



FIELD VARIANCE FORM

DATE: <u>27-SEP-2012</u>	PROJECT NAME: <u>Future East Garrison Munitions Response Area</u>	PROJECT LOCATION: <u>Future East Garrison</u>
APPLICABLE DOCUMENT / SECTION:	<u>Final Group 4 Remedial Investigation/Feasibility Study Work Plan, Volume 2 – Sampling and Analysis Plan, Appendix C: Standard Operating Procedures</u>	
SUBJECT:	<u>Appendix C: Addition of Standard Operating Procedures for Soil Sifting Operations.</u>	

FIELD CHANGE CONDITION:

The Remedial Investigation at Future East Garrison Munitions Response Area (MRA) is being executed in accordance with the Final Group 4 Remedial Investigation/Feasibility Study Work Plan for the Future East Garrison MRA dated October 8, 2010 (“the Group 4 RI/FS Work Plan”).

Soil sifting operations are anticipated to be included in the remedial investigation activities conducted in the Future East Garrison MRA. The Group 4 RI/FS Work Plan allows for soil screening operations as stated in Volume 2, Section 2.4.6 Soil Screening Operations, which allows for soil screening with a 3/8-inch screen; however, a standard operating procedure for soil sifting is not included in Appendix C, Standard Operating Procedures, of the work plan.

RECOMMENDED APPROACH / CHANGE:

It is recommended that an amendment be made to Volume 2 of the Group 4 RI/FS Work Plan for the addition of an SOP for soil sifting operations (attached) to Appendix C.

Soil sifting is being recommended to complete the remedial investigation within the Future East Garrison MRA and to complete the RI/FS for the Future East Garrison MRA. The ESCA RP Team will conduct the sift operations in accordance with the field investigation plan described in the Group 4 RI/FS Work Plan, Volume 2, Sections 2 and Section 2.4.6. Section 2.4.6 describes the soil screening operations allowing for soil screening with a 3/8-inch screen. The SOP further specifies that a 3/4-inch screen (or 3/8-inch, if harp screen is used) will be used, which is appropriate for investigation in the former hand grenade area where sifting operations will be implemented. Activities to be conducted include but are not limited to:

- QC Seeding: The QC seeding program for the sifting operations is included in the Standard Operating Procedures for Soil Sifting Operations.
 - Initial Survey: Wooden perimeter stakes will be installed around the sifting area using a maximum spacing of 100 feet. Perimeter stakes will be placed approximately 10 feet outside of the sifting area.
 - Removal of top 6 inches of Sediment in Aquatic Features: During soil removal activities in Aquatic Features the top approximately 6 inches of sediment will not be sifted. The sediment will be excavated with heavy equipment and placed nearby on a clean soil surface to allow for inspection of the material using instrument-aided visual inspection.
 - Excavation of Soils: A series of soil lifts may be required with instrument checks conducted to verify adequate debris removal. If multiple soil lifts are required, the soil excavated below approximately 6
-



inches may be stockpiled and sifted separately from the top 6 inches to allow the seed bank to be subsequently replaced on top of the excavation areas.

- Soil Scraping: Scraping of soils will be performed to remove the soil suspected of containing MEC, MD and other masking debris to facilitate subsequent detection methods.

IMPACT ON PRESENT AND COMPLETED WORK:

No impact to present or completed work.

REQUESTED BY: Kristie Reimer, ESCA Remediation Program Manager (ARCADIS)

CLARIFICATION/FOR INFORMATION ONLY

MINOR CHANGE

MAJOR CHANGE

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9-27-12

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ATTACHMENTS:

Attachment A: Appendix C; Standard Operating Procedures for Mechanical Soil Sifting

ATTACHMENT A

FORA ESCA REMEDIATION PROGRAM

Group 4 Remedial Investigation/ Feasibility Study Work Plan Standard Operating Procedure for Mechanical Soil Sifting

Future East Garrison Munitions Response Area
Former Fort Ord
Monterey County, California

September 11, 2012

Prepared for:

FORT ORD REUSE AUTHORITY

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and
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Prepared by:



CONTENTS

ACRONYMS AND ABBREVIATIONS.....	III
1.0 PURPOSE.....	1
2.0 SCOPE.....	1
3.0 REGULATORY REFERENCES	1
4.0 RESPONSIBILITIES	1
4.1 Remedial Project Manager	1
4.2 Senior UXO Supervisor.....	1
4.3 UXO Safety Officer.....	1
4.4 UXO Quality Control Specialist.....	2
4.5 UXO Technician.....	2
4.6 Equipment Operator	2
5.0 OPERATIONS.....	2
6.0 EQUIPMENT	5
7.0 SAFETY	5
8.0 PERSONAL PROTECTIVE EQUIPMENT	6
9.0 QUALITY CONTROL AND QUALITY ASSURANCE ACTIVITIES.....	6
9.1 Material Types 1, 2, 3, and 4.....	7
9.2 Material Types 5 and 6.....	7
9.3 Sifting Operations Seeded Items	8
9.5 Sifting Operations Quality Assurance	9
10.0 DATA COLLECTION AND REPORTING	9
11.0 DUST MONITORING PLAN.....	9
12.0 DISPOSITION OF MATERIAL	10
13.0 SUMMARY	10

APPENDICES

- A Map Showing Location of Sifting Operation
- B Equipment Specifications and Flow sheet
- C Activity Hazard Analysis and Daily Equipment Safety Checklist
- D Daily Quality Control Inspection Report

ACRONYMS AND ABBREVIATIONS

Army	United States Department of the Army
dBa	decibel
CFR	Code of Federal Regulations
ESCA RP	Environmental Services Cooperative Agreement Remediation Program
ESP	Explosive Safety Plan
FFE	free from explosives
FORA	Fort Ord Reuse Authority
MD	munitions debris
MEC	munitions and explosives of concern
mg/m ³	milligrams per cubic meter
millimeter	
MRA	Munitions Response Area
µg/m ³	micrograms per cubic meter
OSHA	Occupational Safety and Health Administration
PM	Program Manager
PPE	personal protective equipment
QA	quality assurance
QC	quality control
SOP	standard operating procedure
SUXOS	Senior Unexploded Ordnance Supervisor
TWA	time-weighted average
UXO	unexploded ordnance
UXOQCS	Unexploded Ordnance Quality Control Specialist
UXOSO	Unexploded Ordnance Safety Officer
WESTON	Weston Solutions, Inc.

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to provide the minimum procedures and safety and health requirements applicable to the conduct of mechanical soil sifting operations in the Group 4 Remedial Investigation/Feasibility Study (RI/FS) Work Plan, Volume 2 – Sampling and Analysis Plan, Future East Garrison Munitions Response Area (MRA) (Group 4 RI/FS Work Plan)

2.0 SCOPE

Personnel performing sifting operations utilizing mechanical means shall conform to this SOP. This SOP is not a stand-alone document and personnel shall become familiar with associated documents and/or manuals related to this operation and associated field activities.

3.0 REGULATORY REFERENCES

- Occupational Safety and Health Administration (OSHA) General Industry Standards, 29 CFR 1910
- OSHA Construction Standards, 29 CFR 1926
- United States Army Corps of Engineers Engineering Manual 385-1-1, Safety and Health Requirements Manual

4.0 RESPONSIBILITIES

4.1 Remediation Project Manager

The Remediation Project Manager (RPM) is responsible for ensuring availability of resources to safely and effectively implement this SOP.

4.2 Senior UXO Supervisor

The Senior Unexploded Ordnance Supervisor (SUXOS) is responsible for incorporating this SOP in plans, procedures, and training, and ensuring compliance during field operations.

The SUXOS is jointly responsible for certifying that material is free from explosives (FFE) along with the Unexploded Ordnance Quality Control Specialist (UXOQCS).

4.3 UXO Safety Officer

The Unexploded Ordnance Safety Officer (UXOSO) ensures that mechanical sifting operations are conducted in a safe manner, in accordance with the Group 4 RI/FS Work Plan, this SOP, and applicable regulatory guidance.

4.4 UXO Quality Control Specialist

The UXOQCS ensures that quality control inspections are performed and documented in accordance with Group 4 RI/FS Work Plan and this SOP. Deficiencies will be reported to the PM, SUXOS, and UXOSO. The UXOQCS will verify that appropriate corrective measures are taken and documented. The UXOQCS will inspect munitions debris (MD) and non-munitions and explosives of concern scrap prior to disposal or recycling, and will sign off on Daily Quality Control (QC) Inspection Reports.

The UXOQCS is jointly responsible for verifying that material is FFE with the SUXOS.

4.5 UXO Technician

The UXO Technician provides munitions and explosives of concern (MEC) support and is familiar with the equipment being utilized. The UXO Technician shall perform tasks to include a visual search/survey of the area(s) of operation and inspection of soil being loaded into the sift plant and the spoils and finds resulting from sifting.

4.6 Equipment Operator

The Equipment Operator will be qualified and fully trained on the equipment being utilized and shall operate the equipment as directed. The Equipment Operator shall perform daily inspections and maintenance functions as required by the operator's manual(s) and shall perform other duties as needed or directed.

5.0 OPERATIONS

There will be a minimum of two UXO Technicians (UXO Tech II or higher) on site during active sifting operations. The UXO Technicians will conduct an overall visual survey of the area prior to starting operations. Soil from each polygon will be stockpiled separately to allow the soil sifting data to be recorded by polygon.

The excavated soil screening process will be conducted for each stockpile as follows:

1. The excavated material will be introduced into the feed hopper/grizzly using an armored loader. Material greater than 6 inches in size will be rejected and discharged to one side of the grizzly. This greater than 6-inch reject material will be introduced back into the screening plant a minimum of one more time to minimize the volume of the oversize material. This greater than 6-inch reject material is the first of the seven material types generated. It will be 100% inspected by trained UXO personnel as described in Section 9.1 of this SOP and subsequently sorted into three material types:
 - Material 1A – Rock, asphalt, or concrete compatible with size-reduction equipment will be processed (see item 6 below) and possibly reused as road base or similar beneficial reuse as approved by the regulatory agencies).

- Material 1B – Oversized material not compatible with the size-reduction equipment (e.g., very large items, lumber, rubber, wire, etc.) will be sorted. This material will be classified and disposed of/reused as approved by the regulatory agencies.
- Material 1C – Ferrous material will be segregated into:
 1. MEC, which will be handled according to established handling procedures, and
 2. Non-MEC material (including MD), which will be conveyed to the size-reduction equipment (see item 6 below).
- 2. The material less than 6 inches will fall into a feed hopper and onto a heavy duty conveyor belt leading to the first magnet. The magnet will collect ferrous metal items and discharge the metal into a ferrous scrap bin container via a small conveyor rotating around the magnet. This ferrous metal is the second of the seven material types generated. It will be 100% inspected by trained UXO personnel as described in Section 9.1 of this SOP. Materials (MEC, MD, and non-MEC-related material) will be subsequently segregated into:
 - Material 2A – MEC, which will be handled according to established handling procedures, and
 - Material 2B – Non-MEC material (including MD) will be conveyed to the size-reduction equipment (see item 6 below).
- 3. The material not collected by the magnet will continue on a heavy duty conveyor belt through dual-layered vibrating screens; 2-inch (top) and 3/4-inch (or 3/8-inch if harp screen is used; bottom). The top 2-inch screen is sized to reject larger potential MEC items while minimizing the potential for pluggage by vegetative matter. The material rejected by both screens (greater than 2-inch and greater than 3/4-inch [or 3/8-inch, if harp screen is used]) will be inspected for MEC (specifically 40 millimeter [mm] projectiles) as specified in Section 9.1. This greater than 3/4-inch (or 3/8-inch, if harp screens are used) and greater than 2-inch material is the third of seven material types generated. Materials (MEC, MD, and non-MEC-related material) will be subsequently segregated into:
 - Material 3A – MEC, which will be handled according to established handling procedures, and
 - Material 3B – Non-MEC material (including MD) will be conveyed to the size-reduction equipment (see item 6 below).
- 4. The material less than 3/4-inches (or 3/8-inch, if harp screen is used) will continue on a heavy duty conveyor belt leading to the second magnet. The second magnet will collect ferrous metal and discharge the less than 3/4-inch (or 3/8-inch, if harp screen is used) metal into a separate scrap bin container via small conveyor. This less than 3/4-inch (or 3/8-inch, if harp screen is used) metal is the fourth of the seven material types generated. It will be 100% inspected by trained UXO personnel as described in Section 9.1. Materials (MEC, MD, and non-MEC-related material) will be subsequently segregated into:

- Material 4A – MEC, which will be handled according to established handling procedures, and
 - Material 4B – Non-MEC material (including MD), which will be conveyed to an approved off-site facility.
5. Any material that passes through the 3/4-inch (or 3/8-inch, if harp screen is used) vibrating screen and the second magnet is the final screened material. This less than 3/4-inch (or 3/8-inch, if harp screen is used) in size material is the fifth of the seven material types generated. Additional QC will be performed on this material as described in Section 9.2.
 6. Weston Solutions, Inc. (WESTON) will process the following compatible material through a shredder, hammer mill or similar size-reduction equipment:
 - Oversized material from the Grizzly (Material 1A)
 - MD and cultural debris from the grizzly (Material 1C)
 - MD and cultural debris from the first magnet (Material 2B)
 - Material rejected by the 3/4-inch (or 3/8-inch, if harp screen is used) and 2-inch screens (Material 3B)

The equipment will further reduce the size of the material to 1 inch or smaller (1-inch minus). The 1-inch minus material is the sixth of the seven material types generated. The UXOQC personnel will conduct an inspection at a minimum of twice per day (during sifting operations) of the 1-inch minus material to make sure that the size of the material has not increased due to wear of the internal components as described in Section 9.2.

7. The material processed through size-reduction equipment is the seventh of the seven material types generated.

The resulting less than 3/4-inch (or 3/8-inch, if harp screen is used) sifted soil will be conveyed onto conical-shaped stockpiles by a radial stacking conveyor. After the QC step for the sifted soil described in Section 9.2 has been performed, along with a satisfactory recovery of seed items introduced to the sift plant during the time when the stockpile was generated, the sifted soil stockpile will be loaded into off-road haul trucks. Sifted soil will be transported and placed within the previously excavated areas. In some cases the top 6 inches of soil may be kept separate and will be the last soil placed on the excavated area. This will be coordinated with the biologist during field operations. In the event that any other location is proposed, the United States Department of the Army (Army), the Fort Ord Reuse Authority (FORA), and the regulatory agency stakeholders will be contacted for consultation prior to any placement of soil outside the Future East Garrison MRA.

The 1-inch minus material from the size-reduction equipment will be stored in locked containers and conveyed to an approved off-site facility.

The sifting operation location(s) were approved by the Department of Defense Explosive Safety Board in the Explosive Safety Submission (ESP[Appendix G of the Group 4 RI/FS

Work Plan, Volume 2]). A map showing the location of the sifting operation is provided in Appendix A. In the event that a MEC item with a greater horizontal range is encountered, the adequacy of the exclusion zones for essential and nonessential personnel will be reevaluated. The current approved exclusion zones are described in the ESP.

6.0 EQUIPMENT

Equipment specifications and flow sheet are provided in Appendix B.

7.0 SAFETY

Appropriate precautions will be observed during sifting operations. The precautions listed below are general in nature and applicable equipment and operational publications will be reviewed periodically:

- Conduct tailgate safety briefings daily, when the operation changes, or when there is a change of personnel
- Maintain 824 feet from other essential operations based on the maximum fragmentation distance of the 37mm Low Explosive MK I .
- Maintain appropriate distance for nonessential personnel as provided in the ESP in Appendix G of the work plan
- Use equipment safety features (i.e., seat belts, fire extinguishing equipment)
- Observe applicable safety precautions in operator's manual
- Maintain communications between personnel involved in the operation
- Maintain site control
- Observe MEC precautions for items encountered
- Ensure personal protective equipment (PPE) is serviceable and properly in use
- Mechanical equipment and vehicles used in sifting operations will be armored with the appropriate thickness of Lexan or Plexiglas as indicated in Technical Paper 16 to protect the equipment operators against any unintentional detonations of MEC items; refer to the ESP in Appendix G of the Group 4 RI/FS Work Plan, Volume 2 for the specific thickness of protective armoring
- Water will be used for dust mitigation on a case-by-case basis as deemed necessary by the UXOSO

An activity hazard analysis and equipment safety checklist providing additional details about the tasks, potential hazards, control measures, and PPE requirements is provided in Appendix C.

8.0 PERSONAL PROTECTIVE EQUIPMENT

Level D PPE will be required during mechanical sifting operations. Clothing will include, but not be limited to:

- Coveralls or work clothing as prescribed
- Work gloves, leather or canvas as appropriate
- Safety glasses
- Hard hats, if necessary (not when investigating MEC items)
- Hearing protection, noise attenuators, or ear plugs when within hazardous decibel range of equipment

9.0 QUALITY CONTROL AND QUALITY ASSURANCE ACTIVITIES

As described above, the process of screening the excavated material will generate the following types of materials:

1. Oversize material (over 6 inches) from the feed hopper/grizzly (Material Type 1A compatible with size-reduction equipment, Material Type 1B not compatible with size reduction equipment, and Material Type 1C ferrous material segregated into MEC and non-MEC).
2. Less than 6-inch ferrous debris collected by the first magnet (Material Type 2A MEC and Material Type 2B non-MEC).
3. Greater than 3/4-inch (or 3/8-inch, if harp screen is used) and less than 6-inch debris items rejected by the 2-inch and 3/4-inch/3/8-inch vibrating screens
4. Less than 3/4-inch (or 3/8-inch, if harp screen is used) ferrous debris collected by the second magnet (Material Type 4A MEC and Material Type 4B non-MEC).
5. Less than 3/4-inch (or 3/8-inch, if harp screen is used) screened soil free of MEC and ferrous debris.
6. Material processed with size-reduction equipment (1-inch minus).
 - Oversized material from the Grizzly (Material Type 1A)
 - MD and cultural debris from the grizzly (Material Type 1C)
 - MD and cultural debris from the first magnet (Material 2B)
 - Material rejected by the 3/4-inch (or 3/8-inch, if harp screen is used) and 2-inch screens (Material Type 3)

9.1 Material Types 1, 2, 3, and 4

UXO personnel will conduct a visual inspection of Material Types 1B through 4 as indicated on the Daily QC Inspection Report (Appendix D). Inspections of these types of materials will be documented on the report form. The purpose of this inspection is to verify that reject materials are properly sorted, segregated, and secured depending on material type.

At the end of the day (or more frequently as deemed necessary), each type of material will be placed at a staging area. The staging area will be positioned to maintain a minimum 200-foot team separation distance from the sift plant or any other MEC operations. UXO personnel will then inspect 100% of each material type. MEC, MD, or non-MEC-related debris will be segregated and managed in accordance with the established handling procedures. The various material types will be inspected by spreading the material into a thin lift in a manageable volume size, as determined by the SUXOS, to allow for inspection of the material using instrument-aided visual inspection methods. MEC or MD items recovered will be sorted appropriately.

As part of the QC process, the UXOQC personnel will conduct an inspection at a minimum of once per day of each of the material types (1B through 4). The purpose of this inspection is to verify that the UXO personnel are properly sorting the material. If an item is determined to be improperly sorted and/or a MEC item is missed, a root cause analysis will be conducted to determine why this occurred and a corrective action will be implemented. Failures and corrective actions will be documented. The UXOQCS will also verify that seeds are added to the soil fed to the sift plant twice per day, and that all seeds are recovered.

Compatible material from the grizzly (Material Type 1A) and reject material from the 3/4-inch (or 3/8-inch, if harp screen is used) and 2-inch screens (Material Type 3) will be processed through size-reduction equipment set to a 1-inch final product. The UXOQC personnel will conduct an inspection at a minimum of twice per day of the 1-inch minus material to make sure that the size of the material has not increased due to wear of the internal components.

9.2 Material Types 5 and 6

Material Type 5 (less than 3/4-inch material having passed through the 2nd magnet) is the final product and considered to be free of MEC. As part of the QC process, UXO personnel will inspect Material Type 5 twice a day – typically at midday (lunchtime) and at the end of the day. The sift plant operation will generally create multiple conical piles generated by the radial conveyor belt throughout the day. At midday, UXO personnel will inspect the screened piles generated that morning. The radial stacking conveyor will be repositioned to keep the afternoon production stockpiles separated from the morning stockpiles. At the end of the day, UXO personnel will inspect the screened piles generated since the midday inspection. The loader operator will take approximately 15 cubic yards (three loader buckets) of the material from each morning and afternoon stockpile and spread it into a thin lift. UXO personnel will inspect the material visually (aided with magnetometers and all-metals detectors) for the presence of MEC, MD, and non-MEC scrap and/or any metal that is greater than 3/4 inch (or 3/8-inch, if harp screen is used). If any metal greater than 3/4 inch (or 3/8-inch, if harp screen

is used) is found, the entire stockpile will be re-processed through the sift plant. In addition, a root cause analysis will be conducted followed by corrective actions. Failures and corrective actions will be documented. Once the inspection is completed, the QC material will be consolidated back into the same production stockpile from where it was removed.

Material Type 6 consists of debris processed using size-reduction equipment to 1 inch or less. As part of the QC process, two UXO personnel will inspect Material Type 6 as needed based on size-reduction operations. The material will be spread into a thin lift prior to inspection. UXO personnel will inspect the material visually for the presence of MEC, MD, and non-MEC scrap and/or any material that is greater than 1 inch. If any material greater than 1 inch is found, the entire stockpile will be reprocessed through the rock crusher. In addition, a root cause analysis will be conducted followed by corrective actions. Failures and corrective actions will be documented. Once the inspection is completed, the QC material will be segregated for future disposition. If off-site recycling or disposal is required and authorized, WESTON will follow the procedures as indicated in Section 12.0 of this SOP.

9.3 Sifting Operations Seeded Items

As part of the QC process, the UXOQCS or designated representative will place three seed items in the sift plant twice daily (morning and afternoon) during the sifting operations. The seeds consist of the following items:

- Practice Fragmentation Hand Grenade MKII), painted blue
- 1-inch by 4-inch galvanized pipe, painted blue (used to simulate 37 - 40mm in size)
- ½-inch by 12-inch piece of rebar, painted blue (used to simulate 22mm and 35mm subcal)

These items will be placed in the bucket of the heavy equipment loading the hopper of the sift plant. For safety reasons, the UXOQCS or designated representative will wait until soil fed to the sift plant has cleared from the machine prior to entering the 200-foot exclusion zone for placement of the seed items.

The purpose of this QC task is to verify that the sifting operation can remove detectable items from the excavated material. At the next shutdown of the plant, the UXOQC personnel will inspect the various materials rejected to determine if the seed items were removed by the magnets and/or screens.

If all seeds are not accounted for in the finds, a root cause analysis will be conducted. UXO technicians will inspect the area around the sift plant to locate the seed item. The necessary adjustments and corrective actions will be conducted. The results of the seed placement test and corrective actions will be documented by the UXOQC personnel.

In addition to the twice-daily placement of seed items and QC checks of the sifted soil, the screens on the sift plant will also be inspected twice-daily for damage as a means to provide early detection of potential problems as noted on the Daily QC Inspection Report form.

9.5 Sifting Operations Quality Assurance

FORA has contracted with a third-party quality assurance (QA) contractor to provide oversight of MEC-related activities associated with the Future East Garrison MRA Removal Action work, including the soil sifting operations. This QA activity is in addition to, and is independent of, the Environmental Services Cooperative Agreement Remediation Program (ESCA RP) Team's QC activities described above in Sections 9.1 through 9.4. As noted in the Quality Assurance Project Plan for the Future East Garrison MRA, the QA personnel will perform periodic inspections and observe for the following performance indicators:

- Equipment serviceable and in good condition (screens)
- Personnel knowledgeable in plant operation
- Dust control (if applicable)

Quantitative surveillance metrics will consist of periodically introducing seed items into the sift plant and verifying that all seed items are rejected by the sift plant.

10.0 DATA COLLECTION AND REPORTING

Data collected during sifting operations include: number and types of MEC encountered, weight of MD recovered, weight of cultural debris recovered, amount of soil processed, and final disposal location of the various materials processed. Data will be recorded as described in Section 5.0 Operations.

11.0 DUST MONITORING PLAN

This Dust Monitoring Plan presents the dust minimization, controls, and monitoring requirements that will be implemented during sifting operations. During site operations, personnel will implement dust controls, which will consist of spraying water as needed along the haul routes, work areas, and stockpiled soil introduced to the sift plant, to minimize fugitive dust. Heavy equipment speeds will be kept low (less than 15 miles per hour) to minimize dust emissions.

Dust monitoring stations will be operational during working hours. One dust monitor will be located in the work area to monitor dust levels for worker safety as indicated in the Activity Hazard Analysis in Appendix C. The second monitor will be located near the perimeter of the work area to monitor dust levels leaving the site. The dust monitors will continuously monitor the dust concentrations and record the dust concentrations every minute. The data will be downloaded at the end of each day and maintained in the project files for documentation purposes. The California Ambient Air Quality Standard for respirable particulate matter (PM₁₀) is 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), measured as a 24-hour time-weighted average (California Code of Regulations, Title 17, Section 70200). Although construction activities will not occur on a 24-hour basis, as a conservative approach, the action level for dust will be set as 50 $\mu\text{g}/\text{m}^3$. Personnel will periodically inspect the dust monitors to determine if the standard has been exceeded. If the action level is exceeded, dust control

measures need to be increased and/or site operations need to be modified. Site management will also visually monitor the site for “visible” dust and take any necessary corrective actions to reduce or eliminate the visible dust emissions. Every effort will be made to ensure the site activities and dust controls are implemented such that the dust emissions are minimized and the ambient air quality standard is achieved.

12.0 DISPOSITION OF MATERIAL

All MD and non-MEC related material (including the 1-inch minus material) leaving the Future East Garrison MRA site will require the signature of the SUXOS and a UXOQCS documenting that the material is FFE using DD Form 1348-1A, July 91 (EG). The signatures will certify and verify the following statement:

“This certifies and verifies that the material presented herein has been 100% inspected and to the best of our knowledge and belief, are inert and/or free of explosives or related materials.”

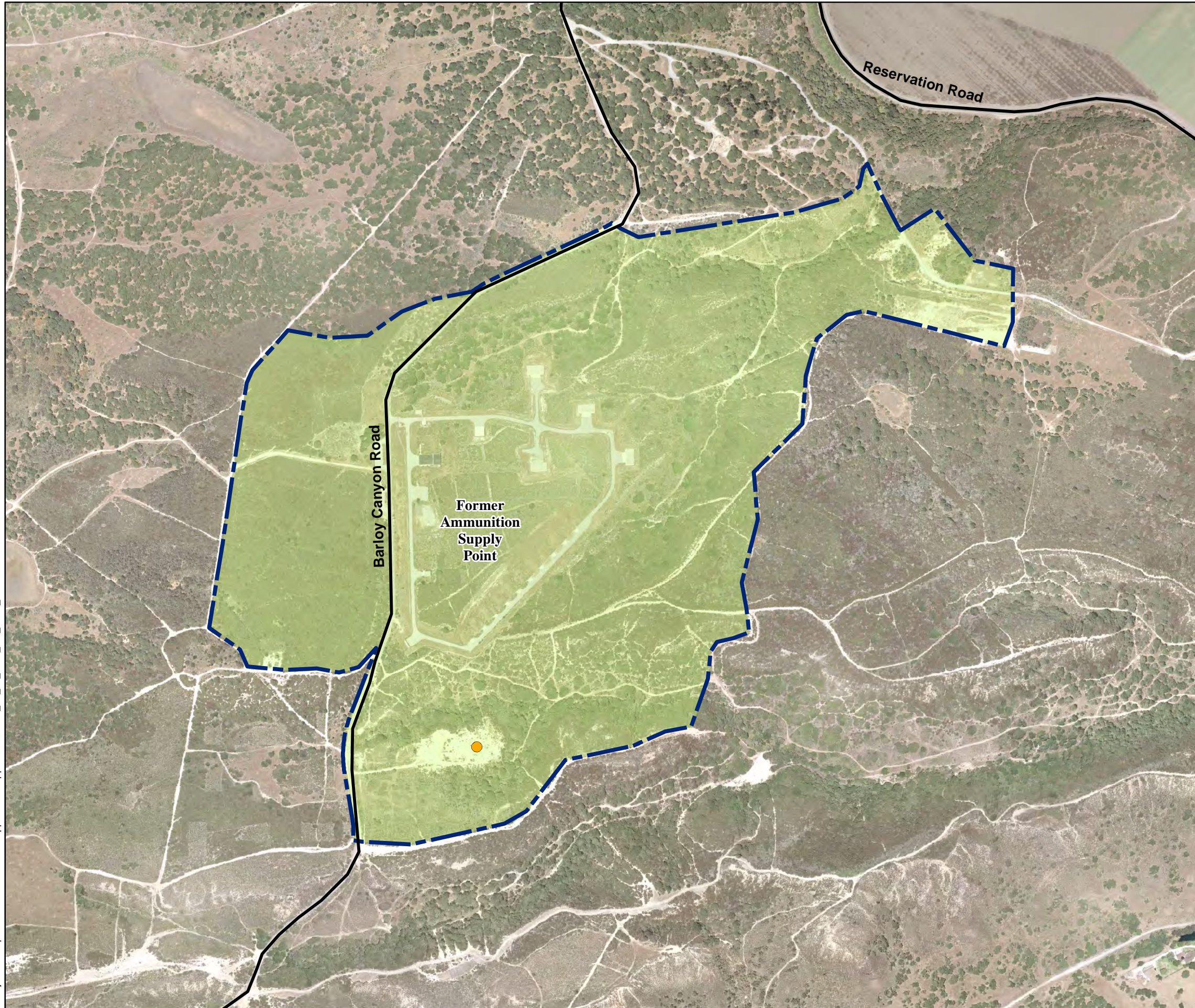
13.0 SUMMARY

This SOP will be used to ensure that the requirements for mechanical sifting operations are conducted in a safe, efficient, and productive manner. The UXOSO and PM will make changes to this SOP as safety and operational necessity dictate. Changes to the SOP will be documented using a field variance form and routed to the Army, FORA, and regulatory agency stakeholders for concurrence.




APPENDIX A

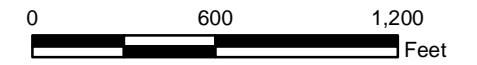
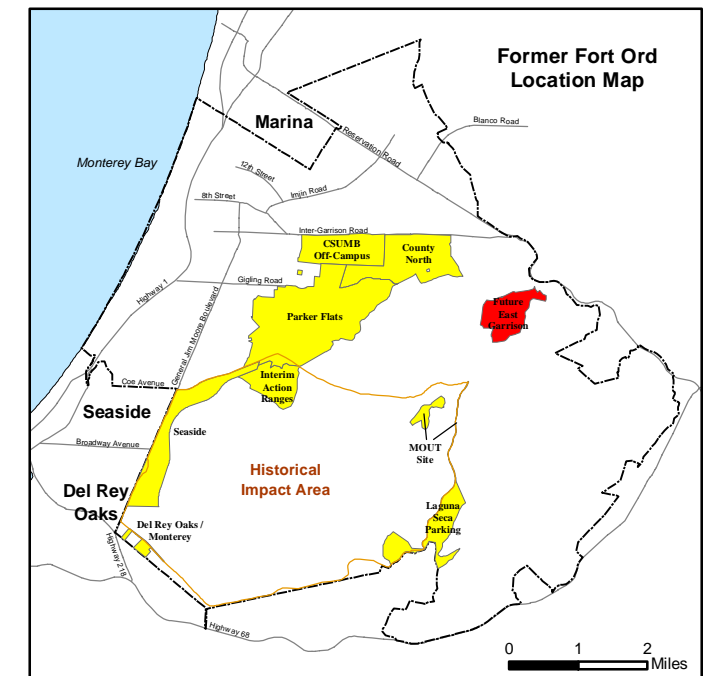
Map Showing Location of Sifting Operation

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Legend

-  Future East Garrison Remedial Investigation Area
-  Major Road
-  Approximate Sift Plant Location



Future East Garrison MRA Sift Plant Location

FORA ESCA RP
Monterey County, California

APPENDIX B

Equipment Specifications and Flow sheet

GENERAL SIFTING SYSTEM REQUIREMENTS

The mechanical soil sifting system will operate as shown on the included figure and be capable of sifting approximately 1000 cubic yards per day of predominantly sandy soil through a 2-inch and ¾-inch screen (or 3/8-inch if harp screen is used) vibratory screen deck. Items #1, #2 and #3 described below shall be provided as integral components of a commercially available portable screen plant.

The following components will comprise the sifting system:

- Item #1 – Feed Hopper with Grizzly - Grizzly will have a nominal 6-inch spacing to remove oversized material; 12-ton-minimum storage capacity, wide feed opening with heavy-duty, 36-inch-wide roller belt feeder with electric/hydraulic variable speed drive, discharge gate to control material flow, full-length skirtboards, and belt scraper.
- Item #2 - Transfer Conveyor - 36-inch-wide by 20-foot-long (one each) transfer conveyor with heavy-duty belt complete with electric motor, v-belt drive with OSHA drive guard, shaft mount reducer with internal backstop, receiving hopper with skirtboards and bolt-on wing extensions, conveyor belting with rubber covers, and support legs.
- Item #3 - Vibratory Screens - Double-deck vibrating screen deck (2-inch top, ¾-inch bottom screens [3/8-inch if harp screens are used]), electric motor drive, common oversized discharge chute, collecting hopper under screen, 30-inch-wide discharge conveyor with heavy-duty belt for material passing through the screen, all mounted on tracks.
- Item #4 - Radial Stockpiling Conveyor - 30-inch-wide by 60-foot-long radial stockpiling conveyor complete with electric motor, v-belt drive with OSHA drive guard, shaft mount reducer with internal backstop, receiving hopper with skirtboards and bolt-on wing extensions, undercarriage with manual raise/lower feature, pivot plate assembly, and wheels that pivot for radial travel.
- Item #5 - Magnetic Separators (two required) - 36-inch-wide, self-cleaning magnetic separator assembly complete with heavy-duty clad belting and electric motor drive. Magnetic intensity of each assembly should be a minimum of 760 Gauss at 20 inches. Screen plant vendor shall provide and install magnets.

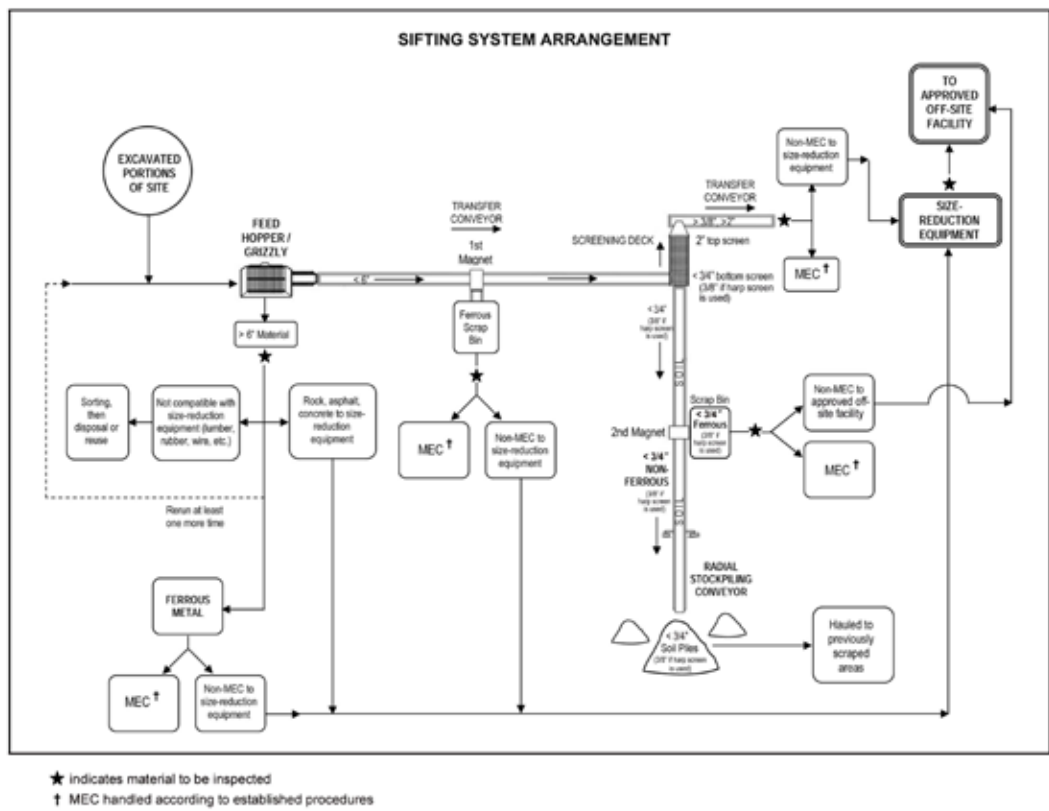
CONVEYOR SAFETY REQUIREMENTS

Conveyor systems shall comply with all applicable safety requirements specified in California Title 8 Section 3999 and 29 Code of Federal Regulations (CFR) 1926.555. The following requirements specified in the U.S. Army Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1) also apply:

1. Where reversing or runaway are potential hazards or the effects of gravity create a potential for hazardous uncontrolled lowering, anti-runaway devices, brakes, backstops, or other safeguards shall be installed to protect persons from injury and property from damage.
2. Conveyor systems shall be equipped with an audible warning signal to be sounded immediately before starting of the conveyor.
3. All conveyors shall be equipped with emergency stopping devices along their full length. Emergency stop devices shall be easily identifiable and readily accessible and shall act directly on the control of the conveyor of concern and not depend on the stopping of any other equipment. Emergency stop devices shall be installed so that they cannot be overridden from other locations.
4. Safety devices shall be arranged to operate in such a manner that, if power failure or a failure of the device occurs, a hazardous condition would not result.
5. All exposed moving machinery parts that present a hazard shall be mechanically or electrically guarded or guarded by location.
6. Nip and shear points shall be guarded.
7. At all points along the conveyor, except at points where loads are removed from or placed on a conveyor or where a conveyor discharges to or receives material from another conveyor, provisions shall be made to eliminate the possibility of loads or material being dislodged from the conveyor.
8. Unless the design, construction, and operation of a conveyor is clearly non-hazardous to personnel, emergency stop buttons, pull cords, limit switches, or similar emergency devices shall be provided at the following locations for remotely or automatically controlled conveyors or conveyors where operator stations are not manned or are beyond voice and visual contact from drive areas: (1) loading arms, (2) transfer points, and (3) other potentially hazardous locations on the conveyor path not guarded by location or guards.
9. When counterweights are supported by belts, cables, chains, or similar means, the weights shall be confined in an enclosure to prevent the presence of personnel beneath the counterweight, or the arrangement shall provide a means to restrain the falling weight in case of failure of the normal counterweight support.
10. When two or more conveying systems are interfaced, special attention shall be given to the interfaced area to ensure the presence of adequate guarding and safety devices.
11. Conveyor controls shall be arranged so that, in case of an emergency stop, manual reset or restart is required at the location where the emergency stop was initiated to resume conveyor operations.
12. Control stations shall be arranged and located so that the operation of the equipment is visible from them.
13. Controls shall be clearly marked or labeled to indicate the function controlled.
14. All openings to the hopper and chutes shall be guarded to prevent persons from accidentally stepping into them. If guards are not practical, warning signs shall be posted.

15. Mobile conveyors shall be provided with brakes or other position locking devices for each degree of motion where movement would present a hazard.
16. Mobile conveyors shall be designed to be stationary against runaway and stable against overturning under normal conditions of operation.
17. The raising and lowering mechanism for the boom of a portable conveyor shall be provided with a safety device that will hold the boom at any rated angle of inclination.
18. Portable conveyors shall be stable so that the conveyor will not topple when used with the manufacturer's rating and in a manner in which it was intended or when being moved.

Screening System Arrangement



Note: If harp screens, the screen size will be 3/8-inch, 3/4-inch.

APPENDIX C

Activity Hazard Analysis and Daily Equipment Safety Checklist

Activity Hazard Analysis – Soil Screening			
Task	Potential Hazard(s)	Control Measure(s)	Personal Protective Clothing
1) Heavy Equipment Operations	a) Slips, trips, or falls on walking and working surfaces	<ul style="list-style-type: none"> • Maintain clean work areas by following good housekeeping procedures. • Be alert for uneven terrain and steep slopes. • <i>Wear slip-resistant footwear when walking/working on slippery surfaces.</i> • <i>Fall protection will be used whenever performing maintenance or fueling where employees are subject to a 6-foot or greater fall hazard.</i> 	Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection, and leather/rubber/cotton gloves, as necessary.
	b) Fire/HazMat spills	<ul style="list-style-type: none"> • Any spills or leaks of petroleum products shall be reported to the Unexploded Ordnance Safety Officer (UXOSO) and Site Manager. • Spill and absorbent materials will be readily available. • Spilled HazMat will immediately be cleaned up and containerized. • All heavy equipment will be equipped with an ABC-type fire extinguisher that will be inspected daily and documented. 	
1) Heavy Equipment Operations (continued)	c) Temperature extremes	<ul style="list-style-type: none"> • <i>Heat Stress Monitoring Program will go into effect at 90° F or as directed by the UXOSO.</i> • <i>Heavy equipment with enclosed cab will be equipped with air conditioning and heaters.</i> • <i>Crews will take heat stress breaks as necessary.</i> • <i>Equipment will be maintained according to manufacturer's recommendations.</i> 	Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection, and leather/rubber/cotton gloves, as necessary.

	d) Dust	<ul style="list-style-type: none"> • Safety technicians will monitor airborne dust levels in the work area. Airborne dust shall be suppressed by application of a water-based mist, as necessary, to keep levels below action level of 0.050 milligrams per cubic meter (mg/m³) (8-hr time-weight average [TWA]). If particulate levels are at or above the action levels, additional wet methods will be used to reduce the dust levels. "No Visible Emissions Rule will be in effect." 	
1) Heavy Equipment Operations (continued)	a) Heavy equipment hazards	<ul style="list-style-type: none"> • <i>Only trained, authorized, qualified, and competent personnel will operate heavy equipment.</i> • <i>Owner's manuals shall be with each piece of equipment in operation.</i> • <i>When equipment is used to load trucks, operators will remain in their cab with windows up and heater/air conditioner on.</i> • <i>Equipment will be inspected before each shift and documented (see attached checklist).</i> • <i>Equipment with serious safety hazards (problems with breaks, etc.) will immediately be taken out of service and repaired before used.</i> • <i>Operators are responsible for the equipment or trucks they operate.</i> • <i>Ground personnel and operators will be familiar with appropriate hand signals in the work area.</i> • <i>All personnel in the controlled area where heavy equipment is operating will wear high visibility vests or an equivalent as approved by the contractor.</i> • <i>Manufacturer's safety and operations manual will be reviewed and followed.</i> • <i>Heavy equipment will be equipped with rollover protection and backup alarms.</i> • <i>Employees will remain at least 25 feet away from the back, front, or sides of heavy equipment during soil moving operations.</i> • <i>Equipment repair noted on the inspection sheet will be scheduled for maintenance during the shift first noted, as appropriate.</i> 	Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection, and leather/rubber/cotton gloves, as necessary.

1) Heavy Equipment Operations (continued)	b) Traffic flow/vehicle accidents	<ul style="list-style-type: none"> • <i>The traffic truck/route plan will be followed.</i> • <i>When two-way traffic travels through intersections with poor visibility or short visibility, the speed limits will be slow enough to prevent accidents (15 miles per hour maximum while on-site), and/or flag personnel will be used to control traffic congestion.</i> • <i>Field foot traffic will be kept away from equipment/truck traffic to the extent possible.</i> • <i>Traffic patterns, traffic plans, and rights-of-way will be covered in safety meetings.</i> 	Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection, and leather/rubber/cotton gloves, as necessary.
	c) Dropped tools or supplies	<ul style="list-style-type: none"> • <i>Steel-toe boots, high visibility reflective vests, safety glasses, and hardhat meeting American National Standards Institute standards will be worn in all construction areas.</i> 	
	d) Eye injury due to flying particulate	<ul style="list-style-type: none"> • <i>Safety glasses with side shields will be worn in all construction work areas.</i> • <i>If material gets into an employee's eye, the eye should immediately be flushed for 15 minutes at an emergency eye wash station. The UXOSO will be notified immediately whenever material gets in an eye.</i> • <i>An eye wash station shall be in the work area where work is to be accomplished.</i> 	
1) Heavy Equipment Operations (continued)	e) Vehicular traffic in work area/Worker struck by vehicle	<ul style="list-style-type: none"> • <i>High visibility vests shall be worn.</i> • <i>Heavy equipment and vehicles will have safety features (backup alarms), brakes, windows, and windshields in-place and maintained according to regulations and good practices.</i> • <i>Vehicle inspection program implemented, which inspects for safe operation and condition each shift before use.</i> 	Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection, and leather/rubber/cotton gloves,

	<i>f) Back injury from lifting heavy loads</i>	<ul style="list-style-type: none"> • Site personnel will be instructed on proper lifting techniques. • Mechanical devices should be used to reduce manual handling of materials. • <i>Employees will follow the WESTON requirement of not lifting more than 50 pounds or unusually awkward materials by themselves. Team lifting should be utilized if mechanical devices are not available.</i> 	as necessary.
2) Heavy Equipment Operations (continued)	<i>g) Exposure to high noise and vibration from heavy equipment</i>	<ul style="list-style-type: none"> • <i>The UXOSO will determine the need for hearing protection and conduct monitoring if needed. Noise monitoring will be conducted for those activities involving difficulty communicating in a normal voice or at or above 85 decibels (dBA) Sound Pressure Level.</i> • <i>All equipment will be equipped with manufacturer's required mufflers.</i> 	Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection, and leather/rubber/cotton gloves, as necessary.
	<i>h) Biological hazards</i>	<ul style="list-style-type: none"> • Insect repellent will be on hand for use to minimize the potential for infection with West Nile virus, as recommended in OSHA directives. • Use caution when walking in shrub areas. Snakes may be active. • Check for ticks when walking through vegetated areas. • An environmental/biological (California tiger salamander) briefing shall be given to all personnel in the area. • Coveralls/Tyvek will be available to help prevent the spread of poison oak oils, and 70% isopropyl alcohol spray will be used to decontaminate personnel and equipment. 	
	<i>i) Unsafe conditions due to housekeeping</i>	<ul style="list-style-type: none"> • <i>Equipment, such as fire extinguishers and owner's manuals, and other items in the cab of equipment and tractors will be secured. Trash and debris will be kept out of the cab to prevent debris from falling under the control pedals. The view out of the windows will remain unobscured by debris.</i> 	

<p>3) Mechanical Soil Screening Process</p>	<p>a) Vibratory Power Screen Operations</p>	<ul style="list-style-type: none"> • <i>Only qualified/authorized personnel shall operate Power Screen.</i> • <i>The UXOSO will determine the need for hearing protection and conduct monitoring if needed. Noise monitoring will be conducted for those activities involving difficulty communicating in a normal voice or at or above 85 dBA Sound Pressure Level.</i> • <i>All equipment will be equipped with manufacturer's required mufflers.</i> • <i>All screens and guards shall be in place to prevent personnel from entering or being caught inside machine.</i> • <i>The area around loading/unloading shall be kept clear of obstructions and Slip/Trip/Fall hazards.</i> • <i>When handling any metal debris, care shall be taken to prevent puncture/cuts from the sharp/irregular edges.</i> • <i>During the screening process, only qualified and authorized personnel shall handle MEC.</i> • <i>Safety technicians will monitor airborne dust levels in the work area. Airborne dust shall be suppressed by application of a water-based mist, as necessary, to keep levels below action level of 0.050 mg/m³ (8-hour TWA). If particulate levels are at or above the action levels, additional wet methods will be used to reduce the dust levels. "No Visible Emissions Rule will be in effect."</i> • <i>All personnel shall know the emergency shutoff/Kill Switch locations and how to operate them.</i> 	<p>Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection (single or double), and leather/rubber/cotton gloves, as necessary.</p>
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<p>3) Mechanical Soil Screening Process (continued)</p>	<p>b) Conveyors</p>	<ul style="list-style-type: none"> • Only qualified/authorized personnel shall operate Conveyors. • No maintenance shall be performed while the conveyor is in operation except when lubrication/adjustments are necessary while the conveyor needs to be in motion and only when all safeguards are in place and is done by experienced/trained maintenance personnel. • Inspect Emergency shutoff switches and all guards on the conveyor belt systems. All employees working on Power Screen Plant will have a thorough working knowledge of the Kill Switches and their locations. • Inspection, maintenance, and repairs will be in accordance with manufacturer’s recommendations. • Where reversing, runaway, or uncontrolled lowering are potential hazards, anti-runaway devices, breaks, backstops, or other safeguards shall be installed. • Safety devices shall be arranged to operate in such a manner that, if a power failure or a failure of the device occurs, a hazardous condition would not result. • All take-up mechanisms (contact with cables, chains, belts) and nip and shear points shall be guarded. • Keep hands and all body parts away from moving parts and pinch points. • Riding on conveyors is prohibited. • The area around loading/unloading shall be kept clear of obstructions. 	<p>Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection (single or double), and leather/rubber/cotton gloves, as necessary.</p>
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<p>3) Mechanical Soil Screening Process (continued)</p>	<p>b) Conveyors (continued)</p>	<ul style="list-style-type: none"> • Safety technicians will monitor airborne dust levels in the work area. Airborne dust shall be suppressed by application of a water-based mist, as necessary, to keep levels below action level of 0.050 mg/m³ (8-hour TWA). If particulate levels are at or above the action levels, additional wet methods will be used to reduce the dust levels. "No Visible Emissions Rule will be in effect." • Shutoff switches shall be tested and witnessed by the supervisor prior to starting work. 	<p>Heavy Equipment Operators/Laborers – hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection (single or double), and leather/rubber/cotton gloves, as necessary.</p>
<p>4) Munitions and Explosives of Concern (MEC)</p>	<p>a) Handling MEC Items</p>	<ul style="list-style-type: none"> • Assume that MEC contains explosives until it can be determined otherwise. • Avoid inhalation of, and skin contact with, smoke fumes and vapors of explosives and related hazardous materials. • Make every effort to identify the MEC item. Carefully examine the item for markings and other identifying features such as shape, size, and external fittings. Do not move the suspected MEC item. Only UXO Technicians may handle/evaluate MEC items. • Plan for, provide, and know the measures to be taken in the event of an accident. • Provide a designated emergency vehicle in the area in case of an accident or an exigent situation. • Do not handle, use, or remain near explosives during the approach or progress of an electrical storm. All personnel should move to a safe place until the storm passes. • Do not allow unauthorized or unnecessary personnel to be present in the established exclusion zone during MEC operations. 	<p>Tyvek, hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection (single or double), and leather/rubber/cotton gloves, as necessary.</p>

<p>4) Munitions and Explosives of Concern (MEC) (continued)</p>	<p>a) Handling MEC (continued)</p>	<ul style="list-style-type: none"> • Always base operational plans on minimizing the exposure of site personnel to MEC, consistent with efficient operations. • Do not rely on color-coding of MEC for positive identification of contents. Munitions having either none, incomplete, or improper color codes have been encountered. • An MEC exclusion zone will be established during all excavation and MEC handling phases of work. • A safety arc will be established around MEC items that are unsafe to handle (blow in place). • At no time will non-UXO-trained employees or subcontractors be responsible for identifying, handling, or removing MEC items. • All movable MEC items shall be removed from site (at least daily) and taken to Magazine for storage, utilizing an approved Explosive Transport Vehicle. All non-movable MEC items shall be destroyed daily or, if not feasible, low profile marking shall be used and the item will be destroyed the next working day. 	<p>Tyvek, hard hat, safety glasses with side shields or goggles, steel-toe safety boots, reflective vests, ear protection (single or double), and leather/rubber/cotton gloves, as necessary.</p>
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SIFTING PLANT DAILY SAFETY INSPECTION REPORT				
Contractor Inspector Signature:		Date:		
Complete one checklist each day.		Yes	No	N/A
1.	Are only trained personnel lubricating or adjusting conveyor when in motion?			
2.	Are Lockout and Tagout procedures being used? Safe access shall be provided to permit inspection, repair, and maintenance activities.			
3.	When machinery or equipment is found to be unsafe or when a deficiency that affects the safe operation of equipment is observed, is the equipment immediately taken out of service and its use prohibited until unsafe conditions have been corrected?			
4.	Is machinery operated only by designated personnel?			
5.	Are safety devices arranged to operate in such a manner so that, in the event of a power failure or failure of the device, a hazardous condition would not result?			
6.	Unless guarded by location, are those sections of conveyors that cannot be enclosed without impairing the function provided with warning signs or personnel barriers?			
7.	In the absence of a guard specifically erected to protect personnel, are warning signs provided to restrict unauthorized personnel from entering such hazardous areas?			
8.	Are all openings that a person could step into guarded or, where guarding is not practical, have warning signs been posted?			
9.	Is all mechanized equipment shut down before and during refueling?			
10.	Are personnel prohibited from working, passing under, or riding in the buckets, booms, or hoppers?			
11.	Does the unit have a dry chemical or carbon dioxide fire extinguisher with a minimum rating of 5-B: C?			
12.	Is there an effective warning alarm?			
13.	Are all belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts guarded?			
14.	Is protection against hot surfaces, exhausts, etc., provided?			

SIFTING PLANT DAILY SAFETY INSPECTION REPORT				
Contractor Inspector Signature:		Date:		
Complete one checklist each day.		Yes	No	N/A
15. Are platforms, footwalks, steps, handholds, guardrails, and toe boards designed, constructed, and installed on machinery and equipment to provide safe footing and access ways?				
16. Are exhaust or discharges from equipment directed so they do not endanger persons or obstruct operator vision?				
17. Is the area around loading and unloading points kept clear of obstructions that could create a hazard?				
18. Is operator blast shielding (fragment protection) installed on equipment used to excavate/handle unscreened soil?				
Comments:				

This checklist is based on EM 385-1-1, dated 3 November 2003.

APPENDIX D

Daily Quality Control Inspection Report

Inspection Date:	
Source Area	

QC Inspection of Oversized Material (over 6 inches) from the feed hopper grizzly (Material Type 1)			
Inspection Frequency	Time	Inspection	UXO Tech Signature
Morning		100% visual inspection performed for MEC and MD (aided with magnetometer and all-metals detectors) of reject material. If item(s) found, notify the SUXOS immediately for proper management and document item(s) listed by Material Type in Comments Section of this form.	
Afternoon		100% visual inspection performed for MEC and MD (aided with magnetometer and all-metals detectors) of reject material. If item(s) found, notify the SUXOS immediately for proper management and document item(s) listed by Material Type in Comments Section of this form.	

QC Inspection of < 6-inch <u>metal</u> debris collected by the first magnet (Material Type 2)			
Inspection Frequency	Time	Inspection	UXO Tech Signature
Daily		100% visual inspection performed for MEC and MD of material recovered by Magnet #1. If item(s) found, notify the SUXOS immediately for proper management and document item(s) listed by Material Type in Comments Section of this form.	

QC Inspection of Debris items rejected by the < 3/4-inch (or 3/8-inch if a harp screen is used) and 2-inch vibrating screen (Material Type 3)			
Inspection Frequency	Time	Inspection	UXO Tech Signature
Morning		100% visual inspection performed for MEC and MD (aided with magnetometer and all-metals detectors) of reject material. If item(s) found, notify the SUXOS immediately for proper management and document item(s) listed by Material Type in	

		Comments Section of this form.	
Afternoon		100% visual inspection performed for MEC and MD (aided with magnetometer and all-metals detectors) of reject material. If item(s) found, notify the SUXOS immediately for proper management and document item(s) listed by Material Type in Comments Section of this form.	

QC Inspection of < 3/4-inch (or 3/8-inch if a harp screen is used) metal debris collected by the second magnet (Material Type 4)

Inspection Frequency	Time	Inspection	UXO Tech Signature
Daily		100% visual inspection performed for MEC and MD of material recovered by Magnet #2. If item(s) found, notify the SUXOS immediately for proper management and document item(s) listed by Material Type in Comments Section of this form.	

QC Inspection of < 3/4-inch (or 3/8-inch if a harp screen is used) screened soil/final product (Material Type 5) and screen integrity

Inspection Frequency	Time	Inspection	UXO Tech Signature
Midday		Randomly select and spread out approximately 15 cubic yards from the morning production stockpile (three loader buckets). Perform visual inspection (aided with magnetometer and all-metals detectors) of selected material for any metal items greater than 3/4 inch (or 3/8-inch) in size. If oversized metal item(s) found, notify the SUXOS immediately for direction and document item(s) listed by Material Type in Comments Section of this form. Note: The stockpile will be reprocessed if metal items greater than 3/4 inch (or 3/8-inch) in size are detected, and cause of failure will be determined prior to performing additional sifting.	
		Visually inspect the 1-3/4-inch and 3/4-inch (or 3/8-inch screens if harp screens are used) screens for damage after shutdown.	
End of Day		Randomly select and spread out approximately 15 cubic yards from the afternoon production stockpile (three loader buckets). Perform visual inspection (aided with magnetometer and all-metals detectors) of selected material for any metal items greater than 3/4 inch (or 3/8-inch) in size. If oversized metal item(s) found, notify the SUXOS	

QC Inspection of < 3/4-inch (or 3/8-inch if a harp screen is used) screened soil/final product (Material Type 5) and screen integrity			
		immediately for direction and document item(s) listed by Material Type in Comments Section of this form. Note: The stockpile will be reprocessed if metal items greater than 3/4 (or 3/8-inch) inch in size are detected, and cause of failure will be determined prior to performing additional sifting.	
		Visually inspect the 2-inch and 3/4-inch screens (or 3/8-inch) for damage after shutdown.	

QC Inspection of 1-inch minus material from size-reduction equipment (Material Type 6) and equipment internal integrity (as needed basis – if the equipment is not being used, no inspection is necessary)			
Inspection Frequency	Time	Inspection	UXO Tech Signature
Midday		100% visual inspection performed for any material > 1-inch. If item(s) found, notify the SUXOS and adjust settings to obtain desired sizing of output.	
End of Day		100% visual inspection performed for any material > 1-inch. If item(s) found, notify the SUXOS and adjust settings to obtain desired sizing of output.	

QC Seeding for Sifting Plant			
Inspection Frequency	Time	Inspection	UXO Tech Signature
Morning		Introduce the three seed items during the morning production run and inspect the magnet reject hoppers and (if necessary) the other oversized reject material after next shutdown to verify recovery of the seed items.	
Afternoon		Introduce the three seed items during the afternoon production run and inspect the magnet reject hoppers and (if necessary) the other oversized reject material after next shutdown to verify recovery of the seed items.	

QC Inspection of MEC and MD Storage and Non-MEC Scrap			
Inspection Frequency	Time	Inspection	UXO Tech Signature
Daily		Inspect MEC storage magazine to ensure that items are properly secured.	
Daily		Inspect MD containers to ensure that lids are secured and locked.	
Daily		Inspect Non-MEC scrap to ensure that it is properly segregated.	

MEC or MD Recovered by Material Type (attached separate sheet if needed):

Deficiencies Noted:

Corrective Actions Taken:

Other Comments:

Senior UXO Supervisor Name

Signature

Date

UXOQCS Name

Signature

Date