performed)					
13.	Performed QC Project Checklist and submitted to QCM for review					
PROJECT MANAGEMENT ON PROJECTS						
1.	Works with Project Team to achieve project quality goals.					



QC PERFORMANCE FACTORS

Employee Name: _____ Employee Number: _____

Project: _____ Period: (From) _____ (To) _____

*Rating: (1) Exceeds Performance Requirements, (2) Meets Performance Requirements, (3) Needs Improvement, (N/A) Not Applicable

Item No.	Performance Factors	Rating*				Comments
		1	2	3	N/A	
2.	Identifies internal and external clients					
3.	Works to identify project QC goals for continual improvement.					
4.						
5.						
6.						

MANAGEMENT INPUT

Project/Site Manager(Print)	Sign:	Date:
Comments:		
Quality Manager(Print)	Sign:	Date:
Comments:		

CMC Surveillance Checklist

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CMC SURVEILLANCE CHECKLIST

Requirement	Frequency of Surveillance	Forms to be Used	Document Location	QC Procedure	Pass/Fail Criteria
Project Documents/ Submittals					
Technical Management Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection, QC Surveillance		QC Specialist will	
Explosive Management Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection, QC Surveillance		QC Specialist will	
Accident Prevention Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection, QC Surveillance		QC Specialist will	
QC Plan	Periodic Inspection (Monthly)	QC Preparatory Inspection, QC Surveillance		QC Specialist will	
Definable Phases Of Work			Process Map/d		
Site Preparation	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Documentation Control	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
GIS	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	



CMC SURVEILLANCE CHECKLIST

Handling and transportation of CMC	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Surface Character	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Required CMC reports	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Demolition of Captured Enemy Ammunition	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Demolition of unused CMCs and UXO munitions	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Explosive accountability and management	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Weapons accountability and management	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Ammunition (for security force) accountability and management	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Data Management	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A



CMC SURVEILLANCE CHECKLIST

CMC collection operations	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Physical security of the CMC depots, collection points, transportation and convey operations, demolition areas and living areas	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
CMC receipt operations	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
CMC management and storage activities	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
F&H Data Entry	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Logbook Entries	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Surface clearance activities	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Safety Meeting including Talks Safety Brief	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Equipment Checks	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillances	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A



CMC SURVEILLANCE CHECKLIST

Site investigations	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Site final close out and acceptance	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Property management	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Mirror construction	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Site-specific training	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Health and Safety Plan compliance	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Administrative/Training Records	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Local hire procedures	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will	
Other	3 Phase Inspection, Periodic Inspection	QC Preparatory Inspection, QC Initial Inspection, QC Surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	QC Specialist will perform random surveillance and evaluation of the following activities:	Observations shall be noted in writing and provided to the SUDOS with recommendations or comments.

Preparatory Phase Inspection Checklist

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Preparatory Phase Inspection Checklist

		Report Number:	
Project Name/Contract Number:		Location:	Date:
I. Definable Feature of Work:			
<input type="checkbox"/> Project Management	<input type="checkbox"/> Ammunition Handling and transportation	<input type="checkbox"/> Required CMC reports	
<input type="checkbox"/> CMC Disposal Operations	<input type="checkbox"/> Site Safety	<input type="checkbox"/> Demolition of unserviceable and UXO munitions	
<input type="checkbox"/> UXO Clearance	<input type="checkbox"/> Demolition of captured enemy ammunition	<input type="checkbox"/> CMC collection operations	
<input type="checkbox"/> Explosives accountability and management	<input type="checkbox"/> CMC management and storage activities	<input type="checkbox"/> Minor construction	
<input type="checkbox"/> CMC receipt operations	<input type="checkbox"/> Surface clearance activities	<input type="checkbox"/> Site-specific training	
<input type="checkbox"/> Property management	<input type="checkbox"/> Administrative/Training Records		
<input type="checkbox"/> Local hire procedures			
<input type="checkbox"/> Site final close out and acceptance			
<input type="checkbox"/> Health and Safety Plan compliance			
<input type="checkbox"/> Weapons and ammunition accountability and management			
<input type="checkbox"/> Other:			
II. References:			
III. Personnel Present			
Name	Position	Company	
IV. Submittals			
1. Review submittals			
Submittals Reviewed.	Item No.	Date	Approval Authority
Have all submittals been approved? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If No, what items have not been submitted?			

Preparatory Phase Inspection Checklist

2. Are all submittals on hand?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If No, what items are missing?		
3. Check approved submittals against delivered material. (This should be done as material arrives.)		
Comments:		
V. Resources		
Adequate Resources on hand to effectively conduct work? <input type="checkbox"/> Yes <input type="checkbox"/> No		
If No, what action is taken?		
VI. Procedures		
1. Review contract specification.		
2. Discuss procedure for accomplishing the work.		
3. Clarify any differences.		
VII. Resolve Any Differences		
Comments:		
VIII. Testing/ Surveillance		
1. Identify Tests/ Surveillance to be performed, frequency, and by whom.		
2. When required?		
3. Where required?		
4. Review Testing/ Surveillance Plan.		
IX. Safety		
1. Review applicable portion of the Health and Safety Plan.		

Preparatory Phase Inspection Checklist

2. Activity Hazard Analysis approved?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
Results of Inspection				
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Unacceptable	Deficiency # NCR #		
		Signature:	Date:	
QCM Comments				
QCM Review				
<input type="checkbox"/> Concur	<input type="checkbox"/> Non-Concur	Signature:		Date
Distribution				
<input type="checkbox"/> PM <input type="checkbox"/> SITE MGR <input type="checkbox"/> SHSS <input type="checkbox"/> SUXOS <input type="checkbox"/> AMMO MGR <input type="checkbox"/> USACE REP				

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Initial Phase Inspection Checklist

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Initial Phase Inspection Checklist

		Report Number:
Project Name/Contract Number:	Location:	Date:
I. Definable Feature of Work:		
<input type="checkbox"/> Project Management <input type="checkbox"/> Ammunition Handling and transportation <input type="checkbox"/> CMC Disposal Operations <input type="checkbox"/> Required CMC reports <input type="checkbox"/> UXO Clearance <input type="checkbox"/> Site Safety <input type="checkbox"/> Demolition of Captured Enemy Ammunition <input type="checkbox"/> Demolition of unserviceable and UXO munitions <input type="checkbox"/> Explosives accountability and management <input type="checkbox"/> CMC collection operations <input type="checkbox"/> CMC receipt operations <input type="checkbox"/> CMC management and storage activities <input type="checkbox"/> Property management <input type="checkbox"/> Minor construction <input type="checkbox"/> Local hire procedures <input type="checkbox"/> Surface clearance activities <input type="checkbox"/> Site final close out and acceptance <input type="checkbox"/> Site-specific training <input type="checkbox"/> Health and Safety Plan compliance <input type="checkbox"/> Administrative/Training Records <input type="checkbox"/> Weapons and ammunition accountability and management <input type="checkbox"/> Other:		
II. References:		
III. Personnel Present		
Name	Position	Company
IV. Identify full compliance with procedures identified at the preparatory phase. Coordinate plans, specifications, and submittals.		
Comments:		

Initial Phase Inspection Checklist

V. Preliminary Work		
1. Ensure preliminary work is complete and correct		
If not, what action is taken?		
VI. Establish Level of Workmanship		
1. Has previous work been completed in accordance with the plans and specifications?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If No, corrective actions planned.		
2. Procedures and/or work methods witnessed are in strict compliance with the requirements of the contract specifications.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If No, corrective actions planned.		
3. Workmanship is acceptable?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
State areas where improvement is needed.		
VII. Resolve Any Differences		
Comments:		
VIII. Check Safety		
Review job conditions using Health and Safety Plan and Activity Hazard Analysis.		
Comments:		

Initial Phase Inspection Checklist

IX. Results of Inspection		
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Unacceptable	Deficiency # NCR #
Signature:		Date:
X. QCM Comments		
XI. QCM Review		
<input type="checkbox"/> Concur <input type="checkbox"/> Non-Concur	Signature:	Date
XII. Distribution		
<input type="checkbox"/> PM <input type="checkbox"/> SITE MGR <input type="checkbox"/> SHSS <input type="checkbox"/> SUXOS <input type="checkbox"/> AMMOMGR <input type="checkbox"/> USACE REP		

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Site Final Acceptance Tracking Form

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UXO Program Review Documentation Form

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UXO PROGRAM REVIEW DOCUMENTATION FORM

Date:		Comments Due Date from Review:	
Project Name:		Sections Addressed in Attached Review:	
Client:			
Project No.:			
Document Title:			
Version/Date of Document:			
Prepared by:			

Reviewers	Reviewer Name	Comments (Write Comments On Attachment Sheets Or Refer To Text Markup)	Reviewer's Signature Indicating Review Completed	Date Review Complete
<input type="checkbox"/> Program Director				
<input type="checkbox"/> Project/Task Mgr				
<input type="checkbox"/> UXO Operations Manager				
<input type="checkbox"/> Quality/Assurance				
<input type="checkbox"/> Health and Safety				
<input type="checkbox"/> Risk Assessment				
<input type="checkbox"/> Regulatory Compliance				
<input type="checkbox"/> Interdisciplinary Reviewer				
<input type="checkbox"/> Internal Consistency				
<input type="checkbox"/> Technical Editing				
<input type="checkbox"/>				

Review Completed and Comments Addressed: Yes <input type="checkbox"/> No <input type="checkbox"/>			
Signature of Project or Task Manager:		Date:	

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Surveillance/Inspection Report Log

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Causes of Missed MEC

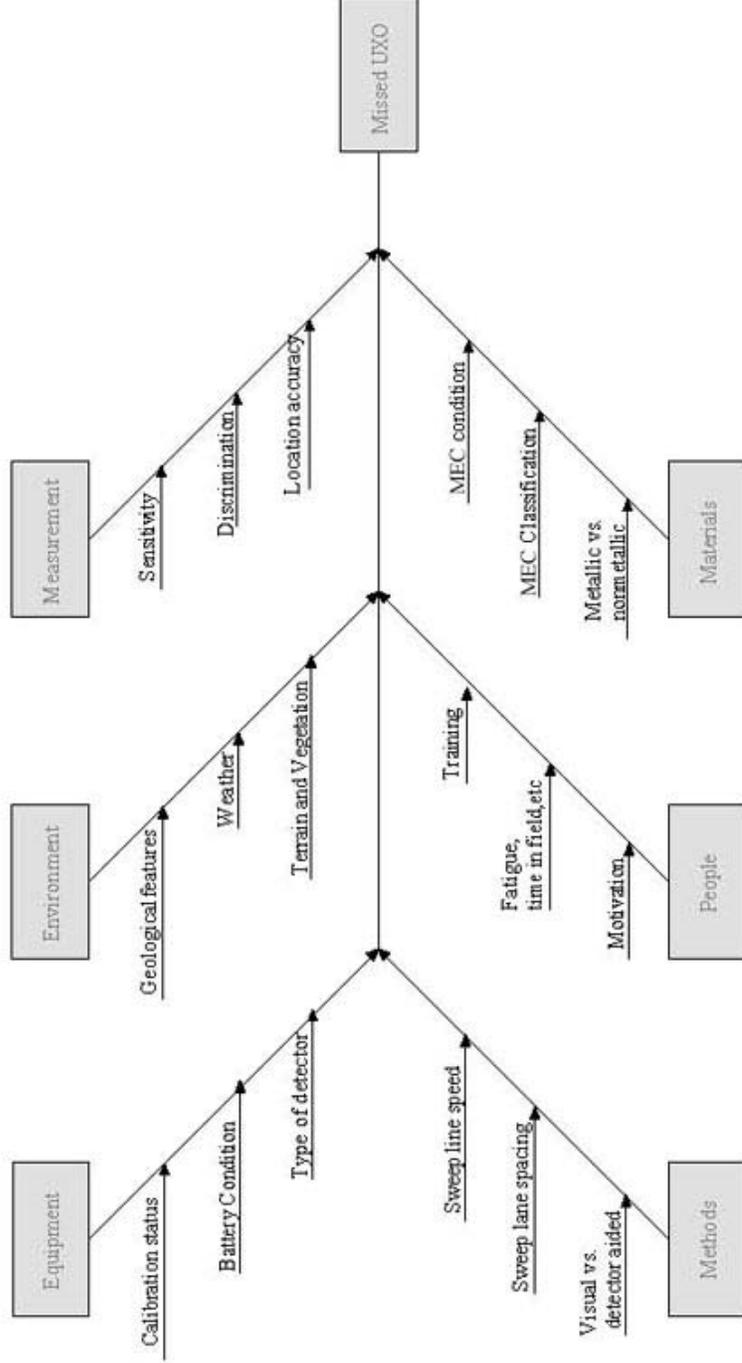
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TETRA TECH EC, INC.



Causes of Missed MEC



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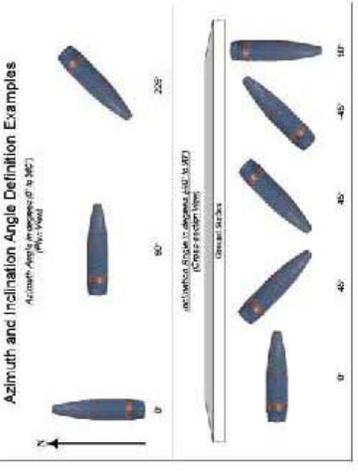
Seeding Checklist

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Area	No. of Grids Investigated	No. of Grids for Seeding (minimum @ 20%)	Type of Seed (simulated caliber)	Max Depth	Comments

NOTES:

1. Randomly select Grids from Grids to be investigated
2. Bury inert ordnance items at locations in the randomly selected grids where geophysical surveys or mag and dig operations will be performed.
3. The seeded items should be painted blue and tagged with a non-biodegradable label identifying the items as inert and providing a point of contact address, phone number, and a unique target identifier.
4. The items will be placed at depths and orientations that, when surveyed effectively, will cause in-strument responses that indicate the presence of a buried metallic item.
5. A log will be maintained documenting the exact location, depth, Azimuth and Inclination of every seeded item.
6. If the seeded item is not detected, a Nonconformance report will be issued and a causal analysis/ corrective action will be developed.



ZIP Slip

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ZIP SLIP

ZIP SLIP ID NUMBER:

PROJECT LOCATION

ENTER A ZIP SLIP CATEGORY

RECOGNITION FOR JOB WELL DONE REPORT OF POTENTIAL QUALITY CONCERN
 SUGGESTION FOR IMPROVEMENT REPORT OF POTENTIAL HAZARD

OBSERVATION

ORIGINATED BY: DATE:
 SEND TO SUPERVISOR FOR ACTION: COPY TO:

ACTION TAKEN (TO BE COMPLETED BY SUPERVISOR)

REVIEWED CLOSED OUT COPY TO ORIGINATOR ENTERED INTO DATABASE

RECEIVED BY: (UXO QUALITY MANAGER/SAFETY MANAGER)

* When ZIP Slip form is complete, submit it to Don Weeks or Steve Neill for action.





ZIP SLIP GUIDELINES

1) RECOGNITION FOR A JOB WELL DONE

Recognize individuals or groups for proactive Environmental, Safety and Quality (ESQ) actions.

Print the individual(s) or group name in the OBSERVATION section of the form.

Try to recognize personnel as quickly as possible by talking with them, discussing the situation at a meeting, or presenting an ESQ award. Keep in mind that some people prefer private vs. public recognition.

2) SUGGESTION FOR IMPROVEMENT

ESQ suggestions can describe ways to improve a workplace condition, practice, process, or off -the-job safety.

Suggestions such as these promote ESQ goals and should be encouraged.

3) REPORT OF POTENTIAL HAZARD

As long as the corrective action is within your capability, immediately correct all dangerous situations or barricade and remove personnel from the hazard until it can be corrected.

Use the incident report and investigation forms for any high loss potential near miss/hit (contact your Supervisor).

If you are capable, try to correct the problem on your own or within your work team. Fill in the ACTIONS TAKEN upon correction and submit it to your UXO Program Safety Manager, Steve Neill.

When you cannot resolve the problem yourself, report it to Steve Neill. Indicate this on the ACTIONS TAKEN portion of this ZIP SLIP.

4) REPORT OF POTENTIAL QUALITY CONCERN

Deviations from established quality requirements must be corrected immediately if it is within your capability.

Try to correct the concern on your own or within your work team. Upon correction, fill in the ACTIONS TAKEN and submit it to the UXO Program Quality Manager, Don Welch.

When you cannot resolve the quality concern yourself, report it to Don Welch. Indicate this on the ACTIONS TAKEN portion of this ZIP SLIP.



Safety Meeting Attendance Log

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Tetra Tech EC, Inc.
Ft. McClellan Alabama
Daily Sign In/Out

Date _____ *Person briefing* _____

Shift/Department: _____

1. Awareness (e.g., special EHS concerns, pollution prevention, recent incidents, etc.) :

2. Other Issues (EHS Plan changes, attendee comments, etc.) :

<small>Present @ Meet</small>	<i>Last, First Name</i>	<i>Signature</i>	<i>Time In</i>	<i>Time Out</i>	<i>Radio</i>
1					

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Site Visitors Log

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Safety Inspections Log

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EHS WEEKLY/MONTHLY CHECKLIST AND ACTION ITEM REPORT

Project: Inspection Type: <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly Inspector: Signature:	Area of Inspection: Date: Time:
---	---

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
Work Conditions		
1 Walking /Working Surfaces		
2 Aisles and Passageways		
3 Platforms/ Scaffolding		
4 Ladders		
5 Stairs		
6 Exits/Egress		
7 Roadways		
8 Ventilation		
9 Lighting		
10 Noise Exposure		
11 Ergonomics		
Materials		
1 Stacking and Storage		
2 Chemicals and Fuel		
3 Compressed Gases		
Equipment		
1 Hand / Portable Tools		
2 Machine, Tools, Guarding		
3 Mobile/ Heavy Equipment a. Physical inspection of equipment b. Review of daily inspection reports c. Review of equipment deficiency correction logs/records		

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
4 Lifting Gear Equipment		
5 Materials Handling Equipment		
6 Mechanical Power Systems		
7 Hydraulic Power Systems		
8 Pneumatic Power Systems		
9 Electrical Power Systems		
10 Valves and Controls		
Hazard Controls		
1 Other Heavy Equipment		
2 Lock-Out Systems		
3 Signs and Tags		
4 Color Coding		
5 Materials Labeling		
6 Warning Systems		
Emergency Systems		
1 Emergency Instructions		
2 Fire Protection		
3 Eye Wash and Showers		
4 First Aid Kits/ Stations		
5 Emergency Rescue Equipment		
Protective Equipment		
1 Eye Protection		
2 Ear Protection		
3 Respiratory Protection		
4 Head Protection		
5 Hand Protection		
6 Foot Protection		
7 Body Protection		
8 Fall Protection		

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
Hazardous Waste Storage Area(s)/Satellite Accumulation Areas ^{1, 2}		
1 Designated, secured area with "Hazardous Waste" signage. For SAA area is marked "SAA". (SAA)		
2 Containers:		
a. DOT-spec. containers (for wastes to go off-site only)		
b. Intact/in good condition (SAA)		
c. Waste compatible with containers (e.g., no evidence of corrosion, softening, bulging) (SAA)		
d. Marked "Hazardous Waste"/ visible Accumulation Date. For SAA, marked "Hazardous Waste" or identify container contents and Accumulation date (SAA)		
e. Securely closed and stored to prevent rupture/leaking, except when add/remove waste. (SAA)		
f. Labeled with EPA Id. No.		
g. For SAA only, Stored "at the point of generation" and meets quantity limits.		
3 Reactive/ignitable wastes stored at least fifty (50) feet from property.		
4 Liquid wastes within secondary containment.		
5 Incompatible wastes separated by a dike, wall, berm or other device.		
¹ For sites with multiple storage areas or Satellite Accumulation Areas (SAAs). Indicate location where deficiencies are noted.		
² For SAAs, evaluate only the rows marked with (SAA).		
6 Stored for less than 90 days. (CERCLA projects may have storage variance) ¹		

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
7 Container tracking log accurately reflects containers stored. (SAA)		
8 Area maintained in an orderly fashion and complies with state/EHS plan requirements. (SAA)		
¹ If stored on site 75 or more days, TSD Transporter has been selected (EHS 1-4), pick up date has been scheduled and PM/PESM are aware of 90 day limit.		
Hazardous Waste Tank Storage Area <i>(Daily inspection is being conducted and maintained on-site)</i>		
Waste/Stockpiles - State Regulated Non-Hazardous Wastes <i>(Refer to PESM Checklists, if applicable)</i>		
TSCA PCB Wastes – must be inspected at least every 30 days (GMP - weekly) <i>(Refer to PESM TSCA Checklist for inspection items)</i>		
Point Source Discharges/ Air Emissions		
1 Permit conditions are being met.		
2 Monitoring equipment is fully operational.		
3 Equipment calibrations and maintenance is up-to-date.		

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
4 Discharge sampling performed at required intervals.		
5 Review monitoring results (<i>Report permit exceedences per EHS 1-7</i>)		
6 DMR and Plant Logs properly completed, signed, and submitted (if required).		
7 Fugitive Dust – Appropriate BMPs are instituted for fugitive dust emissions.		

REQUIREMENTS	OBSERVATIONS (N/A if not applicable)	FINDING YES/NO
Stormwater Discharge Activities		
1 SWPPP /Soil Plan reflects current activities.		
2 Monitoring /sampling performed at required intervals.		
3 Review monitoring results (<i>Report permit exceedences per EHS 1-7</i>)		
4 BMPs in SWPPP/Soil Plan implemented.		
5 Visual observations indicate stormwater meets water quality criteria.		
6 Inspections conducted as required and documented. Corrective actions are implemented and documented.		
Other Conditions or Work Practices		
1		
2		
3		
4		
5		
6		
7		
8		

- End of Checklist-

Monthly Inspections must be sent to PESM and Project Manager.

Review previous week's/month's Action Item Report. Carry forward action items that have not been implemented.

Note outstanding action items with an (F) in the "Action Item" column on this report. Note an (F) in the "Date Completed" column on previous week's/month's Action Item Report.

Project: Inspection Type: <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly Inspector: Signature:	Area of Inspection: Date: Time:
---	---

ACTION ITEM	RESPONSIBLE PARTY	SCHEDULE	DATE COMPLETED
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
Reviewed By (SUXOS):		Date:	
cc: <i>Project Manager (monthly only)</i> <i>PESM (monthly only)</i>			

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Daily Report of MEC Operations

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Tetra Tech EC, Inc. (TtECI)
Daily Report of MEC Operations

Date: _____

Contract No.: _____

Project Title & Location: _____

Weather: _____ Precipitation: ____ in. Temp: Min. ____°F Max. ____°F Wind ____ mph

Personnel On site: TtECI () SUBCONTRACTOR ()

NAME	COMPANY	FUNCTION	HOURS

Total man hours this day: _____ TtECI() Subcontractor ()

Total man hours this project: _____ TtECI() Subcontractor ()

1. Work Performed: (Indicate location and description of work performed by prime and/or subcontractors and complete Table.

<u>TASK</u>	<u>DAILY TOTAL</u>	<u>CUMULATIVE</u>
GRIDS ESTABLISHED	()	()
UXO VISUAL CLEARANCE	()	()
GRIDS CLEARED (VEGETATION)	()	()
GEOPHYSICAL SURVEY	()	()
UXO INTRUSIVE SAMPLING	()	()
ANOMALIES INVESTIGATED	()	()

2. Operating Plant or Equipment Utilized, Mob and/or Demo. (Not hand tools)

Equipment Utilized:

3. Control Activities Performed:

Preparatory Inspections: ()

Initial Inspection: ()

Follow-up Inspections: ()

4. Material Received: (Note inspection results and storage provided)

5. Waste Generated and/or Disposed: (- lbs) was picked up by project personnel and placed in designated pickup areas. Total metal debris picked up to date: _____ - lbs

-UXO Located: (date/grid #/anomaly ID/description/disposal information)

-UXO Related: (date/grid #/anomaly ID/description/disposal information)

6. Job Safety: (List items checked, results, instructions and corrective actions taken)

Total Number of Days Worked on Site: _____

Total Man-hours Worked with No Lost Time Accidents: _____

Total Number of Lost Time Accidents on the Site to Date: _____

Number of Lost Man-hours for Bad Weather Today: _____; To Date _____,

Lost intrusive time today: Equipment (), EZ violation (), Miscellaneous (), Total ()

Lost intrusive time to Date: Equipment (), EZ violation (), Miscellaneous (), Total ()

Safety functions completed today:

7. Remarks: (Instructions received or given. Conflict(s) in Plans and/or specifications. Delays encountered).

COMMENTS:

8. Attachments:

Field Change Request

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TETRA TECH EC, INC

FIELD CHANGE REQUEST

Project Information

Project	_____	Date:	_____
Charge	_____	Change	_____
Number:	_____		
Location:	_____		
Project	_____		
Manager:	_____		

Information on Change

Description of Change: _____

Reason for Change: _____

Recommended Disposition: _____

FCR Review & Distribution

SUXOS	_____	Date :	_____
:			
UXOSO	_____	Date :	_____
:			
PM:	_____	Date :	_____
PESM:	_____	Date :	_____
Distribu	<input type="checkbox"/> SUXOS <input type="checkbox"/> UXOSO	<input type="checkbox"/> UXOQC <input type="checkbox"/> PESM1 <input type="checkbox"/>	
tion:	CLIENT		



TETRA TECH EC, INC.

EHSP FIELD CHANGE DOCUMENTATION

Project Information

Project Name:	_____	Date:	_____
Field Change No.:	_____		
Effective Date:	_____		

Information on Change

Pen & Ink Changes to be made to the EHSP to alert readers of the field change: _____

Reason for Change to be Incorporated in the EHSP: _____

Text of Change to be Incorporated: _____

Verification of Changes

UXOSO	_____	Date :	_____
SUXOS	_____	Date :	_____

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Plan Acceptance Report

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Medical Data Sheet

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TETRA TECH EC, INC.

MEDICAL DATA SHEET

This brief medical data sheet will be completed by all on-site personnel and will be kept in the Support Zone by the SSHO as a part of the project record during the performance of site operations. It will accompany personnel to medical facilities when medical assistance is needed or if transport to a hospital is required.

Project Information

Project Name: _____ Date: _____
Project Location: _____

Personal & Medical Data

Name: _____ Age: _____
Home Address: _____ Height: _____
_____ Weight: _____
Home Phone No. _____ Blood Type: _____

Drug or Other Allergies: _____

Particular Sensitivities: _____

Current Medications: _____

Medical Restrictions: _____

Previous Illness/Injury: _____

(Surgery, diabetes, etc.) _____

Do you wear: Contacts Glasses Dentures Hearing Aid
 Pace Maker

Name, Address & Telephone Number of
Personal Physician:

Name, Address & Telephone Number of
Emergency Contact:

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**Accident/Incident Report
and Investigation Report**

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TETRA TECH EC, INC.

INCIDENT/NEAR MISS REPORT & INVESTIGATION

Type of Incident – Check All That Apply

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Injury/Illness | <input type="checkbox"/> Vehicle Damage | <input type="checkbox"/> Property Damage | <input type="checkbox"/> high Loss Potential |
| <input type="checkbox"/> Spill/Release | <input type="checkbox"/> Permit Exceedence | <input type="checkbox"/> Fire | <input type="checkbox"/> Other |

General Information

Project Name/location: _____

Report Number: _____ Date of Report: _____ ESQ Report #: _____

Date of Incident: _____ Time (Military): _____ Day of Week: _____

Location of Incident: _____

Weather Conditions: _____ Adequate Lighting: Yes No

Supervisor on Duty: _____ At the Scene: Yes No

Incident/Accident Description (Describe what happened in Detail – Use additional pages if necessary)

Affected Employee Information (Include injured person, vehicle operator, or person causing incident)

Name: _____ Male Female

TtECI Employee: _____ Yes No

Home Address: _____

Social Security No.: _____ Home Telephone No.: _____

Job Classification: _____ Years in Class: _____ Age: _____

Time Employee Began Work: _____ Date of Hire: _____

Did incident relate to routine tasks for the assigned job classification: Yes No

Injury/Illness Information

Nature of Injury/Illness: _____

Object/Equipment/Substance Causing: _____

First Aid Provided Yes Where: On Site Off Site

Who provided First Aid: _____

Will/did the injury/illness result in: Restricted Duty Lost Time Unknown Death

If the accident resulted in the death of an employee Died, what was the date of death: _____

Medical Treatment Information

Was medical treatment provided: Yes No Was Treatment Provided: On Site Dr's Office ER
Was the injured party hospitalized overnight as an in-patient: Yes No
Name of Person(s) Providing Treatment: _____
Address Where Treatment was Provided: _____
Type of Treatment : _____

Vehicle/Property Damage Information

Vehicle/Property Damaged: _____
Description of Damage: _____

Spill/Release Information

Substance Spilled/Released: _____ From: _____ To: _____
Estimated Quantity/Duration: _____ CERCLA Hazardous Substance : Yes No
Reportable Quantity Exceeded: Yes No Specify RQ Quantity: _____
Reportable to Agency: Yes No Specify¹: _____
Written Report Required: Yes No Timeframe for Report¹: _____
Response Action Taken: _____

Permit Exceedence Information

Type of Permit: _____ Permit Number: _____
Date of Exceedence: _____ Date First Knowledge of _____
Permitted Level/Criteria: _____ Exceedence Level/Criteria: _____
Reportable to Agency: Yes No Specify¹: _____
Written Report Required: Yes No Timeframe for Report¹: _____

Notifications

TtECI Personnel Notified: _____ Date/Time: _____
Client Notified: _____ By Whom: _____ Date/Time: _____
Agency Notified _____ By Whom: _____ Date/Time: _____
Agency Contact Name(s): _____

Persons Preparing Report

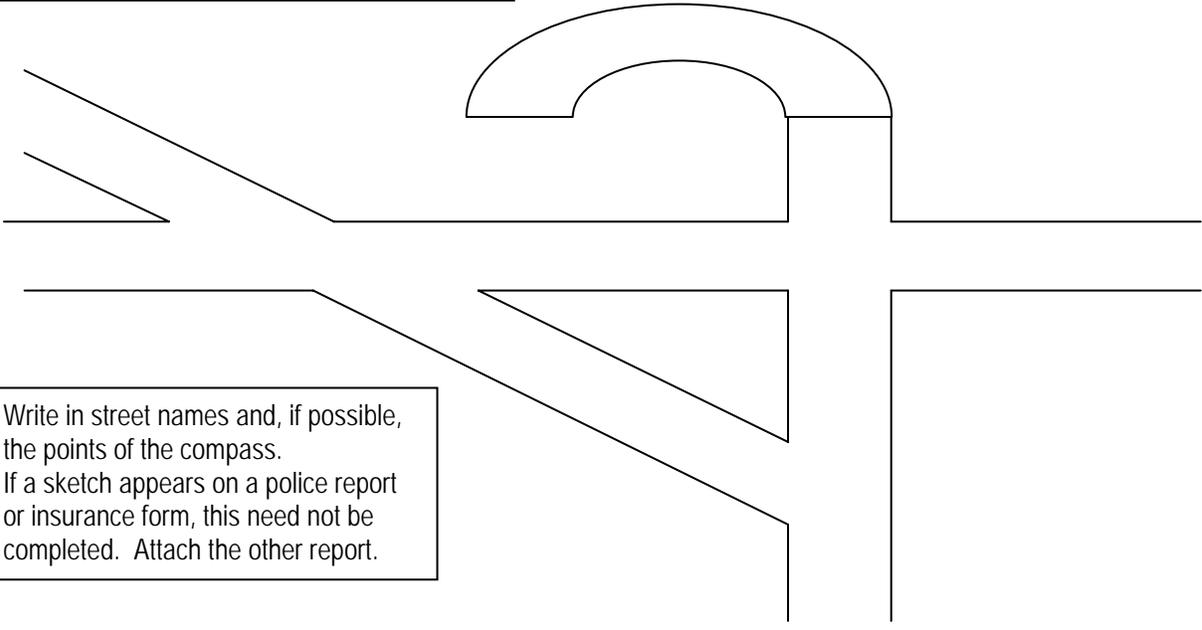
Employee Name (Print): _____ Employee's Signature: _____
Employee Name (Print): _____ Employee's Signature: _____
Supervisor Name (Print): _____ Supervisor's Signature: _____
Supervisor Phone No.: _____ Date Report Signed: _____

Notes: 1. Place a copy of the telecon or report in the project file

INCIDENT SKETCH – PROJECT SITE



INCIDENT SKETCH – ROADWAY



Write in street names and, if possible, the points of the compass.
If a sketch appears on a police report or insurance form, this need not be completed. Attach the other report.

This page intentionally left blank.

INVESTIGATIVE REPORT

Project Information

Project _____ Report No.: _____
Date of Incident: _____ Date of Investigation: _____ ESQ Report No.: _____

Incident Cost Information

Estimated Cost: \$ _____ Actual Cost: \$ _____
OSHA Recordables: Yes No # Restricted Days: _____ # Work Days Missed: _____

Cause Analysis

Was the activity addressed in an AHA? Yes No (If yes, attach a copy of the AHA)

Immediate Causes (What actions and conditions contributed to this event?)

Basic Causes (What specific personal or job factors contributed to this event?)

Action Plan

Remedial actions - What has/should be done to control each of the causes listed? Include Management Programs (see attached list) for control of incidents if applicable.

Action	Person Responsible	Target Date	Date
--------	--------------------	-------------	------

Persons Performing Investigation

Investigator _____ Signature : _____ Date : _____

Investigator _____ Signature : _____ Date : _____

Investigator _____ Signature : _____ Date : _____

Management Review

Project Manager: _____ Signature: _____ Date: _____

PESM or ESC _____ Signature: _____ Date: _____

NOTE: Attach additional information as necessary. Supervisor to forward copy of Investigative Report to the PM or OM, PESM or ESC ASAP, but no later than 72 hrs after the incident. A copy will be sent to the Director, Health and Safety Programs within 24 hrs of completion of the report.

EXAMPLES OF IMMEDIATE CAUSES

SUBSTANDARD ACTIONS

1. OPERATING EQUIPMENT WITHOUT AUTHORITY
2. FAILURE TO WARN
3. FAILURE TO SECURE
4. OPERATING AT IMPROPER SPEED
5. MAKING SAFETY DEVICES INOPERABLE
6. REMOVING SAFETY DEVICES
7. USING DEFECTIVE EQUIPMENT
8. FAILURE TO USE PPE PROPERLY
9. IMPROPER LOADING
10. IMPROPER PLACEMENT
11. IMPROPER LIFTING
12. IMPROPER POSITION FOR TASK
13. SERVICING EQUIPMENT IN OPERATION
14. UNDER INFLUENCE OF ALCOHOL/DRUGS
15. HORSEPLAY

SUBSTANDARD CONDITIONS

1. GUARDS OR BARRIERS
2. PROTECTIVE EQUIPMENT
3. TOOLS, EQUIPMENT, OR MATERIALS
4. CONGESTION
5. WARNING SYSTEM
6. FIRE AND EXPLOSION HAZARDS
7. POOR HOUSEKEEPING
8. NOISE EXPOSURE
9. EXPOSURE TO HAZARDOUS MATERIALS
10. EXTREME TEMPERATURE EXPOSURE
11. ILLUMINATION
12. VENTILATION
13. VISIBILITY

EXAMPLES OF BASIC CAUSES

PERSONAL FACTORS

1. CAPABILITY
2. KNOWLEDGE
3. SKILL
4. STRESS
5. MOTIVATION

JOB FACTORS

1. SUPERVISION
2. ENGINEERING
3. PURCHASING
4. MAINTENANCE
5. TOOLS/EQUIPMENT
6. WORK STANDARDS
7. WEAR AND TEAR
8. ABUSE OR MISUSE
9. CHANGE (Conditions, scope, work methods, personnel)

MANAGEMENT PROGRAMS FOR CONTROL OF INCIDENTS

- | | |
|----------------------------------|-----------------------------|
| 1. LEADERSHIP AND ADMINISTRATION | 10. HEALTH CONTROL |
| 2. MANAGEMENT TRAINING | 11. PROGRAM AUDITS |
| 3. PLANNED INSPECTIONS | 12. ENGINEERING CONTROLS |
| 4. TASK ANALYSIS AND PROCEDURES | 13. PERSONAL COMMUNICATIONS |
| 5. TASK OBSERVATION | 14. GROUP MEETINGS |
| 6. EMERGENCY PREPAREDNESS | 15. GENERAL PROMOTION |
| 7. ORGANIZATIONAL RULES | 16. HIRING AND PLACEMENT |
| 8. ACCIDENT/INCIDENT ANALYSIS | 17. PURCHASING CONTROLS |
| 9. PERSONAL PROTECTIVE EQUIPMENT | |

NOTIFICATION REMINDER

Fatalities or hospitalization (admittance) of three or more individuals requires notification to OSHA within 8 hours. Contact the Director, Health and Safety Programs or Director, ESQ Programs to make the notification. If unavailable, the senior operations person on site should make the notification.

Incident/Near Miss Report and Investigation Instructions

General: The incident report (pages 1 and 2) must be completed within 24 hours. Do not delay the report if any information is unknown. It can be provided later by revising the Report.

Type of Incident: Check all that apply. A High Loss Potential (Near Miss) incident is one that does not result in loss, but under slightly different circumstances, could have resulted in an OSHA Recordable injury, spill, release, permit exceedence, fire, or vehicle/property damage in excess of \$500. All High Loss Potential (Near Miss) incidents are to be investigated.

General Information

Project/Office: If the incident occurs on a delivery order contract, give the contract/program name, DO# and location. If the incident occurs on a C&E field project, give the Office location managing the project as well as the project/location.

Report No.: Optional numbering field for offices/projects.

TtECI Supervisor: The TtECI Supervisor responsible for the work effort involving the incident. Do not give a subcontractor supervisor or craft foreman name. If a TtECI Supervisor was the Affected Employee, this field should contain the name of his or her supervisor. The Supervisor is the project supervisor if the incident happens on a project or the administrative supervisor if the incident happens in the office. E.g., a geologist, acting as an FOL gets injured on a job site, or in a motor vehicle in the course of project work. The TtECI Supervisor is most likely the Project Manager. If the same geologist gets injured lifting a box in his office, the TtECI Supervisor is likely the Office Science Lead.

Location of Incident: The specific location on the project, in the office, or off-site location.

Weather Conditions: Temperature, precipitation, approximate wind speed and direction, cloud cover, relative humidity. This information may be included in the description section, and must be given in detail whenever it is a factor in the cause or impact, e.g., spill, release, heat stress, wind blown material.

Describe What Happened: This section must be completed in sufficient detail to adequately describe the events and

conditions leading up to and resulting from the incident. Try to answer the questions who, what, where, when, and how. This information is then used to determine why (cause). Provide details such as work objective, procedure being used, body position, and PPE. Include diagrams or sketches for all incidents involving vehicles/equipment and other incidents where they aid in providing detail or perspective. Consider attaching photographs. Follow the guidelines in Practical Loss Control Leadership, and consider the impact of each of the following:

- P** - People
- E** - Equipment
- M** - Material
- E** - Environment

To do an effective job, a visual inspection of the scene is usually necessary along with private interviews of affected employees and witnesses.

Where appropriate, use terms indicating the type of contact, e.g., struck by; struck against; fall from elevation; fall on same level; caught in; caught between or under; caught on; contact with; overstress; equipment failure; environmental release; fire.

Affected Employee Information

TtECI Employee: Direct hire, whether professional, administrative, or craft; full-time or part-time; permanent or temporary. If the affected employee is not a TtECI employee, give the name of the employer and business relationship (e.g., client, subcontractor) in the description section above.

Hours Worked on Shift Prior to the Incident: Only include the amount of time the employee worked that shift or day prior to the incident.

Years with TtECI: For TtECI employees, give the number of years employed with TtECI. If the employee has worked for TtECI for less than a year, do not write <1. Give the answer in fraction of year, or specify the number of months, e.g., 0.1 or 1 month.

Injury/Illness Information

Nature of Injury or Illness: If the incident resulted in an injury or illness, give a brief description of the body part affected and type of injury or illness, e.g., fractured thumb, left hand; carpal tunnel syndrome, right hand.

First Aid Provided: First Aid is any treatment that does not have to be provided by a health care professional, even if it is. E.g., a laceration that is cleaned and bandaged in a clinic may constitute first aid, if sutures are not given.

Will the Injury Result In: Do not delay the report if this information is unknown.

Medical Treatment Information

Was Medical Treatment Provided? Medical treatment is that treatment that must be provided by a licensed medical practitioner, e.g., sutures, prescription medication, etc.

Type of Treatment: This information is important in determining OSHA recordability, since some forms of treatment would not constitute a Recordable case (e.g., one-time administration of prescriptions, negative diagnostic exams). Attach a copy of the treating professional's statement/work release.

Vehicle and Property Damage Information

Vehicle/Property Damaged: For vehicles, indicate VIN and whether it is company owned or leased, business trip rental (Avis) or owned by others.

Description of Damage: Be specific as to the identity of damaged part, location and extent.

Spill and Air Emissions Information

Substance Spilled or Released: For pure substances, list materials by common name/chemical. For wastes, indicate waste code. For mixtures or contaminated media, provide contaminant name, CAS No., concentration.

RQ Exceeded? Reportable quantity. Contact your ESQ representative for guidance. Specify the RQ for the material, whether you answer yes or no.

Reportable to Agency? If yes, specify the federal, state or local agency that must be provided with verbal and/or written notification.

Written Report? Answer yes if the release requires a written report to be filed and note the time frame.

Response Action Taken: Describe the mitigation efforts, as well as any reports made, beyond initial notification.

Permit Exceedence

Type of Permit: List name of permit including the agency name where applicable (e.g., NPDES, PSAPCA NOC)

Date of Exceedence: Specify date exceedence occurred (e.g., date discharge in excess of permit limits occurred)

Date First Knowledge of Exceedence: Specify date when first knew there was an exceedence (i.e., date analytical received). This date may be different from the date of the exceedence listed above.

Permitted Level or Criteria: List numerical discharge or emission limit or narrative criteria specified in the permit (e.g., 20% opacity limit, Best Management Practices (BMP) implementation per SWPPP).

Exceedence Level or Criteria: Specify actual numerical discharge/emission limit or narrative criteria which was exceeded (e.g., 22% opacity, failure of BMPs (silt fencing collapse) per SWPPP)

Exceedence Duration: Specify time frame by date and hours (using military time) during which exceedence occurred.

See "**Spill/Release Information**" for description of remaining questions.

Persons Preparing Report

Employee's Name: The affected employee described on page 1 should review the report and sign here, as well as other employees witnessing or involved in the incident.

Supervisor's Name: The TtECI Supervisor must review and sign the report indicating agreement. The TtECI Supervisor and the Investigator (next page) should be the same person.

Investigative Report

Report No.: This is the same as the project/office optional report number from page 1 of the Incident/Near Miss Report.

Date of Investigative Report: This date should be within 72 hours of the incident. In cases where the investigation is not completed until a later date, submit the incomplete report within the 72 hours, and a revised report should be submitted when the missing information is obtained.

Incident Cost: For all vehicle/equipment or property damage cases, an estimated or actual loss value must be entered. If an estimated value is entered, the report must be revised when the actual costs are known.

OSHA Recordables: This section should be completed in consultation with the PESM. If it cannot be determined at the time of the report, the PESM should consult with the Director, Health and Safety Programs and revise the report when a determination is made.

No. of Restricted Days: This relates to days of restricted work activity, not restrictions on motion or physical capability. If the employee is capable of doing his normal job the day after the injury and thereafter, there are no restricted days, even if the physician indicates a physical restriction. It does not include the day of the injury.

No. of Days Away from Work: The number of days after the day of the injury that the employee was scheduled to work but could not due to an occupational injury. If the

treating physician releases an employee to return to work, but the employee chooses not to come to work, do not count those days. In this case the PESM should contact the Director, Health and Safety Programs.

Cause Analysis

Immediate Causes: Determine the immediate causes, using the example on page 4. If one or more of the examples fits the circumstance, use those words in the cause description. This facilitates statistical analysis of the incident database for program evaluation/modification. However, do not confine your cause determination to the guide words. Explain, e.g., Improper Lifting - employee attempted to lift box by bending at the waist and twisting while lifting. Be sure that the incident description on page 1 is sufficiently detailed to support the causal analysis in this section. An assumption of cause (e.g., improper lifting) from the injury (low back pain) is not acceptable.

Basic Causes: Like the Immediate Causes, use the guide words in the attachment whenever appropriate and explain. For example, improper motivation may be because the correct way takes more time or effort; short cutting standard procedure is tolerated or positively reinforced; or the person thinks there is no personal benefit to always doing the job correctly.

Investigators should determine if a change in the work conditions, scope, methods or personnel contributed to the incident. This may occur due to inadequate assessment of hazard potential or inadequate application of hazard controls. If "Change" was contributing, it will most likely be identified in combination with other basic causes.

Note: The investigator is encouraged to review the Practical Loss Control Leadership chapters on *Causes and Effects of Loss* and *Accident/Incident Investigation* before doing the causal analysis. The investigation team should refer to the S.C.A.T. Chart available from the PESM when analyzing causes of high loss potential incidents, especially where motivation is suspected of being a Basic Cause.

Remedial Actions: Include all actions taken or those that should be taken to prevent recurrence. Be sure that actions address the causes. For example, training (safety meetings) may be a

necessary response for lack of knowledge, but may be inadequate for improper motivation. If completion dates exceed the 72 hours reporting period, a revised report must be submitted when all remedial actions are complete.

Persons Performing Investigation: The primary investigator is the TtECI Supervisor in charge of the work where the incident occurred. Others participating in the investigation, such as the Project Manager, ESS, QC, site engineer, foreman, etc. should also sign the report.

Management Review: The Project or Office Manager and the PESH or office ESC must sign the report indicating their satisfaction with thoroughness of the investigation and the report, and their concurrence that the action items address the identified causes. This constitutes the peer review, and the report, particularly the description, should be clear to readers not familiar with the project or incident.

The PESH should add the following statement in the comment box: "The causal analysis is appropriate and is supported by the facts presented in this report, and the action plan adequately addresses the immediate and basic causes."

Weekly Health and Safety Report

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TETRA TECH EC, INC.

1. Project Name: _____.

2. Location/Site: _____.

3. Site Information:

Week Ending: MM/DD/YY

4. MAN HOURS

TtECI Manual: 00

TtECI Non-Manual: 00

Subcontractors: 00

Who: _____

Level of Protection: **B C D**

5. Injuries and Illnesses:

Yes: No:

Number of Incident Reports: 0

Number of Near Miss Reports: 0

Number of USACE Safety 948's: 0

Number of Personnel with Illness: 0

Number of Personnel with Injuries: 0

Number of Personnel seen by Medical : 0

Number of Personnel to Dental: 0

First Aid Cases: 0

Restricted Duty Cases: 0

Restricted Duty Workdays: 0

Lost Time Cases: 0

Lost Time Workdays: 0

Property Loss > \$500: 0

Near Miss Reports: 0

High Loss Potential Incidents: 1

Major Activities Conducted this Week:

Heavy Equipment Operations:

Explosive Demolition or Burning Operations:

MEC Surface Sweep/Clearance Activities:

Geophysical Operations:

Brush Clearance Operations:

Intrusive Operations:

Other Site Issues:

Construction Activities (fencing, renovation, magazines, roads, berms, etc.):

Future or Ongoing Issues (pay, communications, vehicles, safety, staffing, living conditions, medical, etc):

Site Audit/Inspections Conducted: Yes: No:

Weekly Health and Safety Inspection conducted by:

Monthly Health and Safety Inspection conducted by:

PESM Quarterly Inspection conducted by:

Internal Compliance Audits (Corporate Directed)conducted by:

6. HIPO ACTIVITIES

Hot Work.....Yes: No: X Dates:

Lockout/TagoutYes: No: X Dates:

Confined Space EntryYes: No: X Dates:

Excavation Daily Check ListYes: No: X Dates:

Crane On-SiteYes: No: X Dates:

Critical Lift Plan Performed Yes: No: X Dates:

Descriptive Summary of Accidents/Incidents/Near Miss Reports by Number:

Incident Report:

Hazard Report:

Medical Report:

Other Issues:

Recognition and/or Awards:

Site Specific Training:

Subcontractor Performance:

Unique Exposure Hazards:

Air Monitoring:

Site Specific Loss Control Programs:

Site Management Concerns:

Lessons learned:

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Magazine Data Card

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Explosives Usage Record

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Explosives Usage Record

Contract Number:

Team Number:

Date:

Project Name:

Team Leader:

Work Areas & Grid Numbers:

Explosives Issued

Signature Of Team Leader:

Item	Quantity	Lot Number	Checkers Initials

Explosives Expended

Signature Of Team Leader

Item	Quantity	Lot Number	Checkers Initials

Explosives Returned

Signature Of SUXOS:

Item	Quantity	Lot Number	Checkers Initials

The signatures in each section of this document indicate that the items listed in that section were in fact issued, expended, or returned to storage and that the quantities listed were verified through a physical count.

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