

JOINT BASE LEWIS - McCHORD (JBLM) BORROW SOURCE AREA STANDARD OPERATING PROCEDURES

1.1 Borrow Source Use Authorization

Borrow source area use is controlled and authorized by JBLM Directorate of Public Works (DPW). Borrow source area use includes placement, stockpiling, excavation or removal of aggregate/soil materials.

Removal/mining of virgin aggregate materials from any JBLM borrow source area is strictly prohibited unless authorized by the Director of DPW. No excavations deeper than 4 feet allowed.

The use of JBLM borrow source areas must be authorized prior to entry by written notification. A written *Borrow Source Area Use Permit* form (Enclosure 2) for the use of a JBLM borrow source area will be submitted to the DPW/Environmental Division (ED) for review, approval and authorization signatures.

Upon authorization, a copy of the signed authorization form must be in the possession of the individual truck driver(s) and accompany each load delivered to or issued from the borrow source area in use.

1.1.2 Communication. Requests for inbound and outbound Pit permits shall be made by the Project Manager (PM) or Contracting Officers Representative (COR). A government representative shall be present for all site visits and inspections. Contractors shall not request use directly to the Pit Manager. Contractors should go through the PM or COR to request borrow pit use.

1.2 Borrow Source Area Use Requirements

The following describes operation requirements/restrictions for earth-moving, stockpiling, and removing aggregate/soil and other operations in JBLM borrow source areas.

1.2.1 Terms of use

Borrow source use is restricted to permit holders only. Permits expire after 30 days, permit holders can request 30 day extensions. All other use is considered illegal dumping and subject to prosecution. Permit holders agree that all soils must be leveled after delivery or on a weekly basis. Permit holders can deposit soils only if permitted by the Pit Manager and only at agreed to locations and must follow agreed procedures. Upon permit approval for pit use PW will initiate an initial preconstruction site visit with the PW Pit Manager. Outbound permit holder may only remove soils from predetermined locations leaving removal sites level or at permitted grades after use. No open pits that may pose a safety hazard are allowed. Inbound permit holders are required to push piles weekly. Permit holders are responsible to prevent stagnant water, ponds. Excavations shall allow for proper drainage to prevent large areas of standing water, which attracts wildlife.

1.3 Analysis and/or Research to Determine Soil/Aggregate Contamination

Soil/aggregate material excavated from construction and utility projects must be uncontaminated to be considered acceptable for placement in JBLM borrow source areas. Soils from undisturbed or undeveloped property on JBLM will be more likely to be uncontaminated unless determined otherwise by research of historical land use records. Soil from developed sites and particularly sites with prior uses that would indicate the possibility of soil contamination (fueling stations, motor pools, vehicle washing/maintenance areas, or known spill or contaminated sites). PW will conduct site assessments of project areas to determine soil suitability.

1.3.1 Timelines for Site Assessments

To avoid project delays it is critical that site assessments be scheduled well in advance of projected start dates. Please request site assessments at least 90 days in advance of projected start dates to allow time for site reviews to avoid negative impact to project timelines.

Site Assessment process;

1. Site assessment requested 90 or more days in advance for inbound soils to pits. No testing needed for outbound soils unless contract requires testing.

2. Site assessment conducted; No preliminary soil sampling required; proceed with borrow pit site visit within 30 days of contract start date with Pit Manager, PM/COR and contractor reps to discuss process and location of borrow deposit. After site visit - permit issued (permits issued for 30 day increments in most cases). Contractor can bring soils to pit until permit expires. Permit renewals upon request. Pit Manager conducts routine inspections of pits to ensure compliance. Noncompliance can result in permit being revoked.

Or

3. Site assessment conducted; Preliminary soil sampling required; Soil samples taken by PW site assessor and sent for analysis. Testing and review can take 60 days or longer.

a. Samples laboratory results all come back below allowable limits; proceed with borrow pit site visit within 30 days of contract start date with Pit Manager, PM/COR and contractor reps to discuss process and location of borrow deposit. After site visit - permit issued (permits issued for 30 day increments in most cases). Contractor can bring soils to pit until permit expires. Permit renewals upon request. Pit Manager conducts routine inspections of pits to ensure compliance. Noncompliance can result in permit being revoked.

b. Samples laboratory results are above state or federal limits; Off base disposal after waste manifest approval and JBLM Hazardous Waste Program signature. Contract mod, additional funding required.

1.3.2 Site contamination analysis for projects managed by DPW

Project Managers shall email USARMY.JBLM.ID-READINESS.LIST.DPW-BORROW-PITS@mail.mil with project documents, listing the name of the Project Manager (PM) and Contractor Officers Representative (COR) to request site assessment support at least 90 days prior to project start. DPW Environmental Division will identify past and current use of the project site. A determination of not contaminated will allow the site soils to be excavated without testing for deposit in JBLM Borrow Pits or other sites designated on JBLM. Volumes to be removed will determine destination. Soils that are deemed potentially contaminated will require to be stockpiled until testing can determine fitness of soils for deposit in JBLM Pits. Soils deemed too contaminated for reuse on JBLM are required to be moved off the installation for landfilling at an approved site. When contamination is identified notify DPW with a technical memorandum for resolution.

1.3.3 Site contamination analysis for projects not managed by DPW

Project Managers shall email USARMY.JBLM.ID-READINESS.LIST.DPW-BORROW-PITS@mail.mil with project documents, listing contact information of both government and contractor management teams, requesting site assessment support at least 90 days before to project start. Sites determined not to be contaminated (reports to be submitted per **ENCLOSURE 1**) will allow the site soils to be excavated without testing for deposit in JBLM Borrow Pits or other sites designated on JBLM. Volumes to be removed will determine destination. Soils that are deemed potentially contaminated will require, at the contractor costs, to hire an International Code Council (ICC)-certified UST Site Assessor to conduct testing either prior to removal or from contractor sited stockpiled soils. Testing can determine fitness of soils for deposit in JBLM Pits. Soils deemed too contaminated for reuse on JBLM are required to be moved off the installation for landfilling at an approved site. When contamination is identified notify DPW with a technical memorandum for resolution. (Per **ENCLOSURE 1**)

1.4 Permit Requirements

1.4.1 Illegal Items

The following items are prohibited from the pits and cannot be deposited in JBLM borrow source pits;

- a. Vegetative debris including shrubs or wood.
- b. Asphalt, Concrete, Masonry or brick.

Violators are subject to prosecution. Contracts must remove illegal items or have permits revoked.

1.4.2 Borrow Source Area Slopes

Borrow source area slopes, are defined as the operating or working faces of the borrow source; the surfaces where aggregate/soil material is actually being or has been removed or stockpiled. These working faces are limited as to their maximum height and slope angle. Protection along the upper boundary of borrow source area slopes are required for safety reasons to prevent falls.

1.4.3 Slope Height

The maximum unbroken slope height in an active borrow source on JBLM will not exceed four (4) feet, measured vertically. Vertical faces must be roped off, restricting access to prevent accidents. For slopes less than or equal to 4 feet in vertical height, there is no minimum slope requirement. No equipment, structures, or vehicles will be positioned on the top of a working face any closer to the top edge of the face than the vertical slope height plus 5 feet. Vertical faces must be graded to permitted slope angle of 25 degrees as soon as practical and before permit can be closed.

1.4.4 Slope Angle.

Slopes shall not exceed a 25 degree angle. For slope heights in excess of 1' vertical foot, the maximum slope angle will be 4' horizontal to 1' vertical, or no greater than a 25 degree rise or fall.

1.4.5 Slope Protection

Temporary chain-link fencing may be required to be placed a minimum distance of the vertical slope height plus 5 feet back from the top slope edge of the borrow source. If required, the fencing will be placed above all slopes of the borrow source, whether the slopes are being worked or not. The purpose of the fencing is to discourage inadvertent falls over the face by individuals or vehicles traversing the area and to discourage illegal dumping. Fencing will be in place each night at the close of the working day and will be in place on weekends, holidays, or other times when borrow source operations are not in progress. Three foot high berms of soil/aggregate from the borrow source area placed similarly to chain-link fencing may be used as a substitute for fencing.

1.4.6 Stockpile Geometry

Aggregate/soil material stockpiles established within the boundaries of JBLM borrow source areas will be constructed and maintained in such a manner so as not to present a safety and health hazard to site workers or visitors and must maintain the quality of the excavated materials for its' intended purpose. Stockpiles will be limited to:

- Height - no stockpile will exceed the height of the borrow source working face or 4 vertical feet, whichever is greater;
- Slope Angle - no stockpile will be established with side-slopes steeper than 1:4 or a 25% grade.
- Location - all stockpiles will be located as close as practicable to the working face. Stockpiles will be placed so as to not block access to other borrow source faces or roads within the borrow source area, unless otherwise directed.
- Setback Distance from the Working Face - stockpiles will be no closer than 10 feet from any borrow source face as measured from the bottom edge of the stockpile.

1.4.7 Stockpiling of Unsuitable Soil/Aggregate Material

Unsuitable soil/aggregate materials refers to out-of-specification material usually generated with excavation type activities associated with construction or utility installation. This excess material typically consists of fine soil deposits with some aggregate material present. JBLM borrow source areas may only accept uncontaminated aggregate/soil materials for stockpiling or borrow source area reclamation and restoration.

Stockpiling of unsuitable soil materials excavated from JBLM construction/utility related activities will be utilized by JBLM to the maximum extent practicable.

1.4.8 Stock Piling in JBLM Pits

Screened soils or soils that have been removed and brought to the Pits for future use can only remain in a Borrow Pit for 30 days. There shall be no long term storing of stockpiled soils in the JBLM Pits. Soil stockpiles should be either held at the construction site or in the case of screened soils, removed within 30 days of screening. All stock pile locations shall be leveled after use. Soils left over 30 days are subject to being leveled or permits issued for reuse at other sites.

1.4.9 Site Drainage

Permit holders are responsible to prevent stagnant water, ponds. Excavations shall allow for proper drainage to prevent large areas of standing water, which attracts wildlife. Bird/Wildlife Aircraft Strike Hazard (BASH) can result when water bodies are allow to remain. The Gray Army Airfield Pit is directly under the flight path of aircraft arriving and departing JBLM.

1.5 Borrow Source Area Restrictions

1.5.1 Equipment Use Restrictions

Equipment brought into JBLM borrow sources for excavation and processing of materials will be setup in such a manner as to prevent damage or contamination to the environment and to minimize disturbance to the borrow source and adjacent areas.

1.5.2 Environmental Restrictions

Borrow source area users will ensure that equipment used within the borrow source area is mechanically sound and operated in a safe manner. Equipment having leaks of any type, including, but not limited to, hydraulic fluid, cooling fluid, lubricating fluid, fuel, etc., will be immediately removed from service and repaired off site. All spills of fuels, mechanical fluids, chemicals, etc. onto the ground will be immediately reported to the JBLM Fire Department at telephone number 911. Spill mitigation will be undertaken by the borrow source user under the direction of JBLM DPW/ED at the sole expense of the borrow source area user. Spills will be mitigated to the extent required to meet JBLM, local, state, and federal requirements.

1.5.3 Site Disturbance

Disturbance of the borrow source area, access roads, and adjacent areas will be minimized during the operations required to place and issue soil/aggregate materials. No vegetation will be disturbed or removed without the express approval of the Pit Manager. All excavated depressions will have side slopes no steeper than 1:4 slope angle and shall not exceed 4-feet from the established borrow source area floor surface.

1.5.4 Debris and Trash Management

Incidental organic debris, grasses (less than 10%) may be placed with soil/aggregate in JBLM borrow source areas.

Under no circumstances will debris or trash be left within a borrow source area or on adjacent property at the end of the use period. Under no circumstances will debris or trash be buried within a borrow source area or at any other location on JBLM. Borrow source users will maintain the area in a clean and orderly condition throughout the period of use.

1.5.5 Storm Water Control

The restoration, soil stockpiling and filling of existing borrow source areas on JBLM must take into account storm water best management practices (BMP) to prevent erosion and sediment track out onto roadways, adjacent properties or into any receiving waterways. To accomplish the applicable storm water BMP's for the restoration and stockpiling of soil in borrow source areas, the following measures shall be taken by permit holder;

- Limit vehicle access and exit to one route, if possible.
- Stabilize access points with a pad of quarry spalls or crushed rock to minimize tracking sediment onto public roads.
- If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pick up and transport the sediment to an approved disposal area.
- Conduct street washing only after sediment is removed in accordance with the above bullet.
- Conduct maintenance, fueling, and repair of heavy equipment and vehicles offsite. Always use spill prevention and control measures. Report and clean contaminated surfaces immediately following any spill incident.
- As needed, design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants.
- Protect properties and waterways downstream of borrow source areas from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of storm water runoff from the borrow source area sites.

1.5.6 Multiple Users

Use of a single borrow source area by multiple contractors working on unrelated projects may, at times, be determined a necessity by the Pit Manager. Due to the variations in the JBLM construction program over time, it may not be possible to provide specific boundaries for individual users to restrict activities during a multiple use scenario. JBLM DPW/ED will attempt to determine the use boundaries for each borrow source user at the time the entry/use authorization is issued. Each borrow source user will restrict their activities to those areas within a borrow source area where access has been authorized. The pits are utilized by contractors and active duty personnel conducting training. Conflicts arising from multiple users should be brought to the Pit Managers attention for resolution.

1.6 Borrow source area Access Roads

Borrow source area access roads will, in all cases, consist of gravel or native surfaced, single or double lane roads. Borrow source users will restrict vehicle travel to established gravel or native surfaced haul roads into and around borrow sources.

1.6.1 The following guidance will be followed by borrow source users.

- During weather conditions of heavy or extended rainfall when maintenance of the road surfacing becomes impracticable, work within the borrow source will be halted until conditions improve.
- Dust control will be a priority of borrow source users traversing gravel and native surfaced roads and wheel tracks. Dust control by application of water is preferred. Dust clouds of any size are not acceptable and will indicate the need for immediate implementation of dust control measures.

1.6.2 Roadway Damage

Any damage done to JBLM roads, related facilities, or unrelated facilities found to be caused by the borrow source area user or personnel employed by the borrow source user, will be fully repaired by the user at the sole expense of the user.

1.6.3 Repairs

Repairs to damaged JBLM facilities found to be caused by a borrow source user or the employees of a borrow source user will be accomplished at the users expense, to the specifications of the JBLM DPW as necessary to fully restore the facility to its pre-damaged strength and condition. The user will be liable for expenses incurred by the JBLM DPW in evaluating the damage, designing corrective measures, and inspections during and at the completion of actual repairs.

1.7 Closing of Permits

Permit holders must contact the Pit Manager listed on the permit to close permit. To close the permits, the permit holder and the Pit Manager will walk the work areas to ensure illegal items have not been deposited, all piles must be spread and the area left with no drop offs, slopes cannot exceed slope angles of 4 /1. Permit holders are responsible to level all piles delivered during permit period and prevent standing water.

1.7.1 Permit Extensions

Permit holders of can request extensions by contacting the Pit Manager. Permit extensions can be denied if terms of use have not been followed by permit holder.

ENCLOSURE 1

FIELD SAMPLING AND SITE ASSESSOR REQUIREMENT

E1. **Field Sampling.** Soil testing for inbound soils to JBLM Borrow Pits;

a. Undeveloped areas with no known prior use and no known Installation Restoration Program listed sites. No testing needed.

b. Areas of known prior or active use. Testing required. Testing must be witnessed on site by a Department of Ecology registered site assessor, who will witness testing and provide a report along with the soil testing results. Sampling rate per 100 yards = 3 each, 101 – 500 = 5 each, 501 – 1000 = 7 each, 1001 to 2000 = 10 each, over 2000 = 10 each plus 1 for every 500 CY additional.

ANALYTES	ANALYTICAL METHODS
Diesel/Heavy Oil Contaminated Soil	
TPH-D and TPH-HO	Method NWTPH-Dx
Total Total Naphthalenes	EPA Method SW846-8270
Total cPAHs	EPA Method SW846-8270
Gasoline Contaminated Soil	
TPH-G	Method NWTPH-G
Benzene	EPA Method SW846-8021 or 8260
Ethylbenzene	EPA Method SW846-8021 or 8260
Toluene	EPA Method SW846-8021 or 8260
Total Xylenes	EPA Method SW846-8021 or 8260
Petroleum Contaminated Sediments	
TPH-G	Method NWTPH-G
TPH-D and TPH-HO	Method NWTPH-Dx
Total Total Naphthalenes	EPA Method SW846-8270
Total cPAHs	EPA Method SW846-8270
Total Xylenes	EPA Method SW846-8021 or 8260
Toluene	EPA Method SW846-8021 or 8260
Ethylbenzene	EPA Method SW846-8021 or 8260
Benzene	EPA Method SW846-8021 or 8260
Arsenic, Cadmium, Chromium, Lead, & Mercury	EPA Method SW846-6000/7000 Series
Unknown Petroleum Contaminated Sediment and Soil	
TPH-G	Method NWTPH-G
TPH-D and TPH-HO	Method NWTPH-Dx
Total Total Naphthalenes	EPA Method SW846-8270
Total cPAHs	EPA Method SW846-8270
Total Xylenes	EPA Method SW846-8021 or 8260
Toluene	EPA Method SW846-8021 or 8260
Ethylbenzene	EPA Method SW846-8021 or 8260
Benzene	EPA Method SW846-8021 or 8260
Arsenic, Cadmium, Chromium, Lead, & Mercury	EPA Method SW846-6000/7000 Series

E2. **Site assessment.** To perform or directly supervise soil sampling requires certification in site assessment, a service provider must always carry certifying credentials while performing assessment duties on JBLM, and be certified as having sufficient education and experience by:

- (a) The International Code Council (Washington State Site Assessment - U7);

(b) Another nationally or internationally recognized association approved by the department that provides a qualifying examination (Washington State Department of Ecology);

(c) Passing another qualifying examination approved by the department; or

(d) Being licensed as a professional engineer or hydro geologist in Washington State under chapter 18.43 or 18.220 RCW and being able to demonstrate competence in site assessment by means of examination, experience, or education.

(e) Reports submitted by site assessors must contain the following;

EXECUTIVE SUMMARY

SITE DESCRIPTION and MAP (Site Vicinity Map)

SOIL SAMPLING LOCATION MAP (Site Plan and Sample Locations)

TESTING RESULTS (Soil Analytical Results)

CONCLUSIONS (Project Photographs, Laboratory Report and Chain-of-Custody)

CREDENTIALS AND CERTIFICATION OF SITE ASSESSOR

ENCLOSURE 2: Borrow Source Area Use Permit

Name of requested JBLM pit. _____

Name of company requesting use of JBLM pit. _____

Dates of pit use requested (from) _____ (to) _____

Contract ID Number _____

All signatures below are required prior to being granted a permit to dump or remove clean overburden soils into or out of any JBLM borrow pits:

Statement: I the undersigned have sampled and analyzed the clean overburden soil and have concluded that the material meets the requirements stipulated in Enclosure 1.

Signature of the Certified Site Assessor, Printed name of site assessor, Date Signed

Statement: I the undersigned have reviewed the attached site assessor's report and agree – disagree with the site assessor's conclusion to allow the clean overburden soil into the JBLM borrow pit stipulated below.

Signature of PWED reviewer/approver, Printed name of PWED reviewer/approver, Date Signed

Statement: I the undersigned acknowledge that the clean overburden soil is permitted to be brought into the stipulated pit and agree to periodically observe the contractors activities for continuing compliance. I also agree to terminate this agreement for cause if it becomes necessary.

Signature of PW pit manager, Printed name of PW pit manager, Date Signed

Statement: I the undersigned agree to follow the procedures identified below and throughout this permit and to communicate any all deviations of this agreement at once to the JBLM pit manager.

List of required obligations that must be followed to maintain permit compliance

- 1 – Push piles at the end of each week of use.
- 2 – Follow all procedures identified in all sections of this permit.
- 3 – Notify the PW Pit Manager of any unauthorized use of the borrow pits observed.
- 4 – Notify the PW Pit Manager of any exceptions to the rules that may be needed for any reason.
- 5 – Notify the PW Pit Manager when use of the pits are no longer needed.

Signature of Contract Principal, Printed name of Contract Principal, Date Signed.