

USAG Fort Lee  
Environmental Management Division; NEPA  
825 19th Street; Bldg. 6005  
Fort Lee, Virginia 23801  
(804)734-5014

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# FORT LEE ENVIRONMENTAL SPECIAL CONDITIONS



PROTECTING THE LAND WE DEFEND



FORT LEE  
ENVIRONMENTAL MANAGEMENT DIVISION  
825 19<sup>th</sup> Street; Bldg. 6005  
(804) 734-5014  
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## *Standard Operating Procedures (SOP)*

*For inclusion in contract specifications & requirements to work on  
Fort Lee, Virginia*

8/1/2015

Revisions

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		2018
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<i>Carol L. Anderson</i>	Fort Lee EMO Chief	8/12/2010
<i>Carol L. Anderson</i>	Fort Lee EMO Chief	8/27/2009



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# ENVIRONMENTAL SPECIAL CONDITIONS

## STANDARD OPERATING PROCEDURES (SOP)



### *Environmental Management Division Mission Statement*

*The Environmental Management Division (EMD) assists the Fort Lee Community with being good S-T-E-W-A-R-D-S of the environment. The EMD ensures compliance with environmental laws and regulations, promotes pollution prevention and protects the priceless Natural and Cultural Resources on Fort Lee. By "Protecting the Land We Defend" EMD supports the Army's long-range vision and current goals for Sustainability. Army Green is Army Strong!*

## PURPOSE, POLICIES AND IMPLEMENTATION

### 1.1 PURPOSE

The National Environmental Policy Act (NEPA) is our basic national charter for protecting the environment. It establishes policy, sets goals (section 101), and provides means (section 102) for carrying out policy.

*The entire NEPA policy online may be found at:*  
<https://ceq.doe.gov/>

Section 102(2) contains "action-forcing" provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement section 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of section 101.

All work at Fort Lee must be performed in a manner that prevents pollution, protects the environment and conserves natural and cultural resources. All work shall be in compliance with all requirements noted in this Standard Operating Procedure document.

The level of NEPA analysis and documentation required is determined by the NEPA Manager. The NEPA Manager requires at a maximum an Environmental Impact Statement or Environmental Assessment, however the majority of actions will be documented with a Record of Environmental Consideration, or Categorical Exclusion (CX) on a submitted DA Form 4283 as outlined in 32 CFR Part 651.



## 1.2 POLICIES

Agencies shall review their policies, procedures, and regulations accordingly and revise them as necessary to ensure full compliance with the purposes and provisions of Fort Lee Regulations. Each agency of the Federal Government shall comply unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible. Agencies shall implement environmental management systems (EMS) at all appropriate organizational levels. Where contractor activities affect an agency's environmental management aspects, EMS requirements shall be included in contracts to ensure proper implementation and execution of EMS roles and responsibilities. Applicable policies and regulations are noted in, but not limited to those listed in **Appendix A**.

## 1.3 IMPLEMENTATION

All work performed within Fort Lee boundaries shall be carried out in accordance with all applicable federal, state, and local laws, ordinances, regulations, Executive Orders, court orders, and other types of rules or rulings including **United States Army Garrison (USAG) Fort Lee Policies Appendix A**. The following shall be submitted as guidance, not inclusive, in accordance with **FORT LEE SUBMITTAL PROCEDURES**.

- *Material Safety Data Sheets, building 6302, 804-734-5243*
- *Hazardous Materials Usage and Reporting*
- *Pest Management Plan*
- *Pollutant Emitting Equipment*
  - *Hot water/steam boilers*
  - *Unit heater*
  - *Diesel fuel*
  - *Generators*
  - *Water heaters*
- *Asbestos/Lead Abatement Plans*
  - *Abatement or Removal Plans and Notifications*
  - *Manifests*
- *Borrow Source*
- *Borrow Source Sampling Plan*
- *Environmental Protection Plan*
- *Storm Water Pollution Prevention Plan/Stormwater Permit*
- *Erosion and Sediment Control Plan*
- *Reuse, Recycling and Disposal Reporting*
- *Trip Tickets*
- *Waste Soil Analyses*



### 1.3.1 FORT LEE SUBMITTAL PROCEDURES

The Fort Lee **Directorate of Public Works Environmental Management Division** (DPW-EMD) will serve as the Garrison Fort Lee point of contact with outside environmental regulatory agencies including the **United States EPA** and the **Virginia Department of Environmental Quality (VDEQ)**. The Garrison/DPW-EMD is the sole point of contact with the above listed agencies and offices for environmental issues. All permit applications, mandatory notification requirements (to include spills and releases), mandatory reports, and proof of compliance actions (including records, checklists, logs, etc.) required of the Government will be submitted to regulatory agencies through the DPW-EMD. The Contractor shall submit copies of all information to the **Contracting Officer (KO)** or designated representative and DPW-EMD immediately upon request as necessary to meet regulatory requirements. Unless otherwise noted, submittals shall be provided

**Any questions about the  
Environmental Checklist  
please contact NEPA  
Program Manager:**

**804-734-5352**



to the DPW-EMD Administrative Assistant, building 6005, 804-734-5014. The Environmental Checklist in Appendix B has been included with the expectation that it be submitted on an agreed upon schedule at the pre-construction meeting, and that a final copy signed by the Project Manager shall be submitted 30-days after the completion of the project and prior to final payments on contracted work for Fort Lee.

### Environmental Protection Plan

The Contractor will establish and implement an Environmental Protection Program. Within 30 calendar days prior to **notice to proceed**, the Contractor will submit to the KO or designated representative a comprehensive Environmental Protection Plan that shall describe the policies and procedures of the Environmental Protection Program. All environmental protection matters shall be coordinated with the KO (or designated representative) and the DPW-EMD.

The Contractor shall comply with AR 200-1, AR 40-5, and DA PAM 420-7, regarding: pollution control, clean air, clean water, toxic substance control, resource conservation and recovery, natural resources, cultural resources, historic properties, the Installation Spill Contingency (ISC) Plan, the Installation Hazardous Waste Management Plan, Integrated Stormwater Pollution Prevention Plan (SWP3), Qualified Recycling Program (QRP), Installation Pest Management Plan (IPMP), Refrigerant Management Plan (RMP), Green Procurement Plan, and other environmental programs and policies outlined in Appendix A and any other Federal, State, and local programs and policies as well as construction standards.

Project plans shall provide for the elimination and minimization of oil and pollutant releases, address solid waste management (including hazardous waste and construction debris) and all other potential impacts that Contractor activities may have on environmental quality. Environmental constraint maps are available by request at DPW Environmental Management Division, Building 6005, Room 110.

*Using a CAC card, Fort Lee regulations and guidance can be found on the Intranet within the EMD Program Areas or by contacting the appropriate EMD Program Manager. ARMY wide regulations can be found on the Internet as well.*

[https://army.deps.mil/army/cmds/imcom\\_usag15/flg/dpw/emd/SitePages/EMD\\_Home.aspx](https://army.deps.mil/army/cmds/imcom_usag15/flg/dpw/emd/SitePages/EMD_Home.aspx)

***(Use your email certificate for authorization)***

Agencies can reduce delay by:

- 1) *Emphasizing interagency cooperation before the environmental report is prepared, rather than submission of adverse comments on a completed document.*
- 2) *Using the scoping process for an early identification of project-specific issues.*
- 3) *Noting that Fort Lee must follow Federal, Department of the Army, State, Local and Fort Lee policies and regulations. When more than one agency has jurisdiction, the most stringent regulation or policy must be followed to ease the research confusion.*
- 4) *Combining environmental documents with other documents e.g. maps, drawings, specifications, and written statements.*

### 1.3.2 NON-COMPLIANCE, FINES AND INSPECTIONS

Informal and Formal Enforcement Actions (e.g. citations and notices of violation) issued by regulatory authorities against the Contractor and/or Government-Owned Contractor Operated facilities found to be in noncompliance with environmental requirements will be resolved by the Contractor through coordination with the KO (or designated representative), the DPW-EMD, and the issuing office of the affected Federal, State, or local environmental agency and per contracts or scopes of work decisions prior to work beginning.





In accordance with FAR 31.205-15 fines and penalties, the Contractor will be solely responsible for paying any penalties levied for noncompliance resulting from the action or inaction of the Contractor, or the contractor’s employees. The Contractor shall also be solely responsible for non-compliance resulting from the action or inaction of the owner(s) or employee(s) of firms with whom the Contractor has contracts, or other agreements, in order to fulfill requirements of or related to this contract.

\*\*\*\*\*

*FAR 31.205-15 Fines, penalties and mischarging costs.*

*(a) Costs of fines and penalties resulting from violations of, or failure of the contractor to comply with, Federal, State, local, or foreign laws and regulations, are unallowable except when incurred as a result of compliance with specific terms and conditions of the contract or written instructions from the contracting officer.*

*(b) Costs incurred in connection with, or related to, the mischarging of costs on Government contracts are unallowable. Such costs include those incurred to identify, measure, or otherwise determine the magnitude of the improper charging, and costs incurred to remedy or correct the mischarging, such as the costs to rescreen and reconstruct records.*

\*\*\*\*\*

In accordance with the contract for each project, the Government may withhold such from payment, and otherwise indemnify and hold the Government harmless. The Contractor’s operations and all Government facilities utilized by the Contractor shall be subject to environmental inspections by the KO (or designated representative) and DPW-EMD, at any time with or without prior notification. The Contractor will fully cooperate with environmental audit and inspections conducted by DPW-EMD and their contractors, the Department of the Army and their contractors, and federal and state regulators. The Contractor will notify DPW-EMD prior to announced environmental regulatory inspections or during unannounced environmental regulatory inspections.

1.3.3 SITE PLANNING

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*The Contractor shall coordinate with Fort Lee DPW-EMD **PRIOR** to any Ground / Land disturbance to define the limits of construction with the environmental constraints surrounding each site.*

*Ask yourself “Will this action alter the existing ground surface in ANY way?” Ground/Land Disturbance i.e. trenching for utilities, tree or stump removal, posthole digging, grading or any similar type of earthmoving.*

*Ask yourself “Will this action require a Responsible Land Disturber (RLD) on site?” RLD information online: <http://www.deq.virginia.gov/ConnectWithDEO/TrainingCertification.aspx>*

\*\*\*\*\*

Contractors must take the following actions prior to ground/land disturbance:

- 1) Obtain approval of the DPW-EMD.
- 2) Obtain all needed licenses and permits before ground disturbance begins.
- 3) Verify constraint boundaries adjacent to or within the project limits before ground disturbance begins.
- 4) Verify wetlands and the 100’ Resource Protection Area (RPA) Buffer that exists adjacent to or within the project limits.
- 5) Verify with Miss Utility and inform Fort Lee’s DPW-EMD of the presence of any existing utilities to be demolished or relocated as part of a project. Fort Lee utilities are privatized except for the gas distribution infrastructure. Some of the utility infrastructure on Fort Lee has been found to contain asbestos. See Appendix C for additional information.

**Any questions about ground/land disturbance please contact the NEPA Manager:**

**804-734-5352**



- 6) Obtain air permit unless formal written confirmation, **Record of Non-Applicability (RONA)**, is obtained from DPW-EMD's Air Quality Program states an air permit is not required.
- 7) Obtain proper construction stormwater permit from the State of Virginia. A Stormwater Pollution Prevention Plan (SWPPP) is required for projects that disturb one acre or more. Contractor shall provide copy of any required plans and specifications to DPW-EMD for review within 5-working days of submission to the Virginia Department of Environmental Quality (VDEQ). Contractor shall submit this registration and any required plans and specifications to VADEQ at least 45 days prior to commencement of ground disturbing activities.
- 8) All federally funded projects disturbing more than 5,000 square feet of ground must implement Low Impact Development in their stormwater design as per UFC 3-210-10.
- 9) All military construction, renovation and demolition projects shall include contract performance requirements for a 60% minimum diversion of construction **and** demolition (C&D) waste by weight, from landfill disposal. If recycling is determined to be impractical a memorandum stating how the determination was made must be submitted to DPW-EMD.
- 10) Non-Army agencies require an Army Radiation Permit (ARP) to use, store, or possess ionizing radiation sources on an Army Installation (32 DFR 655, para 2-4a). Non-Army applicants will apply by letter with supporting documentation to the Garrison Commander through the Installation Safety Office. The letter shall be submitted such that the Garrison Commander receives the application at least 30 days before the requested start date of the permit (AR 385-10, Chap. 7.)
- 11) All contractors, prime and subcontractors, are required to have received a briefing about Archaeological Resources Protection Act (ARPA) prior to the initiation of ground disturbing activities. The training shall be coordinated with the Fort Lee Environmental Management Division Cultural Resource Staff. Contractors will be required to present proof of attendance (signed attendance sheet) at the job site upon request by DPW-EMD Compliance.

**Any questions about Army radiation please contact the Installation Safety Office:**

**804-765-1661**

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### 1.3.4 SPILL & EMERGENCY RESPONSE

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Prior to any work beginning on site, spill kits must be accessible and of suitable size to respond to unintended releases of various volumes. The Contractor shall have sufficient spill response supplies readily available on the pumping vehicle and/or at the site to contain any spillage and disinfect contaminated areas. In the event of a fuel, sewage, or other hazardous spillage during the performance of this contract, the Contractor shall be responsible for its containment, clean-up, disinfection/sterilization, and all related disposal costs.

\*\*\*\*\*

**The Contractor will immediately report spills and/or releases of HAZMAT in the following ORDER:**

- 1. Dial 911 – Fort Lee Fire & Emergency
  - 2. Responsible KO, COR or designated representative
- DPW-EMD is the only entity to report to the National Response Center. Once incident is over, the Contractor is responsible for making sure appropriate actions are taken to correct its cause and take steps to prevent future occurrence.**

\*\*\*\*\*

If the federal, state, or local authorities assess any monetary fine, penalty, or assessment related to the release of any substance by the Contractor, his/her employees, or agents during the performance of this contract, the Contractor shall be solely liable for its payment, authorizes the United States Army to withhold such from payment, and otherwise indemnify and hold the United States Army harmless.

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## PROGRAM AREAS

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The Environmental Management Division (EMD) focuses on four major areas: compliance, prevention, conservation and restoration. The EMD provides the means necessary to meet the mission protecting the



environment utilizing an integrated environmental and training platform. Protection and preservation of the environment will help Fort Lee to remain a major Army asset with the flexibility to meet future mission needs. Nearly all actions have impacts when referencing the Army, the Environmental Branch’s job is to supply best advice and guidance to Army Decision makers; additional duties include: creating programs and offering solutions to minimize impacts of training and mission.

### 1.1 STORMWATER

The Contractor shall prepare a **Stormwater Management Plan (SWP)** and **Stormwater Pollution Prevention Plan (SWPPP)** in accordance with the requirements of the Virginia Stormwater Management Law (Title 10.1, Chapter 6, Article 1.1) and the Virginia Stormwater Management Regulations (4 VAC 3-20).

For land-disturbing activities one acre or larger, the Contractor shall apply to the Virginia Department of Environmental Quality (VDEQ) for coverage under the Construction General Permit. The Contractor shall be responsible for all fees associated with obtaining General Permit coverage. The Contractor shall provide a postmarked copy of the submitted VDEQ stormwater permit application, to include SWP and SWPPP, to the Contracting Officer and DPW-EMD within 5 days of submission to DEQ. Contractor shall submit this registration and any required plans and specifications to VDEQ at least 60 days prior to commencement of ground disturbing activities. Prior to commencement of land-disturbing activities, the Contractor shall provide evidence of coverage by submitting a copy of the VDEQ coverage letter under the Construction General Permit to the Contracting Officer and DPW-EMD. The following items are required:

- 1) *Copies & signatures of all licenses and permits (i.e. signed DEQ permit authorization)*
- 2) *Permit fees; copy of checks*
- 3) *Calculations and methods identified*
- 4) *Certified reviewed plans and P.E. stamp*
- 5) *Responsible Land Disturber (*
- 6) *RLD) Certification from VADEQ*
- 7) *The Plan Reviewers Certification*
- 8) *Map with verified constraint boundaries adjacent to or within the project limits*
- 9) *Map with verified wetlands and the 100’ RPA Buffer that exists adjacent to or within the project limits*
- 10) *Miss Utility verified ticket number informing Fort Lee’s DPW-EMD of the presence of any existing utilities to be demolished or relocated as part of the project. Fort Lee utilities are privatized. Fort Lee owns the gas distribution infrastructure. Some of the utility infrastructure on Fort Lee has been found to contain asbestos See Appendix C for additional information.*

**Any questions about Stormwater, please contact DPW-EMD Compliance Program Staff:  
804-734-3772**

\*\*\*\*\*

***At the conclusion of work, the Contractor shall provide a copy of the general Permit Notice of Termination to DPW-EMD concurrently with submission to VDEQ as outlined in the Environmental Checklist, Appendix B.***

\*\*\*\*\*

Stormwater site design is to incorporate strategies including a combination of structural and/or nonstructural **Best Management Practices (BMP)** which are appropriate for the site. The design is to include adequate long-term operation and maintenance of BMP’s. Water quality protection will be considered in accordance with the Federal Clean Water Act, Virginia Code §§ 62.1-44.15 through 44.30, and Virginia Administrative Code 9 VAC 25-30-10 et seq.

**Stormwater Requirements Quick Reference:**

Disturbed Square Footage	Requirement
<2500	Install appropriate Erosion and Sediment Controls to prevent sediment from being washed into the storm sewer.
>2500	Submit Erosion and Sediment Control Plan, in accordance with the requirements of the Virginia Erosion and Sediment Control regulation, to DPW-EMD for review and approval.
>5000	Project must demonstrate conformance with the requirements set out under Section 438 of the Energy Independence and Security Act ( <a href="http://water.epa.gov/polwaste/nps/section438.cfm">http://water.epa.gov/polwaste/nps/section438.cfm</a> ). The Army guide for implementation “Army Low Impact Development - Technical User Guide can be found at ( <a href="http://www.usace.army.mil/Portals/2/docs/Sustainability/Hydrology_LID/Army_LID_Technical_User_Guide_January2013.pdf">http://www.usace.army.mil/Portals/2/docs/Sustainability/Hydrology_LID/Army_LID_Technical_User_Guide_January2013.pdf</a> ). In general, development >5000 square feet must either retain the 95th percentile rainfall event on site, or use a site-specific hydrological analysis to determine the pre-development hydrology. A justification must be provided if this requirement cannot be met. The plan for stormwater management must be submitted to DPW-EMD for review.
>1 Acre	Prepare and submit application for coverage under Virginia Stormwater Management Permit (VSMP) program ( <a href="http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPS/ConstructionGeneralPermit.aspx">http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPS/ConstructionGeneralPermit.aspx</a> ). Application must be approved by VDEQ and coverage letter received prior to beginning land disturbance. Submit Erosion and Sediment Control Plan to DPW-EMD for review and approval ( <a href="http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/ErosionandSedimentControl.aspx">http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/ErosionandSedimentControl.aspx</a> ). Approval must be secured before beginning land disturbance. Submit Storm Water Pollution Prevention Plan (SWPPP) to DPW-EMD for review. Plan must demonstrate that the post-development site condition meets the standards set forth in the Virginia Storm Water Management regulation.
Privatized Utilities	For privatized utility installation, upgrade, repair, etc. as a stand-alone project or as part of a large project: <ol style="list-style-type: none"> <li>1) Ground disturbance &gt; 10,000 square feet - submit E&amp;SC Plan, in accordance with the requirements of the Virginia E&amp;SC regulation, to DPW-EMD for review and approval.</li> <li>2) Ground disturbance &gt; 1 Acre – follow procedure above for &gt;1 Acre.</li> <li>3) Utilities with approved state-wide Erosion and Sediment Control Plans shall abide by those plans in lieu of the above requirements. Provide a copy of those plans for DPW-EMD records.</li> </ol> <p>Utility work on existing hard surfaced roads, drives, or sidewalks is exempt. Individual service connections are exempt.</p>

State and Federal design manuals that address proper stormwater management design techniques included the following:

- 1) [Virginia Stormwater Management Handbook, Volumes I and II](#), prepared by VDCR
  - <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx>
- 2) [VDOT Drainage Manual](#), prepared by the Hydraulics Section of the VDOT.
  - <http://virginiadot.org/business/locdes/hydra-drainage-manual.asp>
- 3) [Virginia Erosion and Sediment Control Handbook](#), prepared by the VDCR
  - <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/Publications/ESCHandbook.aspx>
- 4) [Low Impact Development Design Strategies: An Integrated Design Approach](#), USEPA, Office of Water, EPA 841-B-00-003
  - <http://water.epa.gov/polwaste/green/index.cfm>
- 5) [United Facilities Criteria: Low Impact Development](#), WBDG
  - [http://www.wbdg.org/ccb/DOD/UFC/ufc\\_3\\_210\\_10.pdf](http://www.wbdg.org/ccb/DOD/UFC/ufc_3_210_10.pdf)
- 6) [Low Impact Development Hydrologic Analysis](#), USEPA, Office of Water, EPA 841-B-00-002



- [http://water.epa.gov/polwaste/green/upload/lid\\_hydr.pdf](http://water.epa.gov/polwaste/green/upload/lid_hydr.pdf)

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*The linked manuals referenced here should be used by designers to ensure that standard, acceptable design practices are used to develop stormwater management designs.*

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1.1.1 EROSION AND SEDIMENT CONTROL

All land-disturbing activities must comply with the Virginia Erosion and Sediment Control Law and Regulations, Virginia Stormwater Management Act and Regulations, Virginia Stormwater Management Program General Permit, and the Chesapeake Bay Act and Regulations.

For land disturbing activities 2500 square feet or greater (10,000 square feet or greater for utility work), the Contractor shall prepare an Erosion and Sediment Control Plan. Plans must be prepared in accordance with the Virginia Erosion and Sediment Control Handbook and the Virginia Stormwater Management Handbook, Volumes I and II.

All Erosion and Sediment Control Plans and Stormwater Management Plans **must be reviewed by the Fort Lee DPW-EMD** to ensure compliance with the State Laws and Regulations and the Fort Lee Municipal Separate Storm Sewer Systems (MS4) Permit. Contractor shall provide copy of any required plans and specifications to DPW-EMD for review at least 60 days prior to commencement of ground disturbing activities. Contractor must receive approval of their Erosion and Sediment Control Plan from DPW-EMD prior to commencement of land-disturbing activities.

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- *NO excess soil may be disposed of on Fort Lee property without written authorization from DPW-EMD and DPW Master Planning Division.*
- *Hay bales ~~SHALL NOT BE USED~~ for erosion control and inlet protection from storm water run-off on the Ordinance Campus or Cantonment Area. The only allowed areas are the Ranges as long as it meets the needs of the project and does not interfere with operations.*

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1.1.2 OIL-WATER SEPARATORS

For maintenance and service areas where a floor drain is required, all such drains shall discharge to an appropriately-sized and designed gravity oil-water separator. No coalescing media will be allowed. The separator shall discharge treated effluent to the sanitary sewer system, unless no sewer service is proved to the facility. The oil-water separator shall be located such that it provides convenient access to a waste oil recycler truck. Drains, such as those at wash racks, which are exposed to rainwater, shall be bermed to prevent the entrance of stormwater, and either covered with a canopy or provided with a system to divert stormwater to the storm sewer system after the first flush of stormwater is treated by the oil-water separator.

1.1.3 LOW IMPACT DEVELOPMENT (LID)

The Department of Defense requires the use of Low Impact Development (LID) methodologies to manage stormwater runoff from development or redevelopment projects involving a Federal facility or dollars with a footprint that exceeds 5,000 square feet IAW United Facilities Criteria (UFC) 3-210-10 and the Energy



Independence and Security Act (EISA). This requirement is applicable to new construction, additions, new pavement and sidewalks (horizontal construction), and site redevelopment.

*The United Facilities Criteria for Low Impact Development can be found at the Whole Building Design Guide website at:*  
[http://www.wbdg.org/ccb/DOD/UFC/ufc\\_3\\_210\\_10.pdf](http://www.wbdg.org/ccb/DOD/UFC/ufc_3_210_10.pdf)

The design objective of LID is to maintain the pre-development hydrologic conditions. Potential opportunities for improving water quality when developing the appropriate sites include providing runoff diversion; recycling gray water; harvesting rainwater; disconnecting downspouts or discharging them to pervious surfaces; using pervious surface parking instead of asphalt parking; minimizing tree clearing and grubbing; and installing bio-retention, soil amendments, filter strips, vegetated buffers, grassed swales, dry wells, infiltration basins/trenches, inlet pollution removal devices and tree box filters.

Low-impact development with respect to paving can result in lower maintenance costs and overall life-cycle costs when the savings from the reduced conventional stormwater management infrastructure (e.g., curbs, gutters, piping, detention basins, etc.), reduced operation and maintenance are considered. With respect to porous pavements, the LID approach has the following additional benefits: pollutant removal, control of heat island effects, and cooler surface waters that receive stormwater runoff.

Best Management Practices (BMPs) shall be installed to meet LID requirements. Preferred methods may include stormceptors, infiltration pits, plastic chamber systems and vegetated swales. Retention and/or detention ponds may be used only with prior approval from EMD.

*EPA resources for Low Impact Development can be found online:*  
<http://water.epa.gov/polwaste/green/index.cfm>

Prior to finalizing the design for a redevelopment project, designer shall also consider whether natural hydrological conditions of the property can be restored, to the extent practical. Estimated design and construction costs for implementing EISA Section 438 shall be documented in the project cost estimate as a separate line item. For MILCON projects developed in FY 13 and beyond, an additional 2% should be added as a supporting facility cost. LID Standards include ASHRAE Standard 189.1. UFC 3-210-10 Low Impact Development, UFC 4-030-01 Sustainable Development, UFC 1-200-01 Design: General Building Requirements, UFC 4-010-01 Design: DoD Minimum Antiterrorism Standards for Buildings, and Chapter 10 of AR 420-10.

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*Once final design is complete, contractor must submit a completed EISA LID design certification to the DPW-EMD.*

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### 1.1.4 STORAGE TANKS

Installation of permanent underground or above ground storage tanks must be approved by DPW-EMD. Temporary storage tanks used to serve equipment during construction do not require prior approval, but must have secondary containment or be double walled (if 55-gallons or larger), and their location must be shown on an approved Erosion and Sediment Control (E&SC) Plan or Environmental Protection Plan (EPP).

## 1.2 CROSS CONNECTION CONTROL & BACKFLOW PREVENTION

For Lee operates in accordance with the Safe Drinking Water Act, Cross Connection Control and Backflow Prevention in Waterworks of the Commonwealth of Virginia, State Board of Health, and Waterworks Regulations 1993, as amended and to include all site specific requirements. Domestic water main entering the building shall be provided with a Reduced-Pressure backflow preventer. If the backflow is greater than 3 inches, the contract will require the use of a manifold system with the main line utilizing two smaller backflow s that will provide the same amount of water with the ability to isolate each one independently for servicing. Additionally, domestic water systems shall be protected from contamination by hydronic water systems and other Heating, Ventilation and Air Condition (HVAC) systems via a Reduced-Pressure backflow preventer and any mechanical equipment that may potentially contaminate the public water system. Backflow prevention/ test ports must be placed in locations that allow ease of access in mechanical rooms, not at ceiling height or blocked by other equipment.

**Any questions about backflow, please contact DPW-EMD Pollution Prevention Program staff:**  
804-765-7994  
804-734-3560

## 1.3 PEST MANAGEMENT

The Contractor will submit a pest management plan to the KO (or designated representative) for DPW-EMD review and approval prior to the use of pesticides/herbicides. The pest management plan must include all the information that is required in the Installation Pest Management Plan, AR 200-1, Fort Lee Policy 17-03, and any other applicable state or federal requirements. It is a requirement to apply installation approved termiticide for new building additions and renovations. Only chemicals approved by the Army Environmental Command and Fort Lee's approved pesticide list can be used on the installation. Before the application can be scheduled, the Contractor must have an approved pest management plan signed by Fort Lee DPW-EMD Pest Manager. The Contractor must be on the Fort Lee Pest Contractor approved list, as provided by DPW-EMD. After product is applied submit amount of concentrated quantity applied on DA 1532 or a Fort Lee DPW-EMD approved format.

**Any questions about pests or pesticides, please contact DPW-EMD Pest Management Program staff:**  
804-765-7994  
804-734-3560

In addition to these requirements, the Contractor must submit in the Pesticide Application Submittal the following information:

- 1) *Name of the pest company and applicator name with Virginia Approved License in the appropriate category*
- 2) *MSDS and label of product that is being applied*
- 3) *Location of the area that product will be applied with square footage;*



- 4) *Notification to DPW-EMD at least 48 hours before application date.*

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### 1.3.1 TERMITE TREATMENT

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Provide soil treatment for termite control according to label. All pesticides must be included in a Pesticide Management Plan developed by the Contractor and submitted to and approved by the DPW-EMD Installation Pest Management Coordinator prior to application.

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*It is a requirement to apply termiticide for all new construction and renovation projects*

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The pest management plan must include all the information that is required in the Installation Pest Management Plan, AR 200-1, Fort Lee Policy 17-03, and any other applicable state or federal requirements. The Contractor must:

- 1) *Obtain an approved pest management plan by Fort Lee DPW-EMD.*
- 2) *Be included on the Fort Lee Pest Contractor approved list, as provided by DPW-EMD.*
- 3) *Use a pesticide from the Fort Lee approved pesticide list.*
- 4) *Submit post application amount of concentrated quantity applied on DA 1532 or approved format to Fort Lee DPW-EMD.*
- 5) *Submit the Pesticide Application Submittal with the following information:*
  - a) *Name of the pest company and applicator name with Virginia Approved License in the appropriate category.*
  - b) *MSDS and label of product that is being applied.*
  - c) *Area that product will be applied with square footage.*
  - d) *Notification to Fort Lee Environmental Management Division at least 48 hours before application date.*

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### 1.4 SOLID WASTE MANAGEMENT

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The Contractor shall collect all solid wastes generated during the performance of the contract in a container located in an area designated by the KO or Contracting Officer's Representative (COR). The Contractor shall provide appropriate containers for the collection and segregation of solid wastes, recyclables, and construction/demolition debris generated directly and indirectly by work under this Contract. The Contractor is prohibited from using Installation dumpsters or other government owned/leased waste receptacles for the disposal of any solid wastes. All solid wastes shall be re-used, recycled, or disposed of prior to completion of work at Fort Lee. Recycling to the maximum extent should be the objective. Recycling 60 percent diversion from the solid waste stream is mandated by DOD Strategic Sustainability Performance Plan and Installation Management Command (IMCOM) for the FY15, increasing diversion each year to strive to reach net zero solid waste by 2030, for Fort Lee projects. If recycling is determined to be impractical a memorandum stating how the determination was made must be submitted to DPW-EMD.

The Contractor must, prior to removing any waste from Fort Lee, properly classify each waste stream. Classification can be made based on generator knowledge or through laboratory analysis. The identification and classification of each waste stream shall be shown in the waste management plan. If the government has previously identified and classified the waste stream, that fact should be noted in the Waste Management Plan. All hazardous waste removed from Fort Lee must be accompanied by a Uniform Hazardous Waste Manifest, including Fort Lee's EPA- ID number and must be signed by the Fort Lee Hazardous Waste Manager.

Under no circumstances will any solid wastes, hazardous materials, or hazardous wastes be left at Fort Lee at the end of the project. Before the project is turned over to the government, the Contractor will remove all





solid wastes, hazardous materials, and hazardous wastes from the installation. Those items include, but are not limited to, dirt piles, concrete piles, asphalt piles, and rubbish piles. No materials will be left for the future use of the government UNLESS instructed to do so in writing by the government. This is to include the aforementioned items and also regular or touch-up paint, plaster, solvents, etc. If it is determined that the Contractor left materials/wastes behind, services may be terminated and/or a penalty payment to include the cost of disposal of the material by the government may be withheld from the project payment.

#### 1.4.1 CONSTRUCTION AND DEMOLITION (C&D) WASTE MANAGEMENT

The Contractor will recycle all C&D debris to the maximum extent possible. The Contractor shall make every effort to recycle materials such as, but not limited to, concrete (including concrete with rebar), brick, asphalt, all metals including piping, building insulation, wood, wood paneling and wainscoting, roofing materials, wallboard, carpet, ceiling tiles, floor tiles, cardboard, and similar materials that do not constitute, in and of themselves or in combination with other materials, hazardous materials. With prior coordination through the KO (or designated representative), Fort Lee Recycle Center, and DPW-EMD, the Contractor may take scrap metals to the Fort Lee Recycling Center for recycling.

Any questions about C&D wastes, please contact DPW-EMD Pollution Prevention Program staff:

804-734-3766

Government policy is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that policy the Contractor shall:

- 1) Practice efficient waste management when sizing, cutting and installing products and materials and
- 2) Use all reasonable means to divert construction/demolition waste from landfills and incinerators and to facilitate their recycling or reuse.

The Government is committed to diverting its waste away from landfills to the greatest extent possible. The Contractor will support this objective by adhering to the following requirements:

- 1) Reusing (when authorized and directed by the Government)
- 2) Recycling
- 3) Donating construction/demolition debris material

Refer to **Appendix E** "Local Recycling Company List" for some suggested local sites for recycling of C&D debris. The Government does not warrant that these facilities will, in fact, accept any particular materials. The Government does not warrant that any or all of these entities are still in operation.

#### 1.4.2 C&D WASTE MANAGEMENT PLAN

A waste management plan shall be submitted within 15 days after notice to proceed and prior to initiating any site preparation work. At a minimum, for FY15 the plan shall include the contractor's plan(s) for a minimum 60% diversion rate and for each of the following years increasing diversion until 2030 or justification for not meeting these goals due to time and/or cost constraints as identified below. The plan shall include the following:

- 1) Name of individuals on the Contractor's staff responsible for waste prevention and management.
- 2) Actions that will be taken to reduce solid waste generation.
- 3) Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas and equipment to be used for processing, sorting, and temporary storage of wastes.
- 4) Characterization, including estimated types and quantities, of the waste to be generated.
- 5) Name of landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.
- 6) Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity.



- 7) *List of specific waste materials that will be salvaged for resale, salvaged and reused, or recycled. Recycling facilities that will be used shall be identified.*
- 8) *Identification of materials that cannot be recycled / reused with an explanation or justification.*
- 9) *Anticipated net cost savings determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration and/or landfill cost avoidance.*

The contractor shall notify the KO (or designated representative) if diversion activities will cause the project duration time to be exceeded. Along with the notification, the contractor shall provide the highest diversion rate that can be obtained based on the project schedule. If it is determined by the Government that the project is mission-critical, the diversion rate may be amended. If the cost of achieving the minimum diversion rate, sixty percent (60%) is significantly greater than the cost of conventional demolition methods and the risk can be attributed directly to meeting the minimum diversion rate, the contractor shall immediately notify the Contracting Officer for a determination on whether a lower diversion rate is acceptable. If the Contracting Officer determines that a lower diversion rate is acceptable, the rate may be amended to the highest obtainable rate that can be met as agreed upon by **all parties**.

## 1.5 HAZARDOUS WASTE (HAZWASTE) MANAGEMENT

Fort Lee is regulated by the EPA as a large quantity generator of hazardous wastes and holds the appropriate EPA ID number. All hazardous waste as defined in 40 CFR 260-265 is subject to **Resource Conservation and Recovery Act (RCRA)** provisions. All such waste generated by the Contractor during performance under this Contract shall be stored by the Contractor in containers approved by Department of Transportation Reg. 49 CFR, part 172-173 and disposed of in accordance with the Installation Hazardous Waste Management Plan available for review in the DPW-EMD. All other wastes generated by the Contractor shall be disposed of by the Contractor through Government sources in coordination with the KO (or designated representative) and DPW-EMD.

**Any questions about disposal or manifests of contaminated wastes, please contact DPW-EMD Hazardous Waste Program staff:**

**804-734-3811  
804-734-3772**

### 1.5.1 HAZARDOUS WASTE REGULATIONS

The Contractor will collect and segregate all solid and/or hazardous wastes generated during the performance of the contract in containers located in an area designated by the KO (or designated representative) or DPW-EMD. All wastes shall be re-used, recycled, or disposed of prior to completion of work. The Contractor must, prior to removing any waste from Fort Lee, properly classify each waste stream. Classification can be made based on generator knowledge or through laboratory analysis. The identification and classification of each waste stream shall be shown in the waste management plan, if applicable. The Contractor will coordinate with the KO (or designated representative) and the DPW-EMD Hazardous Waste or Compliance Program to ensure hazardous waste removed from Fort Lee is accompanied by a Uniform Hazardous Waste Manifest, including Fort Lee's EPA ID number to be signed by the DPW-EMD Hazardous Waste Manager.

#### Prior to beginning any demolition:

- *The contractor shall confirm the existence or lack of existence of hazardous substances including, but not limited to, asbestos, PCBs, and lead based paint. If hazardous substances exist, the contractor shall properly remove and dispose of these materials prior to beginning any other demolition.*



- *Lead may be present in windows/frames. If any framing or window replacement is proposed then testing may be needed. PCB and non PCB ballasts may also be present at this site; if found and replaced the ballasts and bulbs will be turned in to Fort Lee’s HazWaste Facility (building 7123 for recycling or disposal).*
- *Fort Lee assumes that anything built before 1978 contains lead paint and that anyone doing any work in a building should be made aware of that so that they can comply with the OSHA worker-protection requirements in 29 CFR. Refer to Section HAZARDOUS WASTE TESTING paragraph 1.11.2.8 under no circumstances will the Contractor leave any solid wastes, hazardous materials (HAZMAT), or hazardous wastes at Fort Lee at the end of a project. Before the project is turned over to the Government, the Contractor will remove all solid wastes, hazardous materials, and hazardous wastes from the installation. Those items include, but are not limited to, dirt piles, concrete piles, asphalt piles, and rubbish piles. No materials will be left for the future use of the Government, unless Contractor receives direction to do so from the KO (or designated representative); this is to include the aforementioned items and also regular or touch-up paint, plaster, solvents, etc.*

All material and waste containers must be closed when not in use. Materials/wastes are to be covered for protection from the weather. Each container is to be properly labeled. Do not store hazardous materials/wastes or portable toilets near storm drains. Upon completion of the project the Contractor shall remove all hazardous materials and hazardous waste.

The Contractor shall submit all trip tickets from the landfill facility, incinerators, and recycling companies to show that all debris is being land-filled, incinerated, re-used, or recycled in accordance with all federal requirements and in an approved location. These trip tickets will be submitted to the Contracting Officer.

**1.5.1.1 MANIFESTS**

DPW-EMD staff will review all lab analyses or MSDS of wastes prior to signing manifests. All hazardous waste manifests must be signed by DPW-EMD prior to removal of such waste from the Installation. Only the DPW-EMD Hazardous Waste Manager and Compliance Manager are authorized to sign Universal Hazardous Waste Manifests. The generator copy of the manifest must be returned to below address within 35 days of removal of waste from the installation.

**Any questions about Hazardous Waste manifests, please contact the DPW-EMD HazWaste Management Program:**

**804-734-3811**  
**804-734-3772**

DEPARTMENT OF THE ARMY  
DPW ENVR MGMT DIVISION  
ATTN: COMPLIANCE PROGRAM  
825 19<sup>TH</sup> STREET, BLDG 6005  
FORT LEE VIRGINIA 23801

**1.5.1.2 WASTE ACCUMULATION AREAS**

Contractor activities generating hazardous wastes as defined in 40 CFR Part 261.3 must contact the DPW-EMD for assistance in setting up a designated Satellite Area Site (SAS). The Contractor will designate a single and back-up point of contact to manage the SAS at all times in accordance with Federal, state, Army, and Fort Lee Policies. The point of contact, and their back-up, shall have training as prescribed in 29 CFR 1910.1200 and as set forth in the Fort Lee Hazardous Waste SOP.

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*Hazardous materials are different from hazardous wastes. The Contractor will not remove hazardous wastes from Fort Lee premises without the DPW-EMD Hazardous Waste Manager’s signature on the manifest.*

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This includes citing a roll-off for disposal of a hazardous waste i.e. demolition wastes. However, roll-offs are greater than 55 gallons and fall outside the SAS rule.

*Using a CAC card, Fort Lee regulations and guidance can be found on the Intranet within the EMD Program Areas or by contacting the appropriate EMD Program Manager. ARMY wide regulations can be found on the Internet as well.*

[https://army.deps.mil/army/cmds/imcom\\_usag15/flg/dpw/emd/SitePages/EMD\\_Home.aspx](https://army.deps.mil/army/cmds/imcom_usag15/flg/dpw/emd/SitePages/EMD_Home.aspx)

*(Use your email certificate for authorization)*

### 1.5.1.3 SITE MANAGEMENT

The Contractor will ensure all material/waste containers are closed when not in use. The Contractor will properly label each container and will not store hazardous materials near storm drains. Upon completion of projects, the Contractor will remove all hazardous materials and hazardous waste from Fort Lee through coordination with the KO (or designated representative) and DPW-EMD Hazardous Waste Manager.

### 1.5.1.4 CONTAMINATED ABSORBENTS

The Contractor will clean up all hazardous materials/wastes using the proper absorbent materials. Spills caused by the Contractor will be the Contractor's responsibility to containerize and dispose of the contaminated absorbent material.

### 1.5.1.5 HAZARDOUS WASTE IN EXCESS OF 55 GALLONS

Hazardous waste in excess of 55 gallons must be manifested off Fort Lee within 72 hours of generation in order to comply with the requirements of the satellite accumulation rule. If, in an emergency, waste in excess of 55 gallons must be stored on site for more than 72 hours, arrangements must be made to use Fort Lee's 90-day storage site. Roll-offs, due to their size, may remain onsite until removed. Roll-offs containing hazardous wastes are required to be in good condition, covered with poly sheeting or equivalent material to prevent rainwater infiltration, and weekly inspections by the DPW-EMD Hazardous Waste Manager.

### 1.5.1.6 WASTE SOIL

Soil must be tested for contaminants prior to removal from Fort Lee. Testing and disposal of soil shall follow Virginia Solid Waste Management Regulations 9 VAC 20-81-660. A minimum of one composite sample shall be analyzed for each required test for every 250 cubic yards of soil to be disposed. Testing shall include at minimum: **Total Petroleum Hydrocarbon (TPH) Gasoline Range Organics (GRO) and Diesel Range Organics (DRO), Benzene, Toluene, Ethyl Benzene, and Xylene (BTEX), Total Organic Halides (TOX) and a Paint Filter Test.** Contractors will contact the DPW-EMD Hazardous Waste Manager to determine if further tests are required. If test results determine "other than clean", the material must be transported to an appropriate landfill or processing center based on the contaminants identified. Contaminated soils, in sludge or slurry form, shall be containerized and managed as either hazardous waste or non-regulated waste, depending on the contaminant. The disposal of the containerized contaminated soil shall be the responsibility of the Contractor. DPW-EMD must review the sample results and sign all hazardous/non-hazardous waste manifests prior to disposal.

Subsequent to coordination with the KO (or designated representative), the Contractor shall contact the DPW-EMD Hazardous Waste Program Manager to coordinate proper characterization, disposition, and disposal of any contaminated soils.



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*DPW-EMD must review the sample results and sign all hazardous/non-hazardous waste manifests prior to disposal.*

*Under no circumstances will soil, clean or contaminated, from Fort Lee be delivered to or donated to outside sources (other than an appropriate landfill or processing center based on the contaminants identified) for use.*

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1.5.2 HAZARDOUS WASTE TESTING

All hazardous wastes that cannot be characterized through generator knowledge shall be tested for hazardous wastes constituents according to EPA testing methods in SW-846. Wastes may be required to have the method 1311 Toxic Characteristic Leaching Procedure (TCLP) performed to determine constituents. Contractors will coordinate with the DPW-EMD Hazardous Waste Manager to determine the appropriate tests. Testing shall adhere to the following procedures:

- 1) DPW-EMD shall be notified in advance to witness the testing.
- 2) All testing shall be performed by a Third-Party contractor.
- 3) Containers shall be labeled with a unique identifier to distinguish them from other waste containers on the installation.
- 4) Sampling shall be representative of the waste.
- 5) All samples shall be accompanied by a Chain-of Custody (COC).
- 6) DPW-EMD will apply tamper-evident tape to samples prior to transportation to the lab.
- 7) Sites with multiple containers may require a site diagram.
- 8) DPW-EMD shall receive a copy of the COC and lab results.

The DPW-EMD Hazardous Waste Manager and Compliance Manager have the final authority on waste determinations. Multiple sampling or re-sampling of containers is not permitted without permission from the DPW-EMD Hazardous Waste Manager. Failure to follow these procedures may result in the rejection of sample results.

1.5.3 UNIVERSAL WASTE

Universal waste is a subset of Hazardous Waste with reduced requirements. Provided the wastes are recycled, they may be kept for up to 365 days and not the 90 days for hazardous waste. Containers will be labeled "Universal Waste" and the contents shall be clearly listed.

1.5.3.1 FLUORESCENT LAMPS

Upon removal of fluorescent lamps and high-intensity discharge (HID) bulbs, the Contractor will box the lamps and manage them as universal waste. Fort Lee recycles bulbs including: Compact Fluorescent Lamps (CFL), fluorescent straight tubes, u-tubes, mercury vapor lamps, sodium vapor lamps, and projector lamps. All lamps will be packaged in a suitable container, counted, and brought to the universal waste storage area, Building #7131.

1.5.3.2 BALLASTS

Upon removal of fluorescent light ballasts, the Contractor will separate PCB and non-PCB ballasts and place them in DOT-approved containers suitable for shipment. Fort Lee will arrange for disposal



and/or recycling of ballasts. The ballasts shall be brought to the universal waste storage area Building #7131. A count of ballasts is not necessary.

### 1.5.3.3 RECHARGEABLE BATTERIES

Recyclable batteries (NiCad, NiMH, Lithium, and Lead) may not be disposed of in ordinary trash. Fort Lee recycles batteries. Rechargeable batteries will be brought to the Hazardous Waste Building, Building 7123. Lead batteries will be counted and have their terminals taped. NiCad, NiMH, and Lithium batteries do not need to be counted or taped. Batteries are recycled at no cost to Fort Lee, so we will accept any rechargeable batteries.

### 1.5.4 RECORDS

Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. The records shall be made available to the Contracting Officer/Project Manager during construction, and a copy of the records shall be delivered to the Contracting Officer/Project Manager upon completion of the construction. Throughout the duration of the contract, contractor shall maintain and make available to the Contracting Officer/Project Manager, records, to include all weight tickets, documenting the quantity of waste generated, the quantity of waste diverted from a landfill or incineration and the quantity of waste disposed by landfill or incineration. Upon contract completion, the contractor shall submit a copy to the DPW-EMD of all records including a statement certifying that at least 60% of C&D waste has been diverted from landfill disposal.

Any questions about the Solid Waste Mgt. Plan please contact DPW-EMD Solid Waste Program Manager:

804-734-3766

### 1.5.5 WASTE MANAGEMENT, CLEARING, DEMOLITION DISPOSAL



A Waste Management Plan is required. The Contractor shall collect all solid wastes generated during the performance of the contract in a container located in an area designated by the Contracting Officer/Project Manager. The Contractor shall provide appropriate containers for the collection and segregation of solid wastes, recyclables, and C&D debris generated directly and indirectly by work under this Contract. The Contractor is prohibited from using Installation dumpsters or other government owned/leased waste receptacles for the disposal of any solid wastes. Sixty percent of construction waste is required to be diverted from C&D landfills by reclaiming, recycling, reuse. Prior to beginning any demolition:

- 1) *The contractor shall confirm the existence or lack of existence of hazardous materials including, but not limited to, asbestos, PBCs, and lead based paint. If hazardous materials exist, the contractor shall properly remove and dispose of these materials prior to beginning any other demolition.*
- 2) *Lead may be present in windows/frames. If any framing or window replacement is proposed then testing may be needed. PCB and non PCB ballasts may also be present at this site; if found and replaced the ballasts and blubs will be turned in to Fort Lee's Hazwaste Facility (building 7123).*
- 3) *Fort Lee assumes that anything built before 1978 contains lead paint and that anyone doing any works in a building should be made aware of that so that they can comply with the OSHA worker-protection requirements in 29 CFR.*



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*All solid wastes shall be re-used, recycled, or disposed of prior to completion of work at Fort Lee. If recycling is determined to be impractical a memorandum stating how the determination was made must be submitted to EMD.*

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1.5.6 COLLECTION

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within a fenced off area or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.5.6.1 LOOSE DEBRIS

Loose debris on trucks leaving the site will be loaded by the Contractor in a manner that shall prevent dropping of materials on streets and conform to local ordinances/laws. Containment methods to be employed by the Contractor include, but will not be limited to, fastening of suitable covers, such as a tarpaulin, over the load before entering surrounding roads IAW Virginia Department of Transportation (VDOT) regulations.

1.5.6.2 CONTAINERS



The necessary containers, bins and storage areas to facilitate effective waste management shall be provided and shall be clearly and appropriately identified. Recyclable materials shall be handled to prevent contamination of materials from incompatible products and materials and separated by one of the following methods:

- 1) *Source Separated Method*  
Waste products and materials that are recyclable shall be separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing.
- 2) *Co-Mingled Method*  
Waste products and recyclable materials shall be placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed.
- 3) *Other Methods*  
Other methods proposed by the Contractor may be used when approved by the Contracting Officer/Project Manager.

1.5.6.3 DISPOSAL

Unless otherwise specified, disposal shall be in accordance with the following:

- 1) *First consideration shall be given to salvage for reuse since little or no reprocessing is necessary for this method and less pollution is created when items are reused in their original form. Sale or donation of waste suitable for reuse shall be considered. Salvaged materials other than those reinstalled shall not be used in this project.*
- 2) *Recycle materials not suitable for reuse, but having value as being recyclable shall be made available for recycling whenever economically feasible.*
- 3) *Wastes with no practical use or economic benefit shall be disposed of at a landfill or incinerator*

1.5.6.4 TRIP TICKETS

The Contractor will submit all trip tickets from the landfill facility, incinerators, and recycling companies to show that all debris is being land-filled, incinerated, re-used, or recycled in accordance with all federal



requirements and in an approved location. These trip tickets will be submitted to the KO (or designated representative) and reports are provided to DPW-EMD.

**Project Managers and Primary Contractors** shall track all of the listed equipment and check for the proper identification to be placed on the vehicles and to be logged on the daily worksheets once weekly as a completed task. Furthermore equipment listed above found on post without this information may be removed at the owner’s expense. Construction vehicles, heavy equipment, lifts, trailers and other rolling pieces on Fort Lee without a Government license plate, left overnight off or on their contracted sites must have the following information posted on the vehicle generally in the window if there is one, or on the door of the equipment or some other easily seen portion. This information is necessary in case of spill(s), accident(s) or abandonment of equipment.

Any questions about Hazardous Materials inventory or consumption, please contact Hazard Material Control Center:  
  
804-734-5243

Date	Construction Project	Company equipment belongs to	Emergency POC Phone No.
<i>Equipment Ownership ID</i>			

### 1.6 HAZARDOUS MATERIALS (HAZMAT) USAGE AND REPORTING

The Contractor will maintain and provide an accurate consumption list and inventory of its Hazardous Materials (HAZMATs) to the Hazardous Material Control Center (HMCC) (804-734-5243), DPW-EMD and the Installation Safety Office as required by the Community Right-to-Know Act. There are several categories of HAZMAT present at Fort Lee; these include, but are not limited to the following:

- *Lead and other heavy metals*
- *Asbestos*
- *Pesticides*
- *Polychlorinated biphenyls*
- *Paints*
- *Solvents*
- *Petroleum, Oils and Lubricants (POLs)*

HAZMAT listed in the Installation Chemical Inventory maintained by the Installation Safety Office and is subject to OSHA Worker and Community Right-to-Know laws. In addition, other HAZMAT may be encountered and additional materials known to exist are listed in the Installation Spill Management Plan, also so called the “Spill Plan” section of the Oil and Hazardous Substance Integrated Contingency Plan available for review in the DPW-EMD Intranet Online Reference Document Library. The Contractor will comply with the Installation Hazard Communication Standard Program and Hazardous Communication Policy. Please call to ensure that you have the most current and updated HMCC Policy.





Using a CAC card, Fort Lee regulations and guidance can be found on the Intranet within the EMD Program Areas or by contacting the appropriate EMD Program Manager. ARMY wide regulations can be found on the Internet as well.

[https://army.deps.mil/army/cmds/imcom\\_usag15/flg/dpw/emd/SitePages/EMD\\_Home.aspx](https://army.deps.mil/army/cmds/imcom_usag15/flg/dpw/emd/SitePages/EMD_Home.aspx)

***(Use your email certificate for authorization)***

Prior to bringing any HAZMAT on to Fort Lee, a detailed summary of the HAZMAT must be provided to the HMCC. All contractors are required to report the usage of all hazardous materials to the government for all projects and contracts including service contracts executed on Fort Lee. In accordance with FAR Clause 52.223-3, each offeror (Contractor) must provide the Contracting Office with a list of proposed HAZMAT that it plans to use on the installation during the performance of the contract and must provide copies of all MSDSs to the HMCC. Spills and/or releases of hazardous materials must be reported immediately to the Contracting Officer, Fort Lee Fire and Emergency Services and the DPW-EMD.



Hazardous materials are any substance defined by OSHA as a hazardous substance requiring a Material Safety Data Sheet (MSDS). Hazardous materials that need to be reported include but are not limited to chemicals, paints, thinners, sealing compounds, strippers, glues, solvents, all petroleum products including oils, hydraulic fluids, and fuels stored on-site (fuels in vehicles are exempt), pesticides, adhesives, acids, flammables, corrosives, oxidizers, compressed gases (such as but not limited to oxygen, acetylene, propane, flammable and non-flammable gases), all aerosols, and all materials containing hazardous substances.

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***No contractor (including sub-contractors) shall bring hazardous materials onto Fort Lee without coordination with the HMCC and present a MSDS for all chemicals.***

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**1.6.1 HAZARDOUS MATERIALS MANAGEMENT PROGRAM (HMMP)**

The Fort Lee HMCC will notify the project manager and the Contracting Officer (KO) if extremely hazardous materials are being used by the Contractor. The Contractor shall not bring any extremely hazardous chemicals on Fort Lee without prior approval from the HMCC. Contractors are not allowed to have more than a 14-day supply of HAZMAT on the installation at any time. A monthly account of hazardous materials used must be provided to the Contracting Officer and the HMCC for tracking purposes. A final report must be submitted to the KO and HMCC upon project completion. Contractors must ensure that any unused HAZMAT is removed from the installation prior to final inspection and project completion.

If it is determined at any time that hazardous materials are on site that were not reported in advance, the KO (or designated representative) will be notified and the project may be stopped until the materials are submitted as stated above or removed from Fort Lee.

**1.6.1.1 HAZARDOUS MATERIAL STORAGE**

The Contractor will manage HAZMAT properly at all times during performance of this contract; including, but not limited to, all requirements set forth within this paragraph. Containers must be in good condition and properly labeled with the contents and hazard class (flammability, toxicity, corrosivity, oxidizer, etc.) at all times. Containers will be closed at all times when not in use, HAZMAT will be kept under cover to protect them from the elements and to prevent stormwater runoff contamination, and tanks and 55-gallon liquid drums will have secondary containment.



Fort Lee is subject to inspections at any time from outside agencies (EPA, VADEQ, and OSHA) and any violations by the Contractor will be the responsibility of the Contractor and any fines associated with the violations will be resolved at the Contractor's expense.

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***Inclusive in all HAZMAT storage areas***

*NO SMOKING signs will be posted in all HAZMAT storage areas. In addition, all HAZMAT will be segregated in storage according to compatibility (i.e. flammables will not be stored with corrosives, corrosives will not be stored with oxidizers, flammable gases will not be stored with flammable liquids, etc.)*

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**1.6.1.1.1 PETROLEUM, OIL, LUBRICANTS (POLs) STORAGE**

Containers of 55-gallon capacity or larger must be provided with secondary containment. Double-wall fuel tanks meet secondary containment requirements.

**1.6.1.1.2 GAS CYLINDERS**

Gas cylinders shall be stored in the shade or under cover be maintained in the upright position with caps on and will be secured with chains and locks to prevent tampering and to prevent them from falling over. Gas storage areas will have signs indicating what type gases are stored in the area (i.e., flammable, oxidizer, non-flammable, etc.)

**1.7 RECYCLING**

**1.7.1 REUSE, RECYCLING AND DISPOSAL REPORTING**



As good stewards of the environment, the government is committed to diverting its waste from landfills to the greatest extent possible. This can be done through:

- 1) Reducing
- 2) Reusing (when authorized and directed by the government)
- 3) Recycling
- 4) Donating construction/demolition debris materials

The Contractor shall recycle all construction/demolition debris to the maximum extent possible. Recycling (60% diversion from solid waste stream in FY15) is mandated on Fort Lee projects. The Contractor shall make every effort to recycle materials such as, but not limited to, concrete (including concrete with rebar), brick, asphalt, all metals including piping, building insulation, wood, wood paneling and wainscoting, roofing materials, wallboard, carpet, ceiling tiles, floor tiles, cardboard, and similar materials that do not constitute, in and of themselves or in combination with other materials. If recycling is determined to be impractical a memorandum stating how the determination was made must be submitted to DPW-EMD.

Refer to **Appendix E** "Local Recycling Company List" for available sites for recycling of construction and demolition debris. The Government does not warrant that these facilities will, in fact, accept any particular materials. The Government does not warrant that any or all of these entities are still in operation. The list is provided for your convenience, may not be exhaustive, and does not constitute promotion of those businesses by the Federal Government.

**Fort Lee DPW-EMD  
Recycling Staff can be  
contacted at:**

**804-734-3766**



Whenever the potential for use of non-recycled content products exists during the construction stage of the project, the Contractor shall incorporate in this project, as a substitute, recycled content products that are listed and identified in the Environmental Protection Agency (EPA) Comprehensive Procurement Guidelines (CPG) for recycled-content products. The Contractor shall use recycled-content products as required by EPA and other governmental agencies and Federal Acquisition Regulation (FAR) clauses.

*The recycled-content products listed in the Comprehensive Procurement Guidelines (CPG) can be found in the EPA website at: <http://www.epa.gov/epawaste/conserve/tools/cpg/index.htm>*

It is mandated by Executive Order 13423: Strengthening Federal Government, Energy, and Transportation Management (26 Jan 07) and Section 6002 of the RCRA that the Federal Government use recycled-content products in the construction and/or renovations of facilities. It is the intent of the Government to comply with the Environmental Protection Agency (EPA) requirement 100% of the time and use as many of the applicable listed recycled-content products as feasible and economically practical. The Contractor shall consider this a standard requirement for all aspects of the project construction.

Before starting the project, the Contractor shall create a Recycle Report Checklist **Appendix G**. The Contractor will provide this plan to the KO, the Project Manager, and the DPW-EMD Recycling Manager. During the accomplishment of the project construction, the Contractor may have to adjust this plan indicating the use and non-use of products and/or solid waste and will list all applicable items that have been recycled and not recycled.

The Contractor shall report on a monthly basis the tonnage of items reused, recycled, land-filled, and disposed by regular or waste-to-energy incineration to the KO, DPW-EMD Recycling Manager and Fort Lee's Recycling Coordinator by the 10th day of each month during the period of performance. This report will be for the previous month. The report shall list the title of the project, the contract number, the Contractor's company name and point-of-contact, phone number, the type of items (i.e. concrete, concrete with rebar, asphalt, brick, scrap metals, wood, wallboard, etc.) and the tonnage of those items re-used and recycled. For items disposed of, a total tonnage shall be provided for items land-filled and a separate total tonnage provided for items incinerated, (specify waste incinerator or waste-to-energy incinerator), unless the Contractor prefers to report disposal figures for the various items. For items that cannot be accurately measured, estimates will be sufficient. Use the form in **Appendix G** as a guide to report this information to the KO and the Environmental Management Office's Recycling Program Manager. (*Address below*)

DEPARTMENT OF THE ARMY  
DPW ENVR MGMT DIVISION  
ATTN: RECYCLING MANAGER  
825 19<sup>TH</sup> STREET, BLDG 6005  
FORT LEE VIRGINIA 23801

\*\*\*\*\*

***A FINAL recycling report must be signed by the Contractor as the "Procurement Originator" and then delivered to and signed by the DPW-EMD Recycling Manager. These forms shall be kept in the DPW-EMD record management system indefinitely.***

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## 1.8 SUSTAINABILITY



The goals of the Army's sustainability strategy are as follows:

- 1) *Foster a sustainability ethic:*
  - ❖ *Foster an ethic within the Army that takes us beyond environmental compliance to sustainability.*
- 2) *Strengthen Army operations:*
  - ❖ *Strengthen Army operational capability by reducing our environmental footprint through more sustainable practices.*
- 3) *Meet training, testing, and mission requirements:*
  - ❖ *Meet current and future training, testing and other mission requirements by sustaining land, air and water resources.*
- 4) *Minimize impacts and total ownership costs:*
  - ❖ *Minimize impacts and total ownership costs of Army systems, material, facilities, and operations by integrating the principles and practices of sustainability.*
- 5) *Enhance well-being:*
  - ❖ *Enhance the well-being of our Soldiers, civilians, families, neighbors, and communities through leadership in sustainability.*
- 6) *Drive innovation:*
  - ❖ *Use innovative technology and the principles of sustainability to meet user needs and anticipate future Army challenges.*

These goals were derived from the Army Strategy Map and all six goals support the Army's four overarching integrated goals. Sustaining the health and welfare of local communities is the starting place for sustaining the health and welfare of the world. We all depend upon a quality environment and availability of needed resources to preserve our quality of life for all Soldiers and civilians alike.

Sustainable design techniques will be implemented as they relate to site and building design, construction, operation, and deconstruction. Techniques that conserve energy, improve liability, and that can be justified by life cycle cost analysis as cost effective are required.

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### 1.8.1 LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)

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LEED is required to the greatest extent possible for all projects. The contractor should incorporate LEED elements and principles to the maximum extent practicable for the construction of the facilities that make up this project. The goal of the design and construction of the project is to incorporate the necessary elements to receive LEED Silver rating points; however LEED certification is not required. This project **should** be registered with the *United States Green Building Council* at the beginning of the design phase and this process shall be followed up to the certification (if desired).

Written LEED updates shall be given to the DPW-A&ED (Architectural & Engineering Division) no less than quarterly to ensure that the project finishes at a minimum of LEED Silver per contract. The contractor shall conduct periodic update meetings as required by LEED. The final LEED Checklist must be provided to the Project Manager and to the DPW-A&ED.

***For additional LEED guidance information from USACE Army LEED Implementation Guide***

***[http://www.sas.usace.army.mil/Portals/61/docs/Engineering/EngineeringCriteria/USACE\\_LEED\\_Impl\\_Guide\\_21Aug11.pdf](http://www.sas.usace.army.mil/Portals/61/docs/Engineering/EngineeringCriteria/USACE_LEED_Impl_Guide_21Aug11.pdf)***

***This implementation guidance applies to USACE-executed new construction, renovation and demolition projects located on Army property. You will be accessing a U.S. Government (USG) Information System (IS) that is provided for USG-authorized use only. Paragraphs 5 through 16 addresses USACE processes for implementing LEED and are applicable to all USACE projects requiring LEED.***



### 1.8.1.1 LEED CREDITS

LEED uses six main categories for which differing numbers of points can be achieved. Some points are considered ‘Required,’ while others form a menu to select from. These categories include the following:

#### *Main credit categories*

- **Sustainable sites credits** encourage strategies that minimize the impact on ecosystems and water resources.
- **Water efficiency credits** promote smarter use of water, inside and out, to reduce potable water consumption.
- **Energy & atmosphere credits** promote better building energy performance through innovative strategies.
- **Materials & resources credits** encourage using sustainable building materials and reducing waste.
- **Indoor environmental quality credits** promote better indoor air quality and access to daylight and views.

#### *Additional LEED for Neighborhood Development credit categories*

- **Smart location & linkage credits** promote walkable neighborhoods with efficient transportation options and open space.
- **Neighborhood pattern & design credits** emphasize compact, walkable, vibrant, mixed-use neighborhoods with good connections to nearby communities.
- **Green infrastructure & buildings credits** reduce the environmental consequences of the construction and operation of buildings and infrastructure.

#### *Additional LEED for Homes credit categories*

- **Location & linkage credits** encourage construction on previously developed or infill sites and promotes walkable neighborhoods with access to efficient transportation options and open space.
- **Awareness & education credits** encourage home builders and real estate professionals to provide homeowners, tenants and building managers with the education and tools they need to understand and make the most of the green building features of their home.

#### *Two bonus credit categories*

- **Innovation in design or innovation in operations credits** address sustainable building expertise as well as design measures not covered under the five LEED credit categories. Six bonus points are available in this category.
- **Regional priority credits** address regional environmental priorities for buildings in different geographic regions. Four bonus points are available in this category. *Points possible = 100 points (+10 bonus)*

#### *LEED Certification Levels*

A project is LEED certifiable if it can meet all prerequisites and achieve the minimum number of points to earn the Certified LEED level. Based on the evaluation outcome, a project’s total score is calculated and compared to the following certification levels:

- **Certified:** 40-49 points earned
- **Silver:** 50-59 points earned
- **Gold:** 60-79 points earned
- **Platinum:** 80+ points earned



### 1.8.1.1.1 LEED PROJECT REQUIREMENTS

The Contractor will be required to take the following steps with regard to the goal of a LEED Silver Rating:

- 1) Identify a LEED Accredited Professional on its team to champion sustainable design issues.
- 2) Upon award, register with the United States Green Building Council (USGBC) to establish contact and gain essential information, software tools and communication procedures.
- 3) Once the project is registered, the Offeror will prepare documentation and calculations to satisfy the prerequisite and credit submittal requirements.
- 4) Communicate with the USGBC for guidance in meeting point criteria. The USGBC has established a review process for registered project inquiries called credit interpretation requests which ensure consistency across projects.
- 5) At each design submittal phase, prepare an update on the status of the design in meeting the project requirements of LEED Silver. Provide documentation and calculations to verify goal attainment.
- 6) During the construction phase, maintain required documentation and calculations to verify goal attainment.
- 7) Upon project completion, compile a final documentation submittal to the Corps of Engineers detailing how the goals (and points) were attained.
- 8) Actual certification with the USGBC is not required unless stated to be within the contracting and scoping documents.

Any questions about LEED requirements please contact the LEED Specialist:  
  
804-765-7566

## 1.8.2 ENERGY

Federal agencies are required by the Energy Policy Act of 2005 (P.L. 109-58), Executive Order 13423, Energy Independence and Security Act (EISA) of 2007, and Federal Acquisition Regulation (FAR) Section 23.203 to incorporate the performance criteria used for ENERGY STAR®-qualified and FEMP-designated products into procurement contracts for energy consuming products and systems with emphasis on consideration of renewable energy technology to reduce purchased energy for conservation.

Any questions about Fort Lee Energy Compliance please contact the Energy Manager:  
  
804-734-4100 or  
804-734-3766

Criteria for ENERGY STAR Qualified products can be viewed at:  
[http://www.energystar.gov/index.cfm?c=products.pr\\_find\\_es\\_products](http://www.energystar.gov/index.cfm?c=products.pr_find_es_products)

## 1.9 AIR QUALITY

### 1.9.1 OVERVIEW OF APPLICABLE REGULATORY REQUIREMENTS



Fixed, installed real property that produces or has the potential to produce criteria, hazardous air pollutant (HAP), greenhouse gas (GHG), or ozone-depleting chemical (ODC) emissions to the atmosphere constitutes an emissions unit at USAG-Fort Lee that is subject to the regulations set forth under the Clean Air Act. All emissions units on Department of the Army property at USAG-Fort Lee must meet applicable requirements and performance standards as specified by Fort Lee’s Garrison Commander through Fort Lee’s DPW-EMD. DPW-EMD will make the final recommendation on whether the environmental regulatory, stewardship,



sustainability, and technical aspects of current and future operations are sufficient to meet the intent of the Clean Air Act and Fort Lee's sustainability, efficiency goals and strategies. Only projects found by DPW-EMD Air Quality Program to demonstrate compatibility with the aforesaid aspects are eligible for approval and may proceed through procurement and construction.

Fort Lee DPW-EMD Air  
Quality Program Staff can  
be contacted at:

804-734-5061  
804-734-5123

Pertinent applicable regulatory requirements pertaining to non-stationary mobile sources are also enforced by these Environmental Special Condition requirements that follow. Any owner / operator of stationary source or mobile source equipment on Fort Lee property has a duty to understand and adhere to the applicable legal requirements as necessary to protect human health and the environment. The following requirements do not set forth all existing stationary and/or mobile source Clean Air Act regulatory requirements for which the owner / operator may be subject. Adherence to these Environmental Special Condition requirements does not imply adherence to all applicable requirements set forth under the Clean Air Act to which the applicable entity may be subject.

## 1.9.2 EMISSIONS UNIT REQUIREMENTS (USAG-FORT LEE EQUIPMENT)

Emissions units for which USAG-Fort Lee assumes full ownership and complete guiding, managing, and regulatory control are authorized to be included in USAG-Fort Lee Air Permit. Prior to procurement, each proposed emissions unit operated by USAG-Fort Lee or a Contractor must be submitted for review and approval by the DPW-EMD Air Quality Program. Refer to 'EMISSIONS UNIT REQUIREMENTS (THREE-PHASE REPORTING)' for additional requirements.

### 1.9.2.1 EMISSIONS UNIT REQUIREMENTS (TENANT / OTHER ORGANIZATION EQUIPMENT)

Only emissions units for which USAG-Fort Lee assumes full ownership and complete guidance, management, and regulatory control are authorized to be included in USAG-Fort Lee Air Permit. Emissions units associated with the following tenant organizations are **NOT** included on USAG-Fort Lee Air Permit:

- *U.S. Air Force*
- *U.S. Marine Corps*
- *Army Air Force & Exchange Service*
- *Defense Contract Management Agency*
- *Defense Commissary Agency*
- *Old Dominion Utility Service*
- *Virginia American Water Company*
- *AT&T / New Cingular Wireless*
- *Petersburg Cellular Partnership / Verizon Wireless*
- *Fort Lee Commonwealth Communities (Pinnacle Properties, LLC)*

Since the above entities constitute public/private organizations separate and distinct from the USAG Fort Lee. USAG-Fort Lee assumes no legal responsibility for the emissions units operated by or on behalf of the aforementioned organizations, or on behalf of any future organization that proposes installation of an emissions unit at Fort Lee. Although legal title to the property on which Fort Lee tenant organizations' facilities are located is held by the United States Government and carried on Fort Lee's property book, operational control of the facilities are held by that tenant organization regardless of installed equipment, property book, ownership considerations, assignment, or other circumstances.



Any organization, including those listed above, that proposes procurement and construction of an emissions unit at Fort Lee will comply with the following requirements at a minimum:

- 1) *Submit a detailed description of the proposed emissions unit including information adequate to support verification of potential emissions estimation by Fort Lee personnel 180 days prior to proposed installation. Information will include: rated capacity, fuel type(s), proposed operational activity rate, manufacturer, model, manufacturer year and month and any other information deemed necessary by DPW-EMD Air Quality Programs.*
- 2) *Designate a Responsible Official for its air emission sources, as defined by the Clean Air Act: “[a] principal executive officer, which includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency.”*
- 3) *Sign air regulatory documents and certify the accuracy of the contents, respond to enforcement actions, and be the point of contact (POC), or designate an on-site POC, to escort a VDEQ/EPA regulator during an inspection of emissions units and associated equipment.*
- 4) *Cooperate with regulatory audits and inspections conducted by the Department of the Army and their contractors, and federal and state regulators and notify DPW-EMD prior to announced environmental regulatory inspections or during unannounced environmental regulatory inspections.*
- 5) *Inform the applicable regulatory agency (VDEQ or United States EPA, Region III) in writing when the responsible official changes and provide a copy of the letter to DPW-EMD within 15 days of said change.*
- 6) *Notify Fort Lee DPW-EMD of plans to install, relocate, reconstruct, modify, or replace any air emission sources to be operated at Fort Lee at the initiation of the planning process (i.e., prior to the procurement of equipment).*
- 7) *Notify Fort Lee DPW-EMD prior to any planned operating scenario modifications that could result in a change in regulated air emissions from equipment (Note: Examples of operating scenario modifications that could have air emission impacts include, but are not limited to, changes to fuels or operating schedules).*
- 8) *Submit any proposal consistent with the above conditions to a full technical, regulatory, and sustainability review 120 days prior to the proposed changes and obtain DPW-EMD's expressed written approval prior to executing the change.*
- 9) *Retain applicable files to demonstrate the emissions unit(s) has been registered with VDEQ.*
- 10) *Pay air program fines and penalties resulting from mission activities and report all instances of non-adherence and notification of enforcement actions to the Fort Lee Garrison Commander immediately (IAWAR 200-1).*
- 11) *Register, operate, and maintain equipment that generates air emissions in accordance with all applicable State and Federal laws and regulations and in a manner consistent with good air pollution control practices for minimizing emissions. Emergency generators will be operated in accordance with New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants.*
- 12) *Operate DPW-EMD approved emissions units for the sole support of the organizations' owned, operated infrastructure and will not engage in a relationship, contractual or otherwise, with an entity to provide for a peak-shaving, load-shedding or any other type of distributional power unit aimed at supplementing grid power, nor will it engage in such an operation on its own at Fort Lee.*
- 13) *Sign a Memorandum of Understanding with USAG-Fort Lee's Garrison Commander 90 days prior to equipment procurement/installment to be executed effective immediately from the date of signatures and to remain in effect for an indefinite period, or until such time that both parties agree to make changes, relevant equipment no longer is located at Fort Lee or regulations change requiring the removal of the equipment.*

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### 1.9.3 EMISSIONS UNIT REQUIREMENTS (THREE-PHASE REPORTING)

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Prior to procurement, all proposed emissions units operated by USAG-Fort Lee, tenant organization, or other duly assigned non-Fort Lee operational entity must be submitted for review and approval by the DPW-EMD Air Quality Program. Failure to obtain said pre-procurement formal approval will result in equipment uninstall and removal from Fort Lee property. After formal approval has been provided and to ensure the submittals for emissions units meet the DPW-EMD's air quality regulatory requirements, the applicable point of contact (Government Project Manager, Tenant Organization POC, or Contractor) will submit the following information:





To...	usarmy.lee.imcom.mbx.lee-dpw-environmental-management@mail.mil
Cc...	
Bcc...	
Subject	Air Quality Program

Include the reason for email and arrangements that can be made to pick up the information at the site

The following equipment will be required for inclusion in the Three-Phased Approach:

- 1) *Natural Gas-Fired Heating Equipment (including but not limited to: boilers, water heaters, furnaces, unit heaters)*
- 2) *Compression / Spark Ignition Reciprocating Engines including but not limited to: non-emergency / emergency generators, fire pumps, light sets, popper / deformer generators*
- 3) *Paint Booth Equipment / Blasting Equipment*
- 4) *Fire Fighting Training Equipment*
- 5) *Welding Equipment*
- 6) *Solvent Cleaners including but not limited to parts washers and weapons cleaners*
- 7) *Underground Storage Tanks (USTs) including but not limited to those storing: gasoline, MOGAS, E-85, jet propulsion-8 (JP-8), No. 2 distillate oil, diesel fuel, and biodiesel.*
- 8) *Aboveground Storage Tanks (ASTs) including but not limited to those storing: all of the above fuel types set forth by (g).*
- 9) *Woodworking Equipment*
- 10) *Pumps*
- 11) *Engine Testing / Heating Equipment, not including kitchen, dining facility, laundry equipment, or portable heaters, unless said portable heater will remain in operating mode in one location for greater than 12 months.*
- 12) *X-Ray Operations*
- 13) *Landfills*
- 14) *Make-Up Air Unit*
- 15) *Roof-Top Units*
- 16) *Any other equipment that emits pollutants.*

**For questions or copies of  
the Three-Phased Approach  
Contact the DPW-EMD Air  
Quality Program at:**

**804-765-7546**

### 1.9.3.1 EMISSION UNIT INFORMATION REQUIRED FOR THREE-PHASED APPROACH

DPW-EMD is required to have and submit supporting documentation to regulators verifying equipment specifications and emissions (e.g. manufacturer's stack testing / emissions certifications not to exceed emissions data). Accordingly, ensure submittal of this manufacturer's information to DPW-EMD Air Quality Program for each piece of equipment per the Three-Phased Approach. Information can be emailed with the following instructions:

If there is uncertainty as to the ownership or operational control assignment of pollutant-emitting equipment, contact the DPW-EMD Air Quality Program Manager for guidance.



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Phase 1 - Prior to ordering equipment, the Contractor must provide the information required in Appendix H. The data reported will be estimated if actual data is unavailable and so noted with an asterisk. If the information is to be determined it will be entered as "TBD".

Phase 2 - Prior to equipment delivery, the Contractor must provide all of the information in Appendix H. The data reported shall be actual data; no estimated data will be accepted in this phase. Submit supporting documentation verifying rated capacity and emissions rates (e.g. manufacturer's stack testing/emissions certifications/not to exceed emissions data) to DPW-EMD Air Quality Program for each fuel-burning piece of equipment. Contact the DPW-EMD Air Quality Program to make arrangements to deliver information.

Phase 3 - Prior to equipment startup, the Contractor must include as part of his/her schedule the following notifications to the DPW-EMD Air Quality Program:

- i. 5-day notification prior to the date that equipment is installed.
- ii. 45-day notification prior to the date the Contractor anticipates starting the equipment.
- iii. 5-day notification prior to the date the equipment is actually started.

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### 1.9.3.2 LOW NITROGEN OXIDES (NO<sub>x</sub>) REQUIREMENT (FURNACES / BOILERS / UNIT HEATERS / MAKE-UP AIR UNITS / OTHER EXTERNAL COMBUSTION UNITS)

Emission control requirements refer to Section 1.13.1.3 for the three-phased approach for adding this equipment: The emissions units covered by this section will be high-efficiency units and shall be fired with only natural gas, and under no circumstance will these emissions units be equipped with the capability of burning No. 2 distillate fuel oil, or any other distillate, residual fuel oil type. They shall be equipped with a low nitrogen oxide (NO<sub>x</sub>) burner system for guaranteed NO<sub>x</sub> performance when using natural gas at no greater than 30 parts per million (ppm), dry volume basis and corrected to 3% excess oxygen (O<sub>2</sub>).

USAG Fort Lee, the tenant organization, or other duly assigned non-Fort Lee operational entity shall provide the following information regarding any equipment that burns natural gas to produce heat:

- *Equipment Manufacturer, Type, and Model Number*
- *Date of Manufacture*
- *Fuel type (natural gas only)*
- *Maximum Rated Input Heat Capacity and Output Capacity (in mmbtu/hr)*
- *Output Brake Horsepower (in BHP)*
- *Steam Quantity (in lb/hr)*
- *Vent Stack Configuration, Height, Velocity*
- *Manufacturer-Specific Emission Factors (if available)*
- *Low NO<sub>x</sub> Manufacturer Support Documentation (see below)*
- *Anticipated Operating Schedule (broken down by annual quarters in percentage format)*
- *Name, Address, Phone Number, Facsimile Number, Position/Title of Point-of-Contact and Responsible Official as defined by 9 VAC 5-80-60.C.*

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**NOTE:** The following low NO<sub>x</sub> requirement guidelines are provided to ensure that USAG-Fort Lee, the tenant organization, or other duly assigned non-Fort Lee entity adheres to this requirement:

**Installation of out-of-spec. equipment will lead to equipment uninstall, retrofit, and reinstall or total equipment replacement with equipment sufficient to meet the 30 ppm performance standard.**

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Prior to equipment purchase, low NO<sub>x</sub> certification will be obtained and will be sent to: ATTN: DPW-EMD Air Quality Program or will call 804-765-7546 to arrange hand delivery. Reference that the equipment is on a South Coast Air Quality Management District (SCAQMD) low-NO<sub>x</sub> list is not adequate to demonstrate compliance with this performance standard. A product pamphlet, brochure, or sticker indicating NO<sub>x</sub> emissions performance is not adequate to demonstrate compliance with this performance standard.

To demonstrate final adherence with this requirement, send DPW-EMD Air Quality Program “not to exceed” and/or actual model/unit-specific stack testing data PRIOR to equipment purchase. If quantitative low-NO<sub>x</sub> documentation that is technically-sufficient to meet DPW-EMD's requirements is not obtainable from the manufacturer after equipment installation is completed, the Contractor must provide the services of a field representative for stack testing. The Contractor shall provide DPW-EMD Air Quality Program with a copy of these stack testing results adequate to demonstrate compliance with the 30ppm NO<sub>x</sub> guarantee within five (5) business days after commissioning the unit.

When fuel-burning equipment is installed, ensure that the fuel-burning equipment is less than 10 million British thermal units per hour (maximum rated capacity).

#### 1.9.3.2.1 VOLATILE ORGANIC COMPOUNDS (VOCs)

All coatings and solvents used in the performance of this contract shall meet the required performance specifications and shall not exceed the volatile organic compound limits of the Air Pollution Control Districts where they are used.

#### 1.9.3.2.2 VOC WORK PRACTICE STANDARDS

VOCs shall not be intentionally spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution practices for minimizing emissions.

If the Contractor anticipates a significant amount of the material is to be used during the course of the project, the Contractor shall maintain **Material Safety Data Sheets (MSDS)** or other vendor information showing VOC content of each resin, catalyst, solvent, cleaning solution or other substance used.

#### 1.9.3.2.3 SOLVENT USE

Depending on the type of solvent cleaning equipment, Fort Lee will be subject to 9 VAC 5-40-3260 (Rule 4-24), Emission Standards for Solvent Metal Cleaning Operations Using Non-Halogenated Solvents. As part of an effective ozone control strategy, operations that use solvents (e.g., hand wiping, immersion, or vapor degreasing for surface cleaning, paint clean up, and general maintenance activities) should employ pollution prevention measures such as use of non- or low-VOC content solvents. As well, Hazardous Air Pollutants (HAP) emissions can be reduced by substituting very low HAP (less than five percent) or HAP-free exempt products. A HAP-free water-reducible product should be used for cleaning paint guns and lines. Notably, the decision and authority to use an alternative product must follow the appropriate implementation route. Although **methyl ethyl ketone (MEK)** was recently delisted as HAP, it is not to be considered a viable alternative solvent. **Ozone Depleting Substances ( )** solvents shall not be used without the approval of the Environmental Support Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology). Solvent Distillers should be used wherever possible to reduce solvent materials by reusing the solvent.

#### 1.9.3.3 FUGITIVE DUST EMISSIONS CONTROL



The Contractor shall not cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions include, but are not limited to, the following:

- a) *Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land. Water must be on site daily prior to beginning work.*
- b) *Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles and other surfaces which may create airborne dust or the paving of roadways and maintaining them in a clean condition.*
- c) *Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.*
- d) *Open equipment for conveying or transporting materials likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion.*
- e) *The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion. (9 VAC 5-40-90)*

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## 1.9.4 EMERGENCY/NON-EMERGENCY GENERATORS

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### 1.9.4.1.1 EMISSION CONTROL REQUIREMENTS

Standards for exhaust emissions from stationary diesel generator sets shall adhere to the following standards:

No compression ignition or spark ignition internal combustion engine (CI / SI) shall be installed at USAG-Fort Lee that is unable to demonstrate compliance with the tiered emission limits set forth by New Source Performance Standards (NSPS) Subpart IIII or Subpart JJJJ corresponding to either the actual year of physical installation or a year subsequent to the actual year of physical installation, unless the emission standards for a previous model year are equivalent in magnitude. This requirement applies to emergency, non-emergency, or any combination thereof regardless of the following:

Project gained approval by the permitting authority, controlling entity assignment, percentages of output agreements, pattern of ownership agreements, status as mobile/stationary source, or any contractual language that proposes circumvention of this requirement.

### 1.9.4.1.2 TIER 4 EMISSION STANDARDS

Regardless of the engine's power, all air emission sources whose construction, modification, or reconstruction commenced after January, 2011 shall be in accordance with 40 CFR 60, Subpart IIII and JJJJ, and be certified to Tier 4 emission standards regardless of model year of the engine.

### 1.9.4.1.3 FUEL REQUIREMENTS

As of 1 October 2007, diesel stationary engines must use diesel fuel with a maximum sulfur content of 500 parts per million (ppm). Beginning 1 October 2010, diesel stationary engines with a displacement of less than 30 liters per cylinder must use diesel fuel with a maximum sulfur content of 15 ppm.

### 1.9.4.2 POLLUTANT-EMITTING EQUIPMENT/VEHICLES

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All pollutant-emitting equipment shall operate in strict accordance with Virginia Regulation 9 VAC 5-40-5670 PART II Emission Standards, ARTICLE 41 "Emission Standards for Mobile Sources (Rule 4-41)".

In the event a unit fails to meet these criteria by emitting smoke other than during immediate start-up or shut-down, the operator must shutdown the unit immediately and in a manner that ensures safety; the operator must perform repairs or replace the unit with a unit that can be operated in a manner that adheres to this regulation.

### 1.9.4.3 OZONE-DEPLETING SUBSTANCES AND CHEMICALS (ODS/ ODC)

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The Contractor shall comply with the United States Environmental Protection Agency (EPA) regulations issued under Title VI, Sections 601-607 of the Clean Air Act pertaining to ODS.

The Contractor shall not employ or provide Class I ODS on Fort Lee, Virginia. Contracts may not include any specification, standard, drawing, or other document that requires the use of a Class I ODS in the design, manufacture, test, operation or maintenance of any system, subsystem, item, component, or process. Contracts may not require the delivery of any items of supply that contains a Class I ODS or any service that includes the use of a Class I ODS.

#### 1.9.4.3.1 GENERAL AIR CONDITIONING & REFRIGERANT (AC&R) REQUIREMENTS

Contractors shall be responsible and accountable for compliance with the EPA Clean Air Act (CAA) Section 608, 40 CFR Part 82 related work. A selection of specific responsibilities is listed below:

- 1) Contractor shall ensure that all contractor employees are made aware of the content of 40 CFR Part 82 prior to beginning work on AC&R equipment.
- 2) Contractor shall comply with all requirements set forth within the most recent version of Fort Lee Refrigerant Management Plan.
- 3) Contractor shall provide only proper level EPA-certified technicians using EPA-certified and registered recovery/recycle units to perform work on Fort Lee Air Conditioning and Recovery (AC&R) equipment.
- 4) Contractor shall maintain and submit on request:
  - o documents with the information to confirm EPA Certification of all service technicians (Copies of EPA Certification Cards are acceptable)
  - o a list of recovery/recycling units to be used and a statement from the Contractor that recovery units are operating to EPA standards and that units are registered with the EPA
- 5) Contractor shall cover and hold Fort Lee harmless from all regulatory action as a result of their failure to perform service that meets all requirements of federal regulations.
- 6) Contractor shall maintain and provide upon request all service order data for AC&R equipment including equipment ID number and/or serial number, equipment manufacturer and model number, location of equipment, refrigerant type, date of service, and service, repair or disposal description.
- 7) The Contractor will comply with all applicable sections of the Department of Defense Ozone-Depleting Substances Turn-In Procedures dated January, 2008 hereinafter referred to as DoD Procedures. The Contractor will follow the DoD Procedures in any case where the following ODC/ODS are present and require recovery: Chlorofluorocarbons (CFCs) 11, 12, 114, 500, 502; Halons 1202, 1211, 1301; and HCFC-22 (i.e. R-22).
- 8) Refer to the Fort Lee RMP for more details on procedures and specifications pertaining to refrigerants.

Using a CAC card, Fort Lee regulations and guidance can be found on the Intranet within the EMD Program Areas or by contacting the appropriate EMD Program Manager. ARMY wide regulations can be found on the Internet as well.

[https://army.deps.mil/army/cmds/imcom\\_usag15/flg/dpw/emd/SitePages/cAirQuality\\_ProgramPage.aspx](https://army.deps.mil/army/cmds/imcom_usag15/flg/dpw/emd/SitePages/cAirQuality_ProgramPage.aspx)

#### 1.9.4.4 OPEN BURNING

Open Burning is not permitted on Fort Lee property.

#### 1.9.4.5 ASPHALT CUTBACKS

Use of asphalt cutbacks is not permitted on Fort Lee property.



## 1.10 ASBESTOS CONTAINING BUILDING MATERIAL & LEAD BASED PAINT

Asbestos containing building materials may not be used on Fort Lee projects. Contact DPW-EMD to determine the extent of Asbestos Containing Materials or Lead Based Paint present in existing facilities affected by the project.

Contractors will coordinate with the DPW-EMD Asbestos/Lead Specialist shall be included in the Asbestos/Lead testing to determine the appropriate tests. If asbestos not previously known to exist is exposed, the Contractor shall cease work in the affected area and notify the Contracting Officer and DPW-EMD immediately.

Testing shall adhere to the following procedures:

- 1) *DPW-EMD shall be notified in advance of testing to have the option of witnessing the testing.*
- 2) *All testing shall be performed by a Third-Party contractor that is trained, certified and licensed in the Commonwealth of Virginia as an Inspector.*
- 3) *Third-Party contractor must be contracted by the Primary Contractor and have no affiliation to the abatement contractor.*
- 4) *All samples shall be accompanied by a Chain of Custody (COC).*
- 5) *DPW-EMD shall receive a copy of the COC and lab results.*

**Any questions about  
Asbestos/ Lead Testing  
please contact the Fort Lee  
Air Quality Specialists at:**

**804-734-5123**

Failure to follow these procedures may result in the rejection of sample results.

### 1.10.1 ASBESTOS

The Contractor will submit abatement plans that include but are not limited to the following elements:

- 1) *Location, quantity, and description of how abatement is to be accomplished*
- 2) *Required notifications and schedule the Contractor will use to comply with notification deadlines, requirements*
- 3) *Contractor's and Sub-contractor's current licensing, certifications, fit test, safety requirements and air sampling documentation*
- 4) *Third-party contractor conducting environmental sampling and monitoring should be onsite at all times during the duration of abatement procedures (the Third-Party contractor must be contracted by the Primary Contractor and have no affiliation to the abatement contractor)*
- 5) *Drawings of the locations of negative air machines, decontamination units, and waste dumpsters*
- 6) *Landfill certifications*

As soon as practicable, Contractor will submit final air clearance results to the Contracting Officer for forwarding to DPW-EMD. Upon review of final air clearance results, DPW-EMD will notify the COR whereupon the Contractor will receive formal communication originated by DPW-EMD that sample results meet the applicable performance standards prior to containment teardown for work area re-occupancy. The Contractor will submit the Abatement Plan, revisions, and all other associated documentation requested by DPW-EMD to the COR and Installation Asbestos Program Manager (APM) prior to the initiation of work. The plan must be approved by the APM.

#### 1.10.1.1 ASBESTOS ABATEMENT OR REMOVAL NOTIFICATION

If the project requires asbestos removal, the Contractor is responsible for disposal of asbestos waste and debris. Contractor is subject to OSHA, EPA and Commonwealth of Virginia compliance and inspection for asbestos removal. The Contractor must perform asbestos removal work in accordance with these specifications and EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) for asbestos and any subsequent updates thereto. This includes state and EPA Region 3 notifications that



shall be accomplished at least 20 days prior to starting any asbestos abatement or removal. A copy of the notification shall be submitted to the KO and Installation Asbestos Program Manager.

**1.10.1.2 ASBESTOS AWARENESS TRAINING REQUIREMENTS**

The Contractor will adhere to the following requirements for individuals who are in contact but not removing asbestos containing material:

- 1) *The Contractor shall provide, at no cost to the Government, for those Contractor employees who may perform housekeeping operations in an area which contains Asbestos Containing Material (ACM) or Presumed Asbestos Containing Material (PACM), an asbestos awareness training course;*
- 2) *The training shall be as needed but no less than once per year and consist of a minimum 30-45 minute awareness training course; and*
- 3) *The training course shall, at a minimum, contain the following elements:*
  - a) Health effects of asbestos
  - b) Locations of ACM and PACM in the building/facility
  - c) Recognition of ACM and PACM damage and deterioration
  - d) Requirements in this standard relating to housekeeping
  - e) Proper response to fiber release episodes
  - f) Each such employee shall be so trained at least once a year.

**1.10.1.3 ASBESTOS MANIFESTS**

If the project requires asbestos removal, all asbestos waste manifests shall be signed by DPW-EMD prior to removal of such waste from Fort Lee. A copy of the completed manifest (signed by the receiving landfill) shall be submitted to DPW-EMD within 10 days of removal of the waste from the Installation.

**1.10.2 LEAD**

If lead-based paint not previously known to exist in buildings built prior to 1978 is exposed, the Contractor shall cease work in the affected area and notify the Contracting Officer and DPW-EMD immediately.

**1.10.2.1 LEAD BASED PAINT RENOVATION/ABATEMENT PLAN**

If the project requires lead-based paint renovation, removal, or abatement, the Contractor will submit work plans to include, but not limited to, the following elements:

- 1) *Location, quantity and description of how abatement / renovation is to be accomplished;*
- 2) *Required notifications and schedule the Contractor will use to comply with notification deadlines and requirements;*
- 3) *The Contractor's and sub-contractor's current licensing, certifications, fit test, safe work practices, safety requirement and air sampling;*
- 4) *The third-party contractor conducting environmental sampling and monitoring to be onsite at all times during the duration of abatement procedures and must be contracted by the primary contractor with no affiliation to the abatement contractor;*
- 5) *Drawings of the locations of negative air machines, decontamination units, and hazardous waste containers.*

**Any questions about Asbestos or Lead please contact the Fort Lee Air Quality Specialists at:**

**804-734-5123**

As soon as practicable, Contractor will submit final wipe sample results to the Contracting Officer for forwarding to DPW-EMD. Upon review of final wipe sample results, DPW-EMD will notify the COR whereupon the Contractor will receive formal communication originated by DPW-EMD that sample results meet the applicable performance standards prior to containment teardown for work area re-occupancy.

**1.10.2.2 LEAD BASED PAINT AWARENESS TRAINING REQUIREMENTS**

The Contractor will adhere to the following requirements for individuals who are in contact but not removing lead-containing material:



- 1) *The Contractor shall provide, at no cost to the Government, an awareness training course*
- 2) *Training shall be as needed but no less than once per year and consist of a minimum 30 - 45 minute session*
- 3) *Training shall at a minimum contain the following elements:*
  - a) *Identify activities covered by the OSHA lead standards.*
  - b) *Recognize the dangers of lead exposure and the features of a medical surveillance program.*
  - c) *Recognize the purpose of and the elements of an exposure control plan.*
  - d) *Recognize requirements of the Construction Lead Standard.*
  - e) *Recognize the importance of respiratory protection, proper hygiene and housekeeping procedures.*
  - f) *Identify key features of a medical removal program.*

### 1.10.2.3 LEAD BASED PAINT DISPOSAL

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Lead paint waste and lead contaminated debris must be sampled to determine the level of lead. This may be determined by using lead totals however, if totals exceed 20 times the Toxic Characteristic Leaching Procedure (TCLP) limit, then a TCLP must be performed. DPW-EMD will inform the Contractor on management procedures. If wastes are determined to be hazardous by TCLP, the containers cannot leave the installation until a completed manifest is reviewed and signed by DPW-EMD. If the Contractor knows a quantity of hazardous waste will be less than 55 gallons, he/she must arrange to have that material removed from the installation within 72 hours of generation. If this cannot be accomplished, the Contractor must contact the Hazardous Wastes Manager to store full drums of lead-contaminated waste at the site for no more than 90 days. The drums must be in good condition, labeled properly and closed. Storage of Contractor's containers will only be provided on an emergency basis. If large quantities of debris (> 5 yards) will be generated, then the contractor must coordinate with the Hazardous Waste Manager. The waste will be treated as a Temporary Storage Site (TSS) with increased regulatory requirements.

## 1.11 CONSERVATION

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As one of the pillars of the Environmental Management Division, the Conservation Branch oversees the preservation and management of Fort Lee's Natural and Cultural Resources. Elements of these resources form the most visible and abundant of the installation's environmental constraints. This ties the Conservation Team to every aspect of Fort Lee's planning and mission objectives. These two programs work in concert to retain the installation's natural and cultural heritage together with supporting the military mission.

### 1.11.1 WETLAND PROTECTION

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The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands or Resource Protection Areas as defined by the Chesapeake Bay Preservation Act of 1988.

No land disturbance shall occur within 100 ft. of existing wetlands or stream channels as defined by the Chesapeake Bay Preservation Act. This 100-ft. buffer is referred to as the **Resource Protection Area (RPA)** and is shown on all environmental constraints maps as provided by DPW-EMD.

All **Best Management Practices (BMP)** must be shown on the Sediment and Erosion Control drawings or the Detail drawings. A **Responsible Land Disturber (RLD)** shall be on site for all ground disturbance activity and must have an original current validated certificate on site and received by the DPW-EMD.





See DEQ website for requirements for Responsible Land Disturber (RLD) at:

<http://www.deq.virginia.gov/ConnectWithDEQ/TrainingCertification.aspx>

### 1.11.2 FORESTRY

- 2 All projects that involve the clearing of timber must coordinate with DPW-EMD. Typically timber stands that exceed a quarter of an acre in size may require an official Government estimate of the value, which must be paid to the Government prior to timber harvest. This is required by the Army's reimbursable forestry program which collects these fees and then makes them available to the Installation to supplement other Army natural resources management funding and to implement conservation-based natural resource projects.
- 3 The Contractor shall provide fencing, supervised trimming, and general protection of existing trees and root systems for trees to remain or are affected by the execution of the work, whether temporary or permanent construction. The Contractor shall ensure that the tree protection and trimming areas are coordinated and shown on the site drawings upon completion of the design's final topographic survey. Existing utilities within or adjacent to the sites must be protected by the Contractor and remain active during all phases of construction activities. If work requires an interruption to utility service, the outage must be scheduled and reported through the proper channels IAW Fort Lee Policy.

Any questions about Wetlands or Forestry, please contact the DPW-EMD Conservation Program Manager:

804-734-5080

### 3.1.1 LANDSCAPE & VEGETATION

Contractor shall provide a Landscape Plan prepared by a Registered Landscape Architect or Landscape Designer and landscape improvements complying with UFC 4-010-01, TI 804-11 and UFC 3-210-02, and the acceptable native plantings list as included in Appendix F. Acceptable plantings will consist of low maintenance, low water plants installed in the plant beds or areas. The use of berms to accent the building and plant beds is encouraged when practical existing trees will be protected and saved.

The Contractor is required to collect soil samples and submit them to an accredited testing laboratory and submit the results to the KO (or designated representative) and to DPW-EMD. The Contractor will apply all soil amendments identified in the soil sample report at the identified rates. The Contractor will use only seed blend that is "Blue Tag" certified for use in state of Virginia. The seed blend recommendations must be approved by the KO (or designated representative) and DPW-EMD. In the event Contractor places sod, the sod placed must be Tifway 419 Bermuda grass or another sod type to be reviewed and approved by the KO (or designated representative) and DPW-EMD.

#### Additional Landscape Requirements:

- 1) *Furnished plant material will be guaranteed to be in a vigorous growing condition for a minimum period of 12 months regardless of contract time period. Plant establishment period will continue until 12 months from the Building Occupancy Date (BOD) of the last building.*
- 2) *Planting soil consisting of 4 inches depth of amended existing surface soil, supplemented with imported or manufactured topsoil will be used for all seeded or sodded lawn areas. Provision for topsoil analysis testing to verify suitability of topsoil for intended use. Soil stabilization such as netting, blankets, and stabilizer mats will be included as needed and maintained. Turf areas shall be provided with a minimum slope of 1 percent to provide positive drainage and a maximum slope of thirty percent to prevent erosion and allow for maintenance.*



- 3) All new landscape materials and soil brought onto the site must contain a certification that the materials and soils are free of red fire ants and invasive species for Virginia. No material will be accepted without certification. Clean soil certification and testing requirements are outlined in section 2.10.5.1 "Clean Soil"
- 4) Projects with lawn areas less than one acre will be sodded and will be a hybrid Tifway 419 Bermuda grass, and should be over seeded with perennial ryegrass if installed September through April. Additionally, any sodding or seeding will require watering for the first thirty days as needed. Contractor may ask for an exemption for large lawn areas where sodding is cost prohibitive and get a written waiver for establishment from grass seed. If waiver is granted, seeding blend shall be 80% Tall Fescue, 15% Perennial Ryegrass, and 5% Riviera Bermuda grass. Seed blend must be "Blue Tag" certified for use in state of Virginia. The seed blend recommendations must be approved by DPW-EMD.
- 5) The project areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

## 3.2 CULTURAL RESOURCES

### 3.2.1 INADVERTENT OR EMERGENCY DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

This procedure covers all situations when, during construction or other ground disturbances, inadvertent archaeological resources are found. Regardless of whether a survey has been completed or not the potential for recovery of previously unknown buried archaeological resources is always possible. The procedures in this SOP will go into effect in such occasions.

#### 3.2.1.1 POLICY

Upon inadvertent discovery of archaeological deposits, the ground disturbing activity must immediately be halted, and the **Cultural Resources Manager (CRM)** contacted. The requirements under Section 106 of the **National Historic Preservation Act (NHPA)** and the **Native American Graves Protection and Repatriation Act (NAGPRA)** will be followed during any subsequent examination of the artifacts. For the purposes of this SOP "archaeological deposits" include, but are not limited to, the following: concentrations of lithic material, including stone tools and projectile points pottery, bottles, buttons, bullets, building material (such as brick), and especially bones and obvious burials that are at least 50 years old. The determination of age and significance will be made by the Fort Lee CRM.

Any questions about Archaeology please contact DPW-EMD Cultural Resources Program Manager:

804-734-4434

#### 3.2.1.2 PROCEDURES

- 1) Work will cease in the area of any discovery and the CRM must be notified within 24 hours of the discovery. The CRM and/or archaeologist will visit the site within 24 hours after notification and examine the excavated artifacts, as well as any surrounding deposits. Failure to cease work prior to examination and evaluation subjects the contractor and Fort Lee's Garrison Commander to liability under the ARPA and/or NAGPRA.
- 2) The CRM will determine whether the artifacts are covered under NAGPRA; if a positive determination is made, based on whether the material contains human remains, funerary objects, sacred objects, or objects of cultural patrimony, the CRM will implement the procedures set forth in NAGPRA.
- 3) If the determination by the CRM is that the artifacts are not covered by NAGPRA, the following procedures will be followed:
  - i) If the CRM concludes that the material, although not Native American, is nonetheless human in origin, (s)he will analyze the context, probable age, and significance of the deposit and follow 36 CFR 800;



- ii) If the CRM determines a buried archaeological site exists an evaluation must take place prior to resuming work to determine the significance of the site.
- (a) Should the site be determined eligible for listing on the **National Register of Historic Places (NRHP)** the CRM in coordination with the **State Historic Preservation Officer (SHPO)** and the project proponent shall determine the best course of action to mitigate the impact:
- (i) If feasible, the project may be relocated.
  - (ii) Fort Lee may dispense with an MOA if further evaluation of the site will be limited in scope and the SHPO agrees; however, the results of the evaluation shall be documented and communicated to the SHPO.
  - (iii) Fort Lee may follow NAGPRA and related state and federal laws, if it is believed that human remains may be discovered. In that case, the CRM will consult with the SHPO and affected Native American tribes.
  - (iv) Fort Lee may choose to follow 36 CFR §800.11(b), and use documentation prepared to comply with other laws to fulfill the requirements of the procedures in that section; however, any documentation must meet the standards of the regulation. When using this approach, Fort Lee must also consult with the SHPO and ACHP regarding the actions taken, in accordance with 36 CFR §800.6.
- (b) Consideration for project relocation or redesign should be the first action in order to eliminate any impact to the site. If this relocation is impossible, the CRM will notify the SHPO regarding the discovery, as set forth in 36 CFR 800.6. Unless the work that threatens the artifacts is of an emergency nature, it must continue to be suspended until the consultation is concluded. Once the mitigation is concluded the project can resume.
- (c) If the site is determined not eligible (in consultation with the SHPO's office), the CRM will document the site and advise the project manager that the work may proceed, with the understanding that a qualified archaeologist will continue to monitor the project to make certain that any NRHP eligible material is not endangered and work can resume.
- (d) If either the CRM or the SHPO concludes that the recovered material cannot lead to a determination of significance because insufficient quantities exist, or the nature of the material does not assist such a determination, they may develop an emergency testing plan for the site. During the implementation of the plan, site activities involving excavation must cease. If the CRM and the SHPO determine that the site is eligible for the NRHP, or if they cannot agree on its eligibility, one of the following procedures can be followed:
- (i) If the CRM and SHPO cannot agree on the sites eligibility then the CRM will appeal to the Keeper of the National Register for a determination
  - (ii) Should the site be determined eligible then:
    - Attempt to relocate the project to minimize or negate impact; or
    - Consult with SHPO and appropriate stakeholders on a mitigation strategy prior to impact.

Prior to ground disturbance and during pre-construction meetings DPW-EMD staff will notify the project manager and prime contractors of this SOP, in particular, the requirement to cease work immediately and notify the CRM when archeological artifacts are encountered.

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### 3.2.2 ARCHAEOLOGICAL RESOURCES PROTECTION COMPLIANCE

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The **Archaeological Resources Protection Act of 1979 (ARPA)** makes it a federal crime for persons to excavate, remove, damage, or otherwise deface any archaeological resource or attempt to excavate, remove, damage, or otherwise deface any archaeological resource on federal lands. Fort Lee proactively monitors archaeological sites for violations of this provision and to enforce the laws prohibiting such activity.



In this instance archaeological resources means “any material remains of past human life or activities which are of archaeological interest...” ARPA defines material remains as “physical evidence of human habitation, occupation use, or activity, including the site location or context in which such evidence is found (32 CFR §229.3(a)(2)).The term “of archaeological interest” is defined as “means capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques such as controlled observation, contextual measurement, controlled collection, analysis, interpretation and explanation (32 CFR §229.3(a)(1)).

\*\*\*\*\*

*All contractors, prime and subcontractors, are required to have received a briefing about ARPA prior to the initiation of ground disturbing activities. The training shall be coordinated with the Cultural Resources Staff within the Fort Lee Environmental Management Office. Contractors will be required to present proof attendance (signed attendance sheet) at the job site upon request by DPW-EMD.*

\*\*\*\*\*

*See file 2.1* POLICY

Unauthorized excavation of archaeological remains is prohibited on Fort Lee without receipt of a permit. Permits may be requested from individuals meeting the qualifications as defined in 32 CFR § 229.8.

Per Fort Lee Policy #03-12 in effect as of April 6, 2012 unauthorized metal detecting is prohibited. Any individual metal detecting on Fort Lee without authorization will be subject to criminal prosecution. Persons conducting metal detecting pursuant to scientific data collection of archaeological remains as described in NHPA Section 106 or Section 110 activities under the direction of the CRM or Staff Archaeologist are exempt from this policy.

### 3.3 INSTALLATION RESTORATION PROGRAM (IRP)

The mission for Fort Lee active installation restoration is to perform appropriate cost-effective cleanup so that the property is safe for installation use and to protect human health and the environment.

**Any questions about Installation Restoration, please contact DPW-EMD Installation Restoration Program Manager:**

**804-734-5068**

#### 3.3.1 CONTAMINATED SOIL AND FREE PRODUCT

Any material (soil) that is suspected of containing petroleum products shall be reported to the Contracting Officer or his/her designated representative. If discovered, the Contractor shall mitigate any potential threat to the workers, public and environment. The area that will be disturbed under this contract has the potential to have free product migrate into and under the construction site. The Contractor shall comply with VR-680 and record the quantity of any fuel removed. Contaminated soil and/or free product shall not be used for backfill or removed from the base without written approval from the Contracting Officer. Once removal is approved, Contractor shall dispose of material under guidance of Fort Lee’s Hazardous Waste Manager. All hazardous waste manifests shall be prepared by the Contractor and shall be coordinated, approved and signed by DPW-EMD Hazardous Waste Manager prior to removal of such waste from the base.



### 3.3.2 SITE SAFETY

Ensure workers are informed of potential hazardous exposures from working at IRP sites, and that the appropriate precautions are followed to minimize hazards to human health and the environment. Personnel working at these sites shall have 40-hour **HAZardous Waste OPerations and Emergency Response (HAZWOPER) Training**. At least one individual on site should have completed the OSHA 8-hour supervisor training course. The plans identify the boundary of applicable IRP sites. To perform work at these sites, the Contractor must have a Health and Safety Plan and Hazardous Waste Disposal Plan for proper disposal of all regulated materials generated during execution of this project.

Any questions about Site Safety, please contact the Safety Office:

804-765-3123

### 3.3.3 MONITORING WELLS

There may be monitoring wells installed in and around a proposed construction area. Site maps and construction drawings provide the location of these wells. The Contractor shall take all precautions to prevent any damage to wells. If the wells and associated structures are damaged during the project, the Contractor shall repair/replace all damages at no additional expense to the Government. Contractor shall dispose of all regulated materials during repair of the damaged structures and remove any free product as required by VADEQ regulations.

### 3.3.4 ADDITIONAL EXCAVATION



Prior to any excavation beyond the immediate area or boundary of the construction site, the Contractor shall coordinate with DPW-EMD and the Project Manager and obtain the Contracting Officer's approval and may be required to obtain additional digging permits. An excavation support and protection system will be designed, furnished, installed, monitored, and maintained in order to support excavation sidewalls and resist soil and hydrostatic pressure. The excavation support and protection system will be installed and removed without damaging improvements adjacent to excavation. The Safety Office also inspects excavations using all of chapter in 29 CFR 1926.650 of the Construction Industry Regulations.

#### 3.3.4.1 SOIL SUPPORT PROGRAM ACCEPTABILITY

##### 3.3.4.1.1 CLEAN SOIL

Projects requiring clean soil, including but not limited to top soil and backfill materials, to be brought onto Fort Lee or relocated within base property must meet minimum standards based on results of physical (geotechnical) and chemical testing. All materials will meet physical (geotechnical) specifications appropriate for the type of project being accomplished and are typically identified elsewhere in the project specifications. The intent of this section is to prevent contamination from borrowed sources (i.e. planned excavation) and define clean soil based on chemical specifications. Levels of chemical contamination will be determined to ensure borrowed soils may be used for the current and future use of the project location. The Contractor shall implement a plan and confirm that the proposed borrowed soils meet clean soil requirements. The plan should incorporate borrow source information, sampling data, and testing results.

##### 3.3.4.1.2 CLEAN SOIL DETERMINATION



Soils testing under the EPA screening levels and/or base "background" levels will be considered acceptable "clean" soil. Generally, acceptable clean soil must not exceed EPA Region III "Residential" Risk-Based Concentrations (RBC). For use in current and future industrial areas, EPA Region III "Industrial" RBCs may be considered.

3.3.4.2 STOCK PILE AND BORROW SOURCE/SITE

All stockpile areas and borrow sites will be provided with adequate soil erosion and sedimentation control measures, to include but not limited to hay bales, silt fence, and temporary seeding and mulching. Location of stockpile areas and borrow sites shall be coordinated with and approved by the Contracting Officer.

\*\*\*\*\*

*Hay bales shall not be used for erosion control and inlet protection from storm water run-off on the Ordinance Campus or Cantonment Area.*

\*\*\*\*\*

The Contractor shall provide detailed borrow source information (e.g., location, owner, operator, past and current land use, previous chemical testing results) at the point of planned excavation to the Contracting Officer's Representative and the DPW-EMD to determine chemical testing requirements. The Contractor shall also submit a certification stating the materials contain no asbestos, no gross contamination have been discerned by visual or olfactory observations, and no spills of a listed hazardous waste (40 CFR 261) have occurred at the borrow site. If previous chemical testing results exist and are provided, DPW-EMD will evaluate those results to determine if they are sufficient and the proposed borrowed soils meet clean soil requirements. If testing is incomplete, the COR with assistance from DPW-EMD, will review borrow source information to determine chemical sample requirements.

3.3.4.2.1 BORROW SOURCE SAMPLING PLAN

At least one composite sample (6-8 grabs) for each undisturbed borrow source would be taken from the original point of excavation and required for each 5,000 cubic yards (CY) of soil. For soil taken from disturbed borrow sources, samples are required for each 1,000 CY of soil. The nature of the borrow source is to be considered when determining the quantity and depth of the samples. Additional samples may be required to adequately characterize the proposed borrow source (i.e. laterally and vertically). The Contractor shall submit a Sample Plan (to include site map, excavation area, location and depth of samples) to the KO (or designated representative) for DPW-EMD review and approval. Unless otherwise provided in the contract, the Contractor shall bear all expenses of developing the source. For the site where soil is reclaimed from government land, the Contractor will be required to perform final grade and seeding according to project requirements. Any on-base borrow source must be included in the E&SC Plan and the contractor shall be responsible for any required E&SC measures and final stabilization of the site.

3.3.4.2.2 EXCESS SOIL WORK

Acceptable excess soil shall be delivered to the designated location(s) following approved haul routes. For the site where excess soil is deposited on government land, the Contractor may be required to perform final grading and seeding according to project requirements.

3.3.4.3 CHEMICAL TESTING STANDARDS

The analysis must be performed by a laboratory accredited under the Virginia Environmental Laboratory Accreditation Program. Submit a copy of the chain of custody and complete validated report of analysis to DPW-EMD for review and approval 30-days prior to use of any borrow soils. Chemical testing of any borrow



source shall include sampling for the following suite of contaminants (test requirements may be reduced based on borrow source information):

**Total Petroleum Hydrocarbons (TPH)** to include **Gasoline Range Organics (GRO)** and **Diesel Range Organics (DRO)**; **Volatile Organic Compounds (VOCs)** [EPA method 8260B] to include **Benzene, Toluene, Ethyl benzene, and Xylene (BTEX)**;

The soil support test suite shall also include unless generator knowledge suggests otherwise:

- 1) *Semi-volatile Organic Compounds (SVOCs) [EPA method 8270];*
- 2) *Pesticides [EPA method 8081A];*
- 3) *Polychlorinated Biphenyls (PCBs) [EPA method 8082]; and*
- 4) *Target Analyte List (TAL) metals (including Mercury) [EPA method 6010B/7470A]*
- 5) *Volatile Organic Compounds (VOCs) [EPA Method 8260] other than BTEX compound reference in the preceding paragraph*

### 3.3.4.4 EXCAVATION AND DELIVERY SCREENING

Common to any multiple point sampling, composite testing may not accurately characterize the entire site. Should contamination be detected (e.g. free product, stained soils, chemical odors) during excavation or delivery, soils operations shall be immediately discontinued, the Contracting Officer notified, and remain discontinued pending DPW-EMD notification, resolution, and approval of the Contracting Officer of the Contractor's plan to eliminate contamination from the work area. Additional soil testing and screening may be required to determine if continued use of the borrow site is acceptable.

#### 3.3.4.4.1 HAUL ROUTES

Contractor shall be responsible for maintaining the condition of the haul route during construction activities and will periodically provide street sweeping to remove the build-up of construction dirt/mud. Contractor should be advised that if your haulers do not follow the haul route you may end up cleaning multiple streets within an area.

\*\*\*\*\*

**Note to Agency: Contractor Haul Routes need to be established for each project or to each site for a project if multiple sites are included in the project. Haul Routes should include the following:**

- Available haul routes
- Identification of construction entrance gate(s)
- Construction water distribution point(s)
- Common staging areas
- Landfill
- Borrow sites
- Stockpile sites



\*\*\*\*\*

#### 3.3.4.4.2 EXCAVATION SUPPORT AND PROTECTION

The Safety Office inspects excavations using all of 29 CFR 1926.650 of the Construction Industry Regulations. An excavation support and protection system will be designed, furnished, installed, monitored, and maintained in order to support excavation sidewalls and resist soil and hydrostatic pressure. The excavation support and protection system will be installed and removed without damaging



improvements adjacent to excavation. Fort Lee has a Policy on Excavation and Ground Disturbance located in [Appendix A](#).

End of SOP



**LIST OF ABBREVIATIONS**

<b>Abbreviation</b>	<b>Term</b>	<b>Page</b>
<b>AC&amp;R</b>	Air Conditioning and Refrigerant	<b>35</b>
<b>ACHP</b>	Advisory Council of Historic Preservation	<b>40-1</b>
<b>ACM</b>	Asbestos Containing Material	<b>37</b>
<b>APM</b>	Asbestos Program Manager	<b>36</b>
<b>ARP</b>	Army Radiation Permit	<b>10-1</b>
<b>ARPA</b>	Archaeological Resources Protection Act	<b>10</b>
<b>ASHRAE</b>	American Society of Heating, Refrigeration, and Air-Conditioning Engineers	<b>16</b>
<b>AST</b>	Above Grounds Storage Tanks	<b>31</b>
<b>BHP</b>	Brake Horsepower	<b>33</b>
<b>BMP</b>	Best Management Practice	<b>13</b>
<b>BOD</b>	Building Occupancy Date	<b>39-1</b>
<b>BTEX</b>	Benzene, Toluene, Ethylbenzene and Xylenes	<b>22</b>
<b>CAC</b>	Common Access Card	<b>7</b>
<b>CFC</b>	Chlorofluorocarbons	<b>35</b>
<b>CFLs</b>	Compact Fluorescent Lamps	<b>23</b>
<b>C&amp;D</b>	Construction & Demolition	<b>10</b>
<b>CFR</b>	Code of Federal Regulations	<b>6</b>
<b>COR</b>	Contracting Officer's Representative	<b>18</b>
<b>CPG</b>	Comprehensive Procurement Guidelines	<b>25</b>
<b>CRM</b>	Cultural Resources Manager	<b>40</b>
<b>CX</b>	Categorical Exclusion	<b>6</b>
<b>CY</b>	Cubic Yards	<b>43</b>
<b>DA</b>	Department of the Army	<b>8</b>
<b>(V)DCR</b>	(Virginia) Department of Conservation & Recreation	<b>--</b>
<b>(V)DEQ</b>	(Virginia) Department of Environmental Quality	<b>7, 9</b>
<b>DA PAM</b>	Department of the Army Pamphlet	<b>8</b>
<b>DoD</b>	Department of Defense	<b>16</b>
<b>DRO</b>	Diesel Range Organics	<b>22, 44</b>
<b>DPW-EMD</b>	Directorate of Public Works – Environmental Management Division	<b>6</b>
<b>E-85</b>	Blend of fuel; 85% ethanol and 15% gasoline or other petroleum based fuel	<b>31</b>
<b>E&amp;SC</b>	Erosion & Sediment Control	<b>13</b>
<b>EA</b>	Environmental Assessment	<b>5</b>
<b>EIS</b>	Environmental Impact Statement	<b>5</b>
<b>EISA</b>	Energy Independence & Security Act	<b>15</b>
<b>EMS</b>	Environmental Management Systems	<b>6</b>
<b>EO</b>	Executive Order	<b>6</b>
<b>EPA</b>	(US) Environmental Protection Agency	<b>6</b>
<b>FAR</b>	Federal Acquisition Regulations	<b>10</b>
<b>GHG</b>	Greenhouse Gas	<b>29</b>



<b>LIST OF ABBREVIATIONS</b>		
<b>Abbreviation</b>	<b>Term</b>	<b>Page</b>
<b>GPP</b>	Green Procurement Program	7
<b>GRO</b>	Gasoline Range Organics	22, 443
<b>HAP</b>	Hazardous Air Pollutants	33
<b>HAZMAT</b>	Hazardous Material	7
<b>HAZWOPER</b>	Hazardous Waste Operator Training	42
<b>HID</b>	high-intensity discharge	23
<b>HMCC</b>	Hazardous Material Control Center	9
<b>HMMP</b>	Hazardous Material Management Coordinator	7
<b>HVAC</b>	Heating Ventilation & Air Conditioning	17
<b>IAW</b>	In accordance with	16
<b>IMCOM</b>	Installation Management Command	18
<b>IPMP</b>	Installation Pest Management Plan	8
<b>IRP</b>	Installation Restoration Program	42
<b>ISC Plan</b>	Installation Spill Contingency Plan	7
<b>JP-8</b>	jet propulsion-8	31
<b>KO</b>	Contracting Officer	6
<b>LEED</b>	Leadership in Energy & Environmental Design	27
<b>LID</b>	Low Impact Development	15
<b>MEK</b>	methyl ethyl ketone	34
<b>MI-EMS</b>	Mission Integrated – Environmental Management System	--
<b>MILCON</b>	Military Construction	16
<b>mmbtu</b>	million metric British Thermal Unit	33-1
<b>MOA</b>	Memorandum of Agreement	40
<b>MS4</b>	Municipal Separate Storm Sewer System	14
<b>MSDS</b>	Material Safety Data Sheet	0
<b>NAGPRA</b>	Native American Graves & Repatriation Act	40
<b>NEPA</b>	National Environmental Policy Act	5
<b>NESHAP</b>	National Emissions Standards for Hazardous Air Pollutions	36
<b>NHPA</b>	National Historic Preservations Act	40
<b>NOX</b>	Oxides of Nitrogen	32
<b>NRHP</b>	National Registrar of Historic Preservation Office	40
<b>NSPS</b>	New Source Performance Standards	34
<b>O2</b>	Oxygen	32
<b>ODCs</b>	Ozone Depleting Chemicals	34
<b>ODS</b>	Ozone Depleting Substances	34
<b>OSHA</b>	Occupational Safety & Health Administration	11
<b>PACM</b>	Presume Asbestos	37
<b>PAM</b>	Presume Asbestos Containing Material	--
<b>PCBs</b>	Polychlorinated Biphenyls	20





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## Appendices – Table of Contents

Appendix A	Policies & Regulations <i>*new in RED</i>
Appendix B	Environmental Checklist
Appendix C	Utility Contact Information
Appendix D	
Appendix E	Local Recycling Company List
Appendix F	Native Plant Directory
Appendix G	Recycle Report Checklist
Appendix H	Three Phased Approach

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*All the entities listed in these Appendices are subject to change at any time so it is the Reader's responsibility to be aware of any updates or additions.*

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# Appendix A

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*All the entities listed in these Appendices are subject to change at any time so it is the Reader's responsibility to be aware of any updates or additions.*

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## **Web Policies & Regulations**

All work performed within Fort Lee boundaries shall be carried out in accordance with all applicable federal, state, and local laws, ordinances, regulations, Executive Orders, court orders, and other types of rules or rulings having the same effect of law and USAG Fort Lee Policies.

### **Regulations issued pursuant to but not limited to:**

- 1) EO 13423: Strengthening Federal Government, Energy, and Transportation Management
- 2) EO 13514: Federal Leadership in Environmental, Energy and Economic Performance
- 3) Resource Conservation and Recovery Act (RCRA) (40 CFR 260-270)
- 4) The Clean Water Act - 33 USC Sec 1251 ET SEQ (1972)
- 5) The Clean Air Act, as amended (42 USC Sec 1857 ET SEQ)
- 6) The Endangered Species Act, as amended (16 USC Sec 1531, ET SEQ)
- 7) The Toxic Substances Control Act - 15 USC Sec 2601 ET SEQ (1976)
- 8) The Solid Waste Disposal Act, as amended (42 USC 6901 ET SEQ)
- 9) The Archaeological and Historic Preservation Act, as amended (16 USC Sec 469, ET SEQ)
- 10) The Energy Policy Act of 2005, Public Law 109-58
- 11) The Energy Independence and Security Act of 2007, Public Law 110-140 (EISA)
- 12) Stormwater Management Regulations (4VAC50-60)
- 13) Virginia Solid Waste Management Regulations (9VAC 20-81)
- 14) Installation Energy Management (DOD 4170.11)
- 15) Pest Management Program (DOD 4150.07)
- 16) Sustainability Building Policy (DOD )
- 17) Net Zero Installations Policy (Army Dir 2014-02)
- 18) Environmental Protection & Enhancement (AR 200-1)
- 19) Army Military Construction & Non- Appropriated Funded Construction Program Development and Execution (AR 415-15)
- 20) Memorandum, Requirements for Sustainable Management of Waste in Military Construction, Renovation, and Demolition Activities
- 21) Memorandum, Sustainable Design and Development Policy Update (Environmental and Energy Performance)
- 22) Memorandum, Implementation of Energy Savings Projects and Performance-Based Contracting for Energy Savings
- 23) Memorandum, Constructive Use of FY10 and Future Bid Savings
- 24) Memorandum, Energy and Water Conservation Design Guide for Sustainment, Restoration and Modernization (SRM) and MILCON Projects
- 25) Memorandum, Assistant Chief of Staff for Installation Management, Sustainable Management of Waste in Military Construction, Renovation and Demolition Activities
- 26) Energy Star and Federal Requirements
- 27) Green Building
- 28) Federal Energy Management Program
- 29) Federal Buildings Personnel Training Act of 2010
- 30) Supporting Energy and Sustainability Goal Achievement Through Efficiency and Deployment of Clean Energy Technology
- 31) Product Purchasing and Computer Power Management for Federal Agencies
- 32) Energy Efficient Design and Construction
- 33) BMP Required Installation of Water Coolers with Bottle-Engineering and Construction Bulletin No. 2013-3



**Fort Lee Directorate Public Works-Environmental Management Policies (DPW-EMD)**

- 34) Policy 01-06 – Noise Abatement
- 35) Policy 02-09 – Fort Lee Policy on Excavation and Ground Disturbance
- 36) Policy 03-11 – Fort Lee Pollution Prevention Policy
- 37) Policy 03-12 – Metal Detector Use Policy
- 38) Policy 04-11 – Fort Lee Green Procurement Policy
- 39) Policy 05-13 – Fort Lee Municipal Separate Storm Sewer System (MS4) Policy
- 40) Policy 07-05 – Mission Integrated/Environmental Management System (MI/EMS) Policy
- 41) Policy 09-05 – Land Disturbing Activities
- 42) Policy 10-06 – Fort Lee Energy Conservation Measures
- 43) Policy 14-12 – Wildlife Management Hunting Policy
- 44) Policy 16-03 – Trimming and Planting of Trees, Shrubs, and Flowers Around Buildings
- 45) Policy 16-12 – Wash Rack Petroleum Purging Policy
- 46) Policy 17-03 – Pest Management Services
- 47) Policy 18-03 – Minimizing the Introduction and Spread of Invasive Plant and Insect
- 48) Policy 19-03 – Fort Lee Recycling Program
- 49) Policy 20-03 – Hazardous Material Control Center (HMCC)

**Fort Lee Directorate Public Works-Standard Operating Procedures (SOPs) - (DPW-EMD)**

- 1) Hazardous Waste Management SOP
- 2)

**DPW-EMD also suggests the following web links:**

- 3) Engineering Knowledge Online (best practices) - <https://eko.usace.army.mil/public/>
- 4) Council on Environmental Quality - <http://www.whitehouse.gov/administration/eop/ceq>
- 5) Virginia government home webpage (lists the various departments) - <http://portal.virginia.gov/>
- 6) Environmental Protection Agency - <http://www.epa.gov/lawsregs/>
- 7) Miss Utility - <http://www.va811.com/>
- 8) Federal Register (a searchable data base of many laws and regulations and notices of review) - <http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR>
- 9) Stormwater Management Rule and Guidebook - <http://ddoe.dc.gov/swregs>
- 10) Army Sustainability Campaign Plan - [http://www.aec.army.mil/Portals/3/sustainability/campaign-plan\\_2010.pdf](http://www.aec.army.mil/Portals/3/sustainability/campaign-plan_2010.pdf)

**\*\*\*\* These regulations and policies do change and the most current locations can be found either using Google or other search engines.**





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# Appendix B

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*All the entities listed in these Appendices are subject to change at any time so it is the Reader's responsibility to be aware of any updates or additions.*

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## Environmental Check List

Program Area	Required for This Project (EMD use)	Yes	No	N/A	Remarks	Date	Initials
<b>Prior to Solicitation:</b>							
Is this Action Documented Under NEPA? (EA, or REC)							
Include Environmental Special Conditions in the RFP							
<b>Prior to Construction:</b>							
Submit Preliminary Design to EMD for Review							
Submit Final Design to EMD for Review							
Receive EMD Comments & Requirements from Design Review							
Submit a Copy of LEED Checklist for EMD Review							
Submit Recycling Plan to EMD for Review (Must meet 60% diversion)							
Submit DEMDition Plan to EMD for Review (Must meet 60% if not submit justification)							
Submit Asbestos Abatement Plan to EMD							
Submit Lead Abatement Plan to EMD							
Submit PCB/Mercury Abatement Plan to EMD							
Abatement Plans Accepted by EMD?							
Lead Training/Education Conducted?							
Hold Meeting Discussing Plans w/ Contractor IH & EMD							
Receive Record of Environmental Consideration from EMD							
EMD to Attend Pre-Construction Meeting							
<b>During Construction:</b>							
<b>Recycling</b>							
Separate Waste by Type (Aluminum/Steel/Land Fill Debris/Concrete/Asphalt)							
Cardboard Items to Designated Areas on Fort Lee							
Report by Weight/Volume Recyclables to Fort Lee EMD (SEE Appendix H) monthly by the 5th of the previous month - plus a final							
<b>Asbestos/Hazardous Building Materials</b>							
Material Survey Results Available on Site?							
Proper PPEs Used							
Vacuuming/Wet Sweeping/Damp Mopping IAW Abatement Plans?							
Warning Signs & Labels							
Exposure Monitoring Conducted before Occupancy?							
<b>Water Quality and Quantity</b>							
Valid General Construction Permits							
Erosion & Sediment Control Plan							
Dust Suppression							
Utilities Exemptions Documented							
Certified RLD Proof/Phone Number - submitted to EMD							
Land Disturbance (How Large is the Area?)							



## Environmental Check List

Program Area	Required for This Project (EMD use)	Yes	No	N/A	Remarks	Date	Initials
Spill Kit on Site Prior to ANY work beginning							
Spill Prevention Plan Reviewed?							
Solid Waste Management Plan							
Storm Water Management Plan							
Construction Waste Management Plan							
Brownfield Redevelopment?							
Fertilizers Use							
Silt Fences/laydowns & trailers approved & installed							
Construction Entrance Stabilization							
Rock Check Dams							
Temporary Sediment Traps							
Straw Bale Dikes are NOT allowed on Fort Lee							
Culvert Inlet Protection							
Drainage Inlet/Outlet Protection							
Vegetative Stabilization							
Preconstruction Calculations Provided to EMD							
Post Construction Calculations Provided to EMD							
Water Quality Units Inspected							
Landscape Development Plan Reviewed							
<b>Historical/Cultural Resources</b>							
Property in National Register of Historic Places?							
Any Change to Building, Structure or Landscape?							
Any Ground Disturbance?							
Change in Area's Noise Levels or Visual Characteristics?							
Change in Traffic Patterns or Land Use?							
NHPA Section 106 Initiated?							
Historic Properties Identified?							
Adverse Effects Assessed?							
Adverse Effects Resolved?							
Any Inadvertant Discoveries?							
Section 106 Review Coordinated w/ NEPA, AHPA, ARPA?							
Public Participated in 106 Review(s)?							
Confidentiality of Historic Property Preserved?							
Findings of No Adverse Effect Documented for 30-day review?							
<b>Termites &amp; Pests Management</b>							
Use of Approved Materials							
Plan Submittal to EMD for Review (Alan Mills)							
Infested Area Reported/ Severity of Infestation							
Use of Approved Materials							
Copies of Warranties Submitted to Fort Lee EMD							



## Environmental Check List

Program Area	Required for This Project (EMD use)	Yes	No	N/A	Remarks	Date	Initials
<b>Proper Registration</b>							
<b>Proper Materials Labeling</b>							
<b>MSDS provided</b>							
<b>Trained Personnel/Certified Applicators</b>							
<b>Proper use of PPE</b>							
<b>Hazmat</b>							
<b>Proper Container Labels</b>							
<b>MSDS Available</b>							
<b>HAZMAT Trained Personnel</b>							
<b>Bulging, leaking or rusting containers</b>							
<b>Puddle or Spill on the floor</b>							
<b>Soil Discoloration near Hazmat</b>							
<b>Strong Chemical odor</b>							
<b>Hazmat Clean-up kit</b>							
<b>Air Pollution</b>							
<b>Boilers- Will a new/replacement boiler be installed?</b>							
What type of fuel will be utilized?							
Does it meet low NOX standards? (Section 1.13.1.5)							
Has the boiler product specification/rated capacity been submitted for review and approved by EMD Air Quality?							
<b>Generators (natural gas or diesel)</b>							
Is there a request to install a generator at this site? (Section 1.13.11 - 14)							
<b>Low-VOC solvents / paints / adhesives / sealants</b>							
(Section 1.13.1.6 - 7)							
<b>Cut-back Asphalt</b>							
Cutback asphalt is not permitted for use at Fort Lee							
<b>Fugitive Emissions / Dust Suppression / Blast Media Use</b>							
Has dust suppression techniques been addressed in Scope? (Section 1.13.1.9)							
<b>Open Burning Restriction - not allowed on Fort Lee</b>							
<b>Open Detonation Restriction</b>							
<b>Ozone Depleting Substances (ODC Management)</b>							
Is there refrigerant unit installation? (Section 1.13.1.8 / 1.13.1.12)							
<b>PCB/Mercury Management</b>							
<b>PCB/Hg Plan Reviewed by Fort Lee EMD</b>							
<b>Plan Reviewed by Matt Weeks</b>							



## Environmental Check List

Program Area	Required for This Project (EMD use)	Yes	No	N/A	Remarks	Date	Initials
<b>Plan Approved by Fort Lee Emd</b>							
<b>Ballasts/Transformers Leaking</b>							
<b>Lamps/Bulbs Broken</b>							
<b>PCB-Containing Ballast &amp; Transformers Delivered to EMD</b>							
<b>Mercury-Containing Light Bulbs Delivered to EMD</b>							
<b>TCLP Copies Submitted to Fort Lee EMD</b>							
<b>TCLP &gt; 0.2 ppm (i.e. Hazardous Waste)</b>							
<b>Waste Labelled &amp; Dated</b>							
<b>Waste Arranged for Recycling within a Year</b>							
<b>All Waste Documents Kept with EMD</b>							
<b>Waste Properly Stored before Disposal</b>							
<b>Environmentally-friendly fluorescent lamps used</b>							
<b>Trained PCB/Hg Handling Personnel</b>							
<b>Proper PPEs Used</b>							
<b>Hazardous Waste</b>							
<b>Containers Closed when not in use</b>							
<b>Containers properly labeled</b>							
<b>Containers not near storm drains</b>							
<b>Hazarous waste removed at the end of the project</b>							
<b>MSDS &amp; Lab Results submitted to EMD</b>							
<b>Fort Lee EMD Signed Manifests of Wastes Leaving Site</b>							
<b>Asbestos Management</b>							
<b>Asbestos Present</b>							
Is there an asbestos survey available?							
Is there any building material that is not included on the survey? (Seciton 1.13.3)							
<b>Is additional testing needed?</b> (Seciton 1.13.2.1)							
<b>Abatement Plan</b>							
Has an abatement plan been submitted and approved Carol Anderson or Alex Alvarado? (Seciton 1.13.3.1)							
<b>Meeting Discussing Plan w/ Contractor IH &amp; FL EMD</b>							
Has a pre-Construction meeting been conducted?							
<b>Fort Lee EMD Signed Manifests of Materials Leaving Site</b> (Seciton 1.13.3.1.1)							
<b>Project Inspections &amp; Records</b>							
<b>Site Maps &amp; Plans On Site</b>							
<b>Inspection Log Book On Site &amp; updated per FLSEC</b>							



## Environmental Check List

Program Area	Required for This Project (EMD use)	Yes	No	N/A	Remarks	Date	Initials
Applicable Permits Kept On Site							
Monitoring Results Reported on DMR							
Record of Environmental Consideration (REC)							
Environmental Assessment if Needed							
Environmental Impact Statement if Needed							
<b>MI-EMS</b>							
Received MI/EMS general awareness training?							
Received copy of Fort Lee Special Environmental Conditions?							
Energy Conservation goal stated?							
Water Conservation goals stated?							
C&D recycling plan. Goal stated?							
LEED Rating where is located quarterly meeting							
Received HMCC Policy and SOP?							
<b>Natural Resources</b>							
Wetlands Delineation and Mapping							
Wetlands Protection / Buffers							
Floral and Faunal Surveys							
Migratory Bird Protection and Management							
Forest Inventory and Management							
Sensitive Natural Areas Protection							
Integrated Natural Resources Management Plan							
Prescribed Burns							
Wildlife Management - Hunting Program Coordination							
<b>Geospatial Data Support - GIS</b>							
Aerial Photography							
Map Production, Data Support							
GPS Assistance, Area Measurements, Point Locations							
Environmental Constraints Layers, Maps:							
Select layers as needed:							
Wetlands-Landfills-Contamination Sites-Sensitive Species							
Soils-Topography-Site Planning							
<b>Environmental Post-Construction Meeting</b>							
Attendance of Fort Lee EMD							
Final C&D report (must be hand delivered) Labeled/Dated/sign by Project Manager							
Copy of Quit Work (from the SWPPP)							
Ground coverage for all sites-established and checked by EMD and COR							



Project Number: \_\_\_\_\_  
 Project Name/Building #: \_\_\_\_\_  
 Contractor #: \_\_\_\_\_  
 NEPA Documentation (EMO use): \_\_\_\_\_

\_\_\_\_\_: Prime Contractor  
 \_\_\_\_\_: Phone for Contractor  
 \_\_\_\_\_: Quarterly meeting date

## Environmental Check List

Program Area	Required for This Project (EMD use)	Yes	No	N/A	Remarks	Date	Initials
ALL HVAC, asbestos, & lead documents complete							
Location of final LEED documents							
FINAL SIGNATURE ON THIS DOCUMENT BY NEPA PROGRAM MANAGER							
PRIOR TO FINAL PAYMENT BY KO <b>NO EXCEPTIONS</b>							







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# Appendix C

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**APPENDIX C**  
**UTILITY INFORMATION CONTACTS**  
**Updated: 1 APR 2015**

<ul style="list-style-type: none"><li>• <b>Public Utilities Contract Specialist</b> (Company) 825 19th Street, Bldg. 6220 Fort Lee, VA 23801-1530 804/734-5092 <i>Email</i> <i>Internet address</i></li></ul>	•
<ul style="list-style-type: none"><li>• <b>Natural Gas</b> Supervisor Facilities Management Specialist 804/734-5086 825 19th Street, Bldg. 6220 Fort Lee, VA 23801-1530 <i>Email</i> <i>Internet address</i></li></ul>	•
<ul style="list-style-type: none"><li>• <b>VDOT</b> Highway Permits Specialist Virginia Department of Transportation 4608 Boydton Plank Road Petersburg, VA 23803 (804) 863-4009 <i>Email</i> <i>Internet address</i></li></ul>	•
•	•



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# Appendix E

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**APPENDIX E  
LOCAL RECYCLING COMPANY LIST**

**Updated: 1 APR 2015**

**This List provided for convenience, may not be exhaustive, and  
does not constitute endorsement by the Federal Government**

<ul style="list-style-type: none"> <li>• <b>ACE WASTE RICHMOND LLC.; Ace Recycling Of Richmond</b> <i>(Nonhazardous Waste Treatment and Disposal Company)</i> 13101 N Enon Church Road Chester, VA 23836-3120 (804) 318-3701 <a href="http://www.acewasterecycling.com">www.acewasterecycling.com</a></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Dwight Snead Construction Co</b> <i>(Demolition)</i> 11255 Washington Highway Glen Allen, VA 23059-1910 (804) 798-1611 <a href="http://sneadconstruction.com/">http://sneadconstruction.com/</a></li> </ul>
<ul style="list-style-type: none"> <li>• <b>AERC</b> <i>(All Electronics)</i> 116 Sylvia Road; Suite E Ashland, VA 23005 (804)798-9296 <a href="http://www.aerc.com">www.aerc.com</a></li> </ul>	<ul style="list-style-type: none"> <li>• <b>FCC Environmental</b> <i>(Used Motor Oil and Antifreeze)</i> 2353 Lanier Road Rockville, VA 23146 (804) 749-8344 <a href="http://www.fccenvironmental.com">www.fccenvironmental.com</a></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Battery Barn</b> <i>(Batteries)</i> 124 E Washington Street Petersburg, VA 23803 (804) 862-3425 <a href="http://www.thebatterybarn.com">www.thebatterybarn.com</a></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Griffin Industries/Bakery Feeds</b> <i>(Kitchen Grease/Expired Baked Goods)</i> 16375 Doswell Park Drive Doswell, VA 23047 (804) 876-3415 <a href="http://www.griffinind.com">www.griffinind.com</a></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Com-Cycle</b> <i>(Electronics- that do not contain Hazardous Materials)</i> 116 Sylvia Road; Suite G Ashland, VA 23005 (804) 550-1762 <a href="http://www.com-cycle.com">www.com-cycle.com</a></li> </ul>	<ul style="list-style-type: none"> <li>• <b>International Paper</b> <i>(Office Paper, Newspaper, Cardboard)</i> 1308 Jefferson Davis Hwy Richmond, VA 23224 (804) 232-2386 (804) 706-1784 <a href="http://internationalpaper.com">http://internationalpaper.com</a></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Dominion Salvage</b> <i>(Scrap Steel &amp; other Metals)</i> 607 Dinwiddie Avenue Richmond, VA 23224-5519 (804) 231-7964 <a href="http://www.domsalvage.com">www.domsalvage.com</a></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Mark Dunning Industries, Inc</b> <i>(Solid Waste Collection &amp; Recycling)</i> 1719 Knowles Road Phenix City, AL 36869 (334) 297-6990 <a href="http://www.markdunning.com">www.markdunning.com</a></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Atlantic Iron and Metal</b> <i>(Metal)</i> 30 Mill Street Petersburg, VA 23803 (804) 861-1900 <a href="http://morals102.wix.com/aim2012">http://morals102.wix.com/aim2012</a></li> </ul>	



<p>• <b>Mountain Lumber Co Inc.</b>  <i>(Lumber &amp; Reclaimed Wood)</i>          6812 Spring Hill Road          Ruckersville, VA 22968          (434) 985-3646          (800) 445-2671  <a href="http://www.mountainlumber.com">www.mountainlumber.com</a></p>	<p>• <b>Smith Iron and Metal</b>  <i>(Metal)</i>          3000 Bells Road          PO Box 24284          Richmond, VA 23224 (804) 271-1239  <a href="http://www.smithironmetal.com/">http://www.smithironmetal.com/</a></p>
<p>• <b>Salvage Barn, Inc.</b>  <i>(Groceries, Surplus &amp; Salvage Merchandise)</i>          5240 Hull Street Road          Richmond, VA 23224-2424          (804)-231-1187  <a href="http://www.salvagebarn.com">www.salvagebarn.com</a>  <a href="http://start.cortera.com/company/research/k2l0jsr7m/salvage-barn-inc/">http://start.cortera.com/company/research/k2l0jsr7m/salvage-barn-inc/</a></p>	<p>• <b>River City Recycling</b>  <i>(Metals, Cardboard, and Plastic Bottles)</i>          1709 Reymont Road          North Chesterfield, VA 23237          (804) 525-7352  <a href="http://rivercityrecyclingllc.com">rivercityrecyclingllc.com</a></p>
<p>• <b>S.B. Cox Inc.</b>  <i>(Asphalt, Metal &amp; Salvaged Bldg Material)</i>          901 Potomac Street          Richmond, VA 23231          (804)-222-2232          (804)-222-3500  <a href="http://www.sbcxodemolition.com">www.sbcxodemolition.com</a></p>	<p>• <b>Sonoco Products Co.</b>  <i>(cardboard and paper)</i>          1850 Commerce Road          Richmond, VA 23224          (804)233-5411  <a href="http://sonoco.com">sonoco.com</a></p>
<p>• <b>TFC Recycling; Tide Water Fiber Company</b>  <i>(Plastic, Glass, Paper, Metal &amp; Cardboard)</i>          12200 Old Stage Road          Chester, VA 23836          (804)-706-5877  <a href="http://www.tfc recycling.com">www.tfc recycling.com</a></p>	<p>• <b>Caravati's Inc.</b>  <i><b>REUSE</b> of Vintage Building Material from 1700 to 1960s</i>          104 E 2<sup>nd</sup> Street          Richmond, VA          (804) 232-4175  <a href="http://caravatisalvage.com">caravatisalvage.com</a></p>
<p>• <b>Sustainability Park LLC (143 Acres)</b>  <i>(Composting)</i>          13101 N Enon Church Road          Chester, VA 23836          (804)-416-1143          (804)-314-8455  <a href="http://www.thesustainabilitypark.com">www.thesustainabilitypark.com</a></p>	<p>• <b>Habitat for Humanity Restore</b>  <i><b>REUSE</b> You name it they will take it</i>          829 Commerce Street          Petersburg, VA 23803          (804) 732-5793  <a href="http://www.tchfh.org">www.tchfh.org</a></p>
<p>• Sustainability Park LLC (143 Acres)          Other Companies Onsite:</p> <ul style="list-style-type: none"> <li>• DC White              (recovery of Buildings, Equipment &amp; Metal)</li> <li>• Equustock of VA              (Wood Recycling)</li> <li>• Precision of VA-PRIVA              (Glass Recycling)</li> <li>• McCarter Modular Furniture              (Furniture Recycling)</li> </ul>	



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# Appendix F

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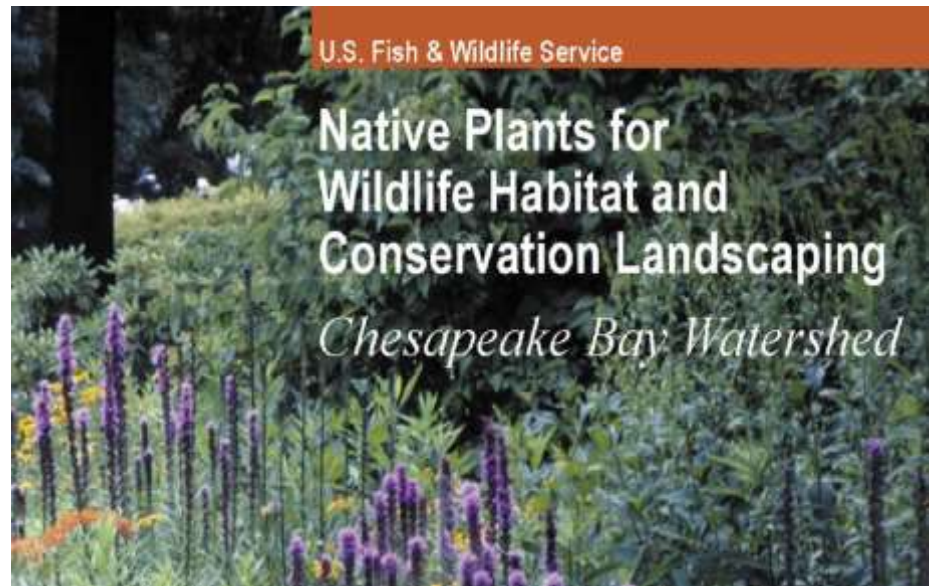
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## **Fort Lee Native Plant Reference Online**

Protecting the Land We Defend



<http://www.nps.gov/plants/pubs/chesapeake/toc.htm>

Native plants naturally occur in the region in which they evolved. While non-native plants might provide some of the above benefits, native plants have many additional advantages. Because native plants are adapted to local soils and climate conditions, they generally require less watering and fertilizing than non-natives. Natives are often more resistant to insects and disease as well, and so are less likely to need pesticides. Wildlife evolved with plants; therefore, they use native plant communities for food, cover and rearing young. Using native plants helps preserve the balance and beauty of natural ecosystems.

The use of native plants in landscaping and of course habitat restoration is certainly not new. In fact, their use has grown exponentially in recent years. Natural resources professionals in turn have been flooded with requests for information on native plants to use in various types of planting projects. Communities, schools, businesses, nonprofit organizations, watershed groups, local governments, state and federal agencies and many others are enhancing and restoring habitat, solving ecological problems, reducing maintenance, or just beautifying surroundings, all using locally native plants. Natural resources professionals, in turn, have been flooded with requests for information on native plants to use in various types of planting projects. There are many excellent resources available on native plants - some more technical than others, some more comprehensive than others.

We hope you will bypass the over-used, non-native and sometimes invasive ornamental plants, and select the equally and often more attractive native plants. Pour through this guide the same way you look through nursery catalogs. Use it to plan and design your next planting, whether it's a small corner of your front yard, a two-acre meadow seeding, or 100 acres of wetland restoration.

This guide provides information about native plants that can be used for landscaping projects as well as large-scale habitat restoration. All of the plants presented are native to the designated areas, however not all of the native species for that area have been included. Rather, plants have been included because they have both ornamental and wildlife value, and are generally available for sale. This guide covers the entire Chesapeake Bay watershed, including south central New York; most of Pennsylvania, Maryland and Virginia; the District of Columbia; Delaware, west of Delaware Bay; and the eastern panhandle of West Virginia.



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# Appendix G

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# Solid Waste / Recycle Report " EXAMPLE"

by: Contractor Name  
Ft Lee, Virginia

Sub-Contractor Name: \_\_\_\_\_  
Project Location: \_\_\_\_\_

Recycled Commodities in Tons									
Month-Yr	Landfill Solid Waste (SW)	recycle 1 (R1)	recycle 2 (R2)	recycle 3 (R3)	recycle 4 (R4)	recycle 5 (R5)	TOTAL RECYCLED (TR)	Recycled + Landfill Solid Waste (T)	Recycle percentage
		<i>metal</i>	<i>Wood</i>	<i>Mixed Construction &amp; Demolition</i>	<i>POs (petroleum, oils, lubricants)</i>	<i>Glass</i>			
January-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
February-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
March-10	4.84	0.00	0.00	20.83	0.00	0.00	20.83	25.67	81%
April-10	3.12	0.00	0.00	13.65	0.00	0.00	13.65	16.77	81%
May-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
June-10	0.64	0.00	0.00	3.07	0.00	0.00	3.07	3.71	83%
July-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
August-10	2.21	0.00	0.00	11.00	0.00	0.00	11.00	13.21	83%
September-10	1.77	0.00	0.00	6.43	0.00	0.00	6.43	8.20	78%
October-10	0.55	0.00	0.00	2.88	0.00	0.00	2.88	3.43	84%
November-10	0.32	0.00	0.00	1.59	0.00	0.00	1.59	1.91	83%
December-10	0.38	0.00	0.00	1.75	0.00	0.00	1.75	2.13	82%
<b>Job Site Totals:</b>	<b>13.83</b>	0.00	0.00	61.20	0.00	0.00	61.20	75.03	82%

(R1+R2+R3+R4+R5) (SW+TR) (TR / T)

# Solid Waste / Recycle Report (example above)

by: Contractor Name  
Ft Lee, Virginia

Sub-Contractor Name: \_\_\_\_\_  
Project Location: \_\_\_\_\_

Recycled Commodities in Tons									
Month-Yr	Landfill Solid Waste (SW)	recycle 1 (R1)	recycle 2 (R2)	recycle 3 (R3)	recycle 4 (R4)	recycle 5 (R5)	TOTAL RECYCLED (TR)	Recycled + Landfill Solid Waste (T)	Recycle percentage
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
							0.00	0.00	#DIV/0!
<b>Job Site Totals:</b>	<b>0.00</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!

(R1+R2+R3+R4+R5) (SW+TR) (TR / T)





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# Appendix H

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<EXAMPLE> ATTACHMENT 6 <EXAMPLE>

AIR QUALITY PROGRAM – THREE PHASED APPROACH

PHASE 1: Example A										
Controlling Entity	Fuel	Description	Building	Shop						
Fort Lee	Diesel	Emergency Generator	xxxxx	SCoE						
PHASE 1: Example B										
Controlling Entity	Fuel	Description	Building	Max. Rated Capacity (mmbtu/hr)	QTY 1					
Fort Lee	Natural Gas	Space Heat / Hot Water	TA-Dining Hall	2000 Mbh / each	1					
PHASE 2: Example A										
Controlling Entity	Fuel	Description	Building	Shop	Rating (kW)	Horsepower (hp)	Model Year	Genset or Engine Manufacturer	Genset or Engine Model Number	Genset or Engine Serial Number
Fort Lee	Diesel	Emergency Generator	xxxxx	SCoE	177	237	2008	John Deere Power Systems	8JDXL06.8104	PE6068X00081 4
PHASE 2: Example B										
Controlling Entity	Fuel	Description	Building	Capacity	QTY 1	Manufacturer	Model Year	Model Number	Serial Number	Information
Fort Lee	Natural Gas	Space Heat / Hot Water	TA-Dining Hall	2000 Mbh / each	1	Aerco	2008	BMK-2.0LN GWB	150024804	NG Boilers (heats water too)





ATTACHMENT 6

AIR QUALITY PROGRAM – TWO PHASED APPROACH

PHASE 1:

Controlling Entity	Fuel	Description	Building	Shop	Rating	Horsepower (hp)	Model	Genset or	Genset or Engine	Genset or Engine

PHASE 1:

Controlling Entity	Fuel	Description	Building	Max. Rated	QTY 1	Manufacturer	Model	Model	Serial Number	Emissions Unit

PHASE 2:

Controlling Entity	Fuel	Description	Building	Shop	Rating	Horsepower (hp)	Model	Genset or	Genset or Engine	Genset or Engine

PHASE 2:

Controlling Entity	Fuel	Description	Building	Capacity	QTY 1	Manufacturer	Model	Model	Serial Number	Information



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