

**DEPARTMENT OF THE ARMY
HEADQUARTERS, XVIII AIRBORNE CORPS AND FORT BRAGG
Installation Restoration**

Standing Operating Procedure #0001A

**Oil/Water Separator & Washrack Removal
For OMA/MCA Projects**

1.0 Purpose.

1-1. References.

- a. 40 CFR, Sections 260-264, 266, 268, 270, and 124.
- b. 29 CFR 1910 Part 120.
- c. 10 NCAC 10F, North Carolina Hazardous Waste Management Rules.
- d. Army Regulation 200-2, Environmental Effects of Army Actions.
- e. 15A NCAC 13A .0013, Hazardous Waste Permit Modification.
- f. Resource Conservation Recovery Act (RCRA) Facility Assessment (RFA) Report, dated July 1988.
- g. Fort Bragg Regulation (FB Reg) 200-2, Installation Hazardous Waste Management Plan.
- h. FB Reg 200-3, Installation Spill Contingency; Spill Prevention, Control, and Countermeasures; and the Facility Response Plan.

1-2. Purpose. To describe the procedures and responsibilities assigned for demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks for minor in-house construction projects and OMA or MCA funded contracts through the U.S. Army Corps of Engineers (USACE).

1-3. General.

a. The U.S. Army Military Reservation at Fort Bragg was established in 1918 as the major logistic, training and mobilization deployment center for the XVIII Airborne Corps, which is part of the U.S. Army's mobile infantry, assault, and armored forces. Fort Bragg occupies about 152,793 acres in southeastern North Carolina. Approximately 115,000 acres are designated for field maneuvers, exercises, firing ranges, impact areas, and parachute drop zones. The cantonment area, which is in the eastern part of Ft. Bragg, occupies 11,000 acres and includes about 4,800 buildings. Most military maintenance and production facilities, supply facilities, operation and training facilities, various community facilities, and family and troop housing are in the cantonment area. Pope Air Force Base borders Fort Bragg north of the cantonment area.

b. During the RFA for Fort Bragg conducted in 1988, forty-six (46) solid waste management units (SWMUs) and seven (7) areas of concern (AOCs) were identified as having the potential for release of contaminants to the environment. As a consequence of the 1988 RFA report, thirty-one (31) SWMUs and seven (7) AOCs were listed in Part IV of the RCRA Part B Permit as requiring RCRA Facility Investigation (RFI) studies to characterize these sites for the nature, amount, and extent of contamination. The 1988 RFA report identified 235 OWS, and 74 washracks located throughout Fort Bragg's cantonment area. The OWS were identified as SWMU 35 and the washracks as SWMU 36.

c. The physical configuration of OWS varies from pre-cast concrete to fiberglass in-ground tanks. Their use is to provide storage for the gravity separation of oil in water prior to discharge to the sanitary sewer system. These structures are not considered underground storage tanks due to exemption of 40 CFR 280.10 (b)(2). Wastes associated with OWS and washracks were predominantly wash water and grease from vehicle maintenance and wash areas. Use of solvents is suspected at most of the OWS on Fort Bragg. Installation dates vary but extend back to 1940.

2-0. Responsibilities.

2-1. Environmental Compliance Branch (ECB). The ECB will:

a. Maintain a database of all OWS and washracks located on Fort Bragg.

b. Maintain a contract to clean and maintain OWS, washracks, and grit chambers. Schedule pumping of the oil chamber of the OWS to prevent overflow of the chamber to the sanitary sewer.

2-2. Construction Management Division (CMD). Construction Management Teams and Real Property Branch will notify the IR Program Manager of any projects involving demolition, alteration, or removal of oil/water separators (OWS) and/or associated Washracks at least six weeks prior to contract execution. Include this SOP in any contract involving demolition of OWS and/or associated washracks. DD Form 1354 will be supplied for updating real property records when oil/water separators or washracks are demolished.

2-3. U.S. Army Corps of Engineers/Contractors. The Corps of Engineers/Contractors will adhere to the requirements of this SOP for work involving demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks. The specifications located within this SOP will be provided to prospective contractors prior to award of MCA or OMA projects. Oil/Water Separators are real property of the installation and must be demolished/removed IAW this approved SOP as part of the demolition requirements of the new OMA/MCA construction guidelines. A DD Form 1354 will be supplied for updating real property records when oil/water separators or washracks are demolished.

3.0. OWS Removal Response Roles/Line of Authority.

3-1. ECB. The ECB will:

a. Perform sampling and testing for all projects involving demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks as described herein this SOP except for OMA/MCA contracts awarded through USACE. The prime or a designated sub-contractor of the OMA/MCA project will perform sampling/testing as described in this SOP.

b. Notify the North Carolina Department of Environment and Natural Resources (NCDENR), (919) 733-2801, ext. 291, prior to demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks.

c. Prepare closure report for all projects involving demolition, alteration, installation, or removal of oil/water separators (OWS) and/or associated washracks as described herein this SOP except for OMA/MCA contracts awarded through USACE. The prime or a designated sub-contractor of the OMA/MCA project will provide closure reports to the ECB. The closure report must contain a general site description, site plan or drawing of the OWS/Washrack removed indicating all sample locations, and a detailed summary of the analytical report provided by the laboratory. The ECB will provide closure documents to NCDENR and coordinate with NCDENR to provide updates after review of paragraph 3-3 below.

d. Remove sludge and/or used oil from the separator prior to removal of the separator/washrack.

3-2. NCDENR. Review all closure documents associated with demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks. Provide acceptance letter if site warrants no further action.

3-3. Installation Business Office, Contracting (IBO,C). The IBO,C will ensure this SOP is referenced in all contracts involving demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks.

3-4. CMD. Serve as Project Managers for construction projects involving demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks and reference this SOP in Scope of Work sections for contracts involving demolition, alteration, or removal of oil/water separators (OWS) and/or associated washracks. Serve as QA for assigned Fort Bragg construction projects. Notify and coordinate with ECB for sampling IAW this SOP.

3-5. U.S. Army Corps of Engineers (USACE). Serve as QA for assigned Fort Bragg construction projects involving demolition, alteration, installation, or removal of oil/water separators (OWS) and/or associated washracks awarded by the USACE, Contract Administrative Office. Notify and coordinate with ECB for sampling IAW this SOP.

3-6. Contractors. Contractors on Fort Bragg involved with projects requiring demolition, alteration, installation, or removal of oil/water separators (OWS) and/or associated washracks must comply with this SOP. The contractor will perform all duties of this SOP for MCA or OMA funded construction projects. Notify and coordinate with ECB for sample locations and number of samples required IAW this SOP.

4-0. OWS and Washrack Removal Objectives.

- a. Remove the oil/water separator and/or associated washrack, flush and close the associated piping.
- b. Collect confirmatory soil samples at the designated locations for the oil/water separator.
- c. Collect characterization soil samples around the wash rack and grease rack if applicable.
- d. Document removal and sampling in a site closure document.

5-0. Description of OWS/Washrack Removal.

5-1. Oil/Water Separator Content Removal and Cleaning.

a. Prior to removal operations, the contractor will coordinate with the Ft. Bragg, Public Works Business Center, ECB OWS Program Manager, (910) 396-3341, ext. 552, to clean and drain the oil from the OWS through the OWS cleaning contract. The contents will be drained until less than one inch of material remains in the OWS. Do NOT remove the OWS until cleaning of the OWS is complete. The OWS will contain water, which will be the contractors responsibility to remove. The contractor will monitor the atmosphere for combustible gases inside the OWS before removing the OWS from the ground. If combustible gas monitoring indicates a flammable atmosphere (> 10% of LEL), the contractor will purge the OWS atmosphere with fresh ambient air to reduce the flammable vapor concentrations.

b. All OWS contents, rinseate, and rinse water will be disposed IAW with current Code of Federal Regulations off the Fort Bragg installation by the contractor. Cleaning activities are being conducted prior to removal to minimize potential spread of contamination in the event the OWS structure breaks apart during removal.

5-2. Excavation, Removal and Disposition of OWS and Excavated Soil.

a. General. The Contractor will obtain any permit requirements (i.e., digging permits or Landfill permit) for the OWS excavation. Associated piping will be located, cut-off, grouted at the ends of the pipe and left in place. The Contractor will transport the OWS to an off-site facility for proper disposition.

b. Extent of Excavation. The Contractor will excavate soil from over and around the OWS and associated piping to the extent needed to remove the OWS from the ground. Over-excavation of the soil around

the OWS will also be conducted if visual evidence of possible contamination is observed. It is this SOPs assumption that over-excavation will not exceed 5 feet from each side of the OWS. If the excavation compromises any nearby structures, the Contractor will immediately cease and desist until given direction to proceed from the COR with input from the on-site ECB or USACE Project Manager for MCA/OMA projects. After the OWS is removed from the ground, the Contractor will inspect the excavation. **Ensure the ECB/USACE representative is on-site prior to proceeding to the next step.**

c. Soil on the perimeter of the excavation or in the excavation that has visible staining, having strong petroleum or chemical odor will be identified and brought to the attention of the COR/USACE QA/QC. Soil with suspected petroleum contamination would be screened with a photo-ionization detector (PID). Any reading of 1 ppm or greater will be used to determine if additional soil is required for removal. All excavated soil will be stockpiled and tested in accordance with applicable provisions (refer to Sampling and Analysis Plan contained within this SOP).

d. Security Fencing and Site Drainage. Extended periods of open excavation are not anticipated. However, if required, orange plastic snow fencing will be provided for security by the contractor. The Contractor will attempt to avoid leaving open excavations or hazardous conditions overnight and shall grade the perimeter of the excavation to direct surface water runoff away from excavation.

e. Screening of Excavated Material around OWS. The Contractor will stockpile all excavated topsoil and soil from around and below the OWS. The Contractor will construct a bermed, impervious surface and provide cover for all soil generated from the excavation. Soil exhibiting visible staining, chemical odor, or other signs of potential petroleum contamination will be screened using the PID. If there is a reading (even 1 ppm) on the PID, this soil will be considered contaminated and segregated into a similarly constructed separate stockpile. Potentially contaminated soil will be transported to Fort Bragg's on-site disposal facility. The on-site disposal facility will then perform any necessary sampling to determine the final disposition of the soil. Soil with PID concentration levels not exceeding the action level will be placed into the "clean" stockpile for later use as backfill.

f. OWS Removal and Disposal. Upon removal, the OWS will be inspected for leaks and visual evidence of contamination. The ECB or the contractor for MCA/OMA projects representative will document the inspection in the field notes and in photographs. The contractor is responsible for removing the OWS off the Fort Bragg installation to an acceptable and approved disposal site IAW with current regulations documented in Paragraph 1.0. All documentation for the disposal and final disposition of the OWS will be made available to the government.

5-3. Sampling and Analysis. Refer to Sampling and Analysis Plan (paragraph 8.0).

5-4. Backfill Excavation. The Contractor will begin backfill operations by first using the soil from the clean stockpile. Additional soil will be required to fill the void space left by the OWS and/or washrack removal. Additional select clean fill will be obtained from Ft. Bragg's on-site borrow. It is the understanding that backfill operations will commence after confirmation soil samples have been collected in the hole. However, no PID screening is anticipated at the confirmation sample locations, and the hole will be backfilled prior to receiving confirmation sample results.

5-5. Grading and Seeding. The Contractor will re-grade the area to its pre-excavation condition. Compaction of the excavation will be performed in 8-inch lifts initially using the clean stockpile soil. Re-grading will be completed with material from the on-site Ft. Bragg borrow source. No compaction testing is required for this task. Backfill of the site will be to existing grade and will be seeded. There is no paving or concrete at the site to be replaced.

6-0. Demobilization.

a. The Contractor will participate in a Joint Acceptance Inspection prior to final demobilization. The Contractor's Site Foreman/Manager will accompany Fort Bragg Contract Officer Representative or USACE QA/QC in a punch list inspection to identify issues of concern. The job cannot be complete until a Final Removal Report is provided to the ECB through USACE. The Contractor will individually address any issues raised during the Inspection process and will propose resolutions for acceptance.

b. The Contractor will remove all contractor equipment utilized in the project efforts. No equipment will be abandoned on Fort Bragg property. All waste material will be collected and disposed in accordance with the transportation and disposal requirements. Salvage materials will be removed from the Fort Bragg property.

c. The Contractor personnel will surrender all government furnished equipment and materials, if any, prior to final departure. If issued, identification badges will be returned to the issuing officer prior to final departure.

7-0. Closure Report.

a. Upon completion of construction, the ECB, IR Manager will submit a Draft and Final Closure Report detailing the work performed for projects other than OMA/MCA. The contractor through USACE will draft, coordinate, and submit a closure report through USACE QA/QC for review by the ECB. The ECB will review closure reports and provide comments for inclusion of the Final Closure Report. The Contractor will provide the Final Closure Report through USACE to ECB. The ECB will provide NCDENR the Final Closure Report. The Closure Report will, at a minimum, include: drawings showing sample locations, sampling methods and analysis, a table comparing analytical results to the Federal Remediation Branch Target Screening Guidelines Table, and ultimate disposition of all excavated soil.

b. The Final Closure Report will be produced in accordance with the regulations set forth for SWMU's under RCRA regulations. The Contractor will recommend any further actions that are deemed appropriate based on site conditions revealed during the OWS removal activities.

8-0 Sampling and Analysis Plan.

8-1. Sampling. The ECB/USACE representative will adhere to the protocol presented within this Sampling and Analysis Plan (SAP). All sample collections and subsequent sample handling procedures will be in accordance with this SOP, and all applicable, USACE, federal, State of North Carolina, and local regulations and guidelines. The ECB will use a NCDENR certified laboratory for sample analysis. The USACE will ensure the contractor uses a NCDENR certified lab for sample analysis. Each of the collected soil samples shall be tested by the analytical methods listed in the section entitled, Test Methods. The contracted laboratory will supply all bottles, preservatives, shipping containers, etc. required for sampling. Bottles will be I-CHEM, or comparable, pre-cleaned and include certified chain of custody.

Note: No QA sampling will be required.

8-2. Soil Sampling Schedule.

a. A minimum of three (3) soil samples will be collected at the bottom of the excavation (one from each end for a total of two, plus one more from the deepest location). Depending on the size of the OWS, more than three (3) samples may be required to characterize site conditions after removal. Any area of soil exhibiting staining will also require sampling. For this SOP the standard will be three (3) samples, the ECB will determine actual numbers based on site conditions. The ECB will coordinate with USACE for MCA/OMA projects to determine number of samples prior to the bid process for each specific OWS or Washrack.

b. Three (3) soil samples will be collected from around the grease rack. Depending on the size of the grease rack, more than three (3) samples may be required to characterize site conditions after removal. Sample locations will be chosen in the field by the ECB or the contractor for USACE MCA/OMA with USACE QA/QC approval.

c. Three (3) soil samples will be collected from around the wash rack. Depending on the size of the wash rack, more than three (3) samples may be required to characterize site conditions after removal. The ECB or the contractor for USACE MCA/OMA projects will choose sample locations in the field with USACE QA/QC approval.

d. One (1) composite soil sample will be collected from the "clean" stockpile. The composite will be randomly collected from 3 locations on the stockpile. Sample material will be collected from the top, middle, and bottom of the soil pile at each of the 3 locations.

Note: If groundwater is exposed, The Contractor will immediately notify the ECB or the USACE QA/QC, if not on site.

e. The ECB or the contractor will document the following in the field notes: location, matrix analysis, any strong petroleum or chemical odor, visible staining, a high organic vapor reading, sheen appearing on the water (if present), or other relevant field conditions. All samples will be clearly identified and their location indicated on the closure report sketch of the excavated area.

8-3. Test Methods. Each of the collected soil samples will be tested for petroleum associated contaminants. Sample analyses required are: RCRA Metals, VOCs, SVOCs, and MADEP EPH and VPH. Samples require current protocols for collection. The ECB/contractor will ensure current protocols are followed with appropriate chain of custody report. A copy of the chain of custody will be included in the Final Closure Document.

9-0. SOP Proponent.

7-1. Proponent. The proponent of this SOP is the Fort Bragg Installation Restoration Program Partnering Team.

PWBC, ENRD, ECB Chief Date _____

Fort Bragg Representative Date _____

NCDENR Representative Date _____

USACE, Savannah District Representative Date _____