Appendix 2.1.2 – ENVIRONMENTAL REQUIREMENTS

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

A.1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment and performing all work required for the prevention of environmental pollution during, and as the result of, all operations under this contract. For the purpose of this specification, environmental pollution is defined as the introduction of, and/or presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare; unfavorably alter biological balances of important to human life or affect other species. The control of environmental pollution requires consideration of air, water, and land.

A.1.2 APPLICABLE REGULATIONS

The contractor and its subcontractors in the performance of this contract shall comply with the following:

a. Clean Air Act (CAA) – Public Law 99-206, 42 U.S.C. §7410

b. Clean Water Act (CWA) – Public Law 92-500, 33 **U**.S.C §1251

c. Coastal Zone Management Act (CZMA) – Public Law 92-583, 33 U.S.C. §§1101-1124

c. Code of Maryland Regulations (COMAR) Title 09 and 26

d. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA aka Superfund) – Public Law 96-510, 94 Stat. 2767

e. Emergency Planning and Community Right-to-Know Act (EPCRA) — Public 99-499, 100 Stat. 1728, 42 U.S.C. 7412

f. Endangered Species Act – Public Law 93-205, 87 Stat. 884

g. National Environmental Policy Act (NEPA) -- Public Law 91-190, 83 Stat. 852

h. Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) – Public Law 61-152, 36 Stat. 331

i. Occupational Safety and Health Act (OSHA) – Public Law 91-596, 84 Stat. 1590

j. Oil Pollution Act, Pollution Prevention Act (PPA) – Public Law 101-508, 104 Stat. 1388

k. Resource Conservation and Recovery Act (RCRA) -- Public Law 94-580, 90 Stat. 2795

l. Safe Drinking Water Act, Toxic Substance Control Act (TSCA) – Public 93-523, 88 Stat. 1660 (1974)

m. Toxic Substance Control Act – Public Law 94-469, 90 Stat. 2003

n. Oil Pollution Act of 1990 – Public Law 101-380, 104 Stat. 484

o. All other applicable Local, State, and Federal laws and regulations concerning environmental and safety requirements, as well as the specific requirements stated elsewhere in the contract specifications.

A.1.3 NOTIFICATION AND RESPONSE

A.1.3.1 Imminent Hazard

If state, federal or installation regulators determine that the contractor has or is creating a condition that may present an imminent and substantial endangerment to health or the environment they have the authority to issue project cease-and-desist and/or termination orders without routing such notification through the Contracting Officer (KO) and/or Contracting Officer's Representative (COR). Such authority falls under definition of "imminent hazard" as defined by OSHA, RCRA, and other laws (see "APPLICABLE REGULATIONS" above). If so directed by persons authorized to issue such notifications, the contractor shall comply immediately and notify the KO and/or COR.

A.1.3.2 Emergency Response

The above statements do not infer that the Contractor will wait for KO, COR and/or regulator notification before initiating corrective action for spills, leaks, fires, explosions, and/or accidents involving injuries. In the event of such incidents the contractor shall immediately notify the Installation "Emergency Operations Center" (dial 911 on post phones or 911 from a commercial phone on or off post) and implement corrective actions to prevent further injuries or damage to the environment. All costs incurred as the result of a contractor caused spill, leak, fire, explosions, or other accidents are the responsibility of the contractor.

A.1.4 SUBCONTRACTORS

The Contractor is responsible for compliance with the provisions of this section by all subcontractors.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

A.3.1 PROTECTION OF NATURAL RESOURCES

The contractor shall practice pollution prevention by means of source reduction. The Pollution Prevention Act (PPA) defines source reduction as practices that reduce or eliminate the creation of pollutants through:

a. increased efficiency in the use of raw materials, energy, water, or other resources; and/or

b. protection of natural resources by conservation; and/or

c. management of personnel and control of hazardous materials to diminish or negate the introduction of pollutants into the environment.

A.3.2 PROTECTION OF WATER RESOURCES

The contractor shall not pollute any waterways (e.g., streams, lakes, reservoirs) with any harmful organic or inorganic material or waste. All work under this contract shall be performed in such a manner that pollutants are not released into ditches, storm drains, surface or groundwater (i.e. waters of the State, COMAR 26.08), adjacent to or downstream to the site.

A.3.2.1 Well Installation and Closure

All well installations and closures shall be accomplished by a State certified and licensed well installer and accomplished in accordance with COMAR.

A.3.2.2 Water and/or Sewer Lines

The extensions to existing lines or new installations of water lines, sewer lines, lift stations, or other water/ sewerage system appurtenances shall be in accordance with COMAR and a water/sewerage construction permit shall be obtained if the extensions, new lines or other features do not qualify for an exemption. If the lines are not exempt a Water/Sewerage Construction Permit application and copy of the contract drawings and applicable specifications

shall be provided to COR for submission to the State of Maryland. Construction shall not proceed until the permit is issued by the State.

A.3.2.3 Septic Systems

Septic systems with drain fields shall not be installed at APG. A holding tank is allowed, provided it meets the design requirements and specifications of COMAR.

A.3.2.4 Groundwater and Dewatering

Discharge of water from an excavation to storm drains is not permitted. Discharges to the sanitary sewers are approved on a case-by-case basis. Requests must be submitted to the COR.

3. PROTECTION OF COASTAL RESOURCES

All projects and activities having reasonably foreseeable effects on land or water use, or natural resources of Maryland's Coastal Zone shall demonstrate consistency to the maximum extent practicable with the approved, enforceable policies of Maryland's Coastal Zone Management Program, as approved by the National Oceanographic and Atmospheric Administration. All work shall be in compliance with Army Regulation (AR) 200-1 Environmental Protection and Enhancement, the Coastal Zone Management Act (CZMA) of 1972, and the Maryland Enforceable Policies.

A.3.3 PROTECTION OF AIR RESOURCES

The contractor shall protect against the emission of any hazardous substance(s) that cause or contribute to air pollution and may reasonably be anticipated to endanger health, welfare and the environment.

A.3.3.1 Burning

Burning in most instances is not permitted. The Contractor shall obtain written approval prior to burning of any substance or waste. This section is not applicable to welding, cutting, brazing, soldering, etc.

A.3.3.2 Dust Control

The contractor shall maintain all work areas free from dust, and air pollutants. Approved temporary methods of stabilization consisting of sprinkling with water, chemical treatment, light bituminous treatment, or similar methods will be permitted to control dust. Sprinkling with water, where used, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times. The use of chemical substances to control dust pollution during construction shall be approved by the COR prior to application of such substances. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.

A.3.3.3 New Air Source Permits and Registration

The contractor is responsible for providing the necessary information for the air permit application for all new air emission source(s) (hoods, volatile substance storage tanks, spray booths, stationary equipment, or other similar type items) that do not qualify for an exemption under the COMAR.

A.3.3.4 Permits to Construct Boilers

Boilers in excess of 1 million British Thermal Units (BTU) to 10 million BTU require a permit to construct ("construct" includes "modifications"; see COMAR 26.11.01.01). Boilers in excess of 10 million BTU require a permit to construct and a New Source Performance Standards (NSPS) permit. The contractor is responsible for providing the necessary information for the air permit application.

A.3.3.5 Generator Sets

Generators that have a horsepower rating of 1000 brake horsepower or more are required to have a permit to construct. The contractor is responsible for providing the necessary information for the air permit application and must pay the fee for this permit.

A.3.3.6 Materials Containing Semi-Volatile or Volatile Organic Compounds (VOCs)

The Contractor shall minimize use of volatile (i.e., benzene, methylene chloride, toluene, etc.) and semi-volatile (i.e., dichlorobenzene, trichlorobenzene, etc.) organic compounds in order to reduce fugitive air emissions during construction. Volatile and semi-volatile organics are contained in such products as paints, solvents, cleaners, sealers, glues, mastics, etc. Under no circumstance shall the contractor install materials (i.e., paint, glue, sealers, mastics, insulations, etc.) that continue to leach chemicals to the environment after cure.

A.3.3.7 Ozone Depleting Chemicals (ODC) and Ozone Depleting Substances (ODS)

The contractor's use or installation of ODCs (i.e., Methyl chloroform (MCF) aka 1,1,1-Trichloroethane (TCA), Carbon Tetrachloride (CCI), CFC-113, etc.) and Class 1 ODSs (i.e., R-11 (CFC-11), R-12 (CFC-12), R-13 (CFC-13), R114 CFC-114), R-500, R-502, R503, etc.) are not permitted under this contract.

A.3.3.8 VOC Limits

COMAR 26.11.33 (Air Quality, Architectural Coatings) sets VOC limits for many types of architectural coatings. The contractor shall ensure materials used at APG meet this requirement.

A.3.4 PROTECTION OF LAND RESOURCES

The land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction and shall appear to be natural and not detract from the appearance of the project. The Contractor shall confine its construction activities to areas defined by the plans and specifications.

A.3.4.1 Protection of Trees, Shrubs, and Vegetation

The contractor shall be responsible for the protection of the tops, trunks and roots of all existing trees, shrubs, and vegetation that are to be retained on the site.

A.3.4.1.1 Heavy equipment, vehicular traffic, or stockpiling materials shall not be permitted within the drip line of trees and/or shrubs to be retained.

A.3.4.1.2 No toxic materials shall be stored within 100 feet from the drip line of trees to be retained or exposed to the elements.

A.3.4.1.3 Except for area shown on the plans to be cleared, the Contractor shall not deface, injure, or destroy trees, shrubs, or vegetation, nor remove or cut them without specific written authorization. Existing nearby trees or shrubs shall not be used for anchorage.

A. 3.4.1.4 No protective devices, signs, utility boxes or other objects shall be nailed to trees to be retained on the site.

A.3.4.1.5 All tree removal shall be in compliance with APGR 200-62 Reforestation, Army Regulation (AR) 200-1 Environmental Protection and Enhancement, Department of Defense Financial Management Regulation (DoD FMR) 7000.14R, the Coastal Zone Management Act (CZMA) of 1972, and the Maryland Forest Conservation Act of 1991. Resulting forest products not sold for merchantable value shall be moved to the Aberdeen Area or Edgewood Area firewood pile while those trees less than 4 inches in diameter shall be ground, not chipped. Any limit of disturbance up to 20,000 square feet of forest or 40,000 square feet of open space will require compliance with the CZMA.

A.3.4.2 Restoration of Landscape Damage

Any tree, shrub, vegetation, or other landscape feature scarred or damaged by the contractor's operations shall be restored as nearly as possible to its original condition at the Contractor's expense. All scars, wounds, cuts or stumps from limbs removed shall be immediately coated with an approved wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes is not permitted. The use of climbing spurs is not permitted for tree climbing. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of the Contracting Officer, shall be immediately removed, or replaced with a nursery-grown tree or healthy tree moved from another location of the same species. Replacement trees and shrubs shall be of the same size as those removed. The Contractor shall remain responsible for the maintenance of replacement trees, shrubs, and vegetation until it is determined that the replacement is viable and can be sustained without other than routine care.

A.3.4.3 Soil Erosion and Sediment Control

The Contractor shall maintain soil erosion and sediment controls on all excavations. The Contractor shall develop and submit a soil and sediment control plan to the COR if the area (inclusive of temporary road construction, construction of temporary embankments and excavation for plant and/or work or staging areas) to be disturbed is in excess of 5,000 square feet or the excavation exceeds 100 cubic yards of either cut or fill material or a combination of the two. The Contractor shall not commence grading or excavation until the State-approved plan is received. During construction and maintenance of soil erosion and sediment control devices, the Contractor shall ensure the presence of an on-site supervisor who holds State of Maryland "Soil Erosion and Sediment Control" certification.

A.3.5 POLLUTION PREVENTION ACT (PPA), EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA), AND APPLICABLE EXECUTIVE ORDERS (EO)

The contractor shall comply with the following:

a. RCRA 6002 (Federal Procurement) Solid Waste Disposal Act.

The contractor shall accomplish the following.

A.3.5.1 Green Procurement/Environmentally Preferable Products (EPP)

The government requires the use of recoverable/recovered materials and products identified in the EPA's Comprehensive Procurement Guideline (CPG). All materials and products intended for use within this contract shall meet the recommended minimum content standards identified in the Recovered Materials Advisory Notices (RMAN).

(a) Use products with post-consumer recycled content.

(b) Use products that are recyclable.

(c) Use low toxicity or non-toxic products.

(d) Use and install low-maintenance products.

A.3.5.1.1 Green procurement and Federal Acquisition requirements emphasize the need to ensure that EPA designated products containing post-consumer recycled content are integrated into construction and that the use of products containing virgin materials are minimized to the greatest extent practicable.

A.3.5.2. Green Building

The contractor shall comply with the Federal Acquisition Regulation (FAR), and APG Green Building Initiative Policy and incorporate green building principles and practices into all APG construction projects.

A.3.5.2.1 The contractor shall perform design and undertake construction with knowledge and consideration of potential impacts to both natural and man-made environments. The contractor shall prevent pollution in all project stages, conserve natural resources, minimize adverse impacts to biological and human environments and maintain historical and cultural integrity.

A.3.5.2.2 During the construction, demolition and/or renovation process the contractor shall minimize adverse acoustical impacts, mitigate adverse air quality impacts to the indoor environment and the atmosphere, employ environmentally sound practices in site layout and landscape, maximize energy efficiency and use of renewable energy sources, protect and conserve water resources and maximize recycling and waste minimization.

A.3.5.2.3 Low Impact Development (LID)

The contractor shall incorporate LID practices into their site development and storm water management plan in order to mitigate development impacts to land, water, and air. LID emphasizes the integration of site design and planning techniques that conserve natural systems and hydrologic functions on a site.

A.3.5.3 Energy Conservation

The contractor shall provide Energy Star or other energy efficient products.

A.3.5.3.1 Lighting

The contractor shall only install energy efficient lighting fixtures, bulbs, fluorescent tubes, switches, and equipment.

A.3.5.3.1.1 Lighting and Pollution Prevention

Fluorescent lamps and other High Intensity Discharge (HID) lights when tested for disposal typically will exceed the Toxic Characteristic Leaching Procedure (TCLP) limit for mercury and are a hazardous waste. The contractor shall comply with pollution prevention mandates (Presidential Executive Order #13423 and the Pollution Prevention Act) and install fluorescent lamps, HID lights, and bulbs that are either mercury-free or the mercury content is below the current hazardous waste standard of 0.20 ppm (parts per million). Fluorescent lamps, HID lights, and bulbs that routinely contain mercury shall have permanent manufacturer labeling stating that the lamp, light, or bulb "Contains Mercury" or is "Mercury-Free." Fluorescent lamps and HID lights containing mercury shall be returnable to the manufacturer for recycling to the greatest extent possible.

A.3.5.4 Paint, Latex (Architectural and Architectural Anti-Corrosive)

The following specifications and restrictions apply to all architectural and anti-corrosive paints used during the course of this contract.

A.3.5.4.1 Paint Volatile Organic Compound (VOC) Restrictions

Due to the documented health risks associated with high VOC levels. Table 1 lists maximum allowable VOC content (grams/liter and pounds/gallon) for each type of paint.

Table 1. APG VOC Limits for Paints

Type of Paint	VOCs (grams/ liter)	VOCs (pounds/gallon)
Interior architectural		
Flat	50 g/l	0.42 lb/gal

Non-Flat	150 g/l	1.25 lb/gal
Exterior architectural		
Flat	100 g/l	0.83 lb/gal
Non-Flat	200 g/l	1.66 lb/gal
Anticorrosive		
Flat	250 g/l	2.1 lb/gal
Semi-Gloss	250 g/l	2.1 lb/gal
Gloss	250 g/l	2.1 lb/gal

A.3.5.4.2 Paint Inorganic Component Restrictions

Paints often contain inorganic and organo-metallic components used as preservatives, additives, and pigments. Table 2 lists the base inorganic components prohibited by APG standards.

Table 2. Inorganic Components Prohibited by Standards for Paints

Antimony
Cadmium
Hexavalent chromium
Lead
Mercury

A.3.5.4.3 Paint Organic Compound Restrictions

Organic chemical compounds in paint affect a number of paint characteristics from how smoothly the paint flows to its freeze resistance. Table 3 lists all compounds prohibited for this contract.

Table 2. Prohibited organic compounds.

Methylene chloride	Di-n-butyl phthalate
1,1,1-Trichloroethane	Di-n-octyl phthalate
Benzene	Diethyl phthalate
Toluene (methylbenzene)	Dimethyl phthalate
Ethylbenzene	Isophorone
Vinyl chloride	Formaldehyde
Naphthalene	Methyl ethyl ketone
1,2-Dichlorobenzene	Methyl isobutyl ketone
Di (2-ethylhexyl) phthalate	Acrolein
Butyl benzyl phthalate	Acrylonitrile

A.3.5.5 Emergency Planning and Community Right-to-Know

A.3.5.5.1 EPCRA Requirements

The contractor shall secure all hazardous materials from the elements, leakage, and entry by unauthorized individuals; maintain active current inventories of all hazardous material and hazardous waste that they manage on-site and maintain a current Material Safety Data Sheet (MSDS) file for each and every hazardous material used on Aberdeen Proving Ground during this contract.

A.3.5.5.2 EPCRA Reporting

A.3.5.5.2.1 The contractor shall provide the COR with a list of all hazardous and regulated materials brought onto the installation during execution of the contract. There are no exceptions.

A.3.5.5.2.2 An initial list shall be provided before any hazardous materials are brought onto the installation. The list shall include chemical/brand name, quantity (in pounds only) with an attached copy of the material safety data sheet (MSDSs) for each item listed. Additions to the quantities previously listed and new items shall be provided over the life of the contract as the contractor determines the necessity to bring more hazardous materials onto the installation.

A.3.5.5.2.3 At the end of the contract or December 31 of each calendar year, whichever comes first, the contractor shall provide the total amount of each chemical used, total amount of waste residues, and total amount of excess hazardous or regulated material removed from the installation or turned over to the government for use.

A.3.6 LOCATION OF STORAGE AND SERVICE FACILITIES

The location of the Contractor's storage and service facilities shall be limited to the job/construction site. Plans showing storage and service facilities, including storage tanks shall be submitted for written approval to the Contracting Officer.

A.3.6.1 Hazardous Materials Storage Tanks and Facilities

The contractor shall assure that all hazardous material storage tanks and facilities are physically separated from the immediate work area. Hazardous material storage facility(s) and tank(s) shall be secured from the elements and entry by unauthorized individuals. Tanks shall be afforded secondary containment to protect against leaks and grounded to protect against electrical charges and sparking. All delivery or loading surfaces shall be impervious and curbed where necessary to insure against spills and leaks to land or water. If secondary containment is open to the environment, it shall be designed and maintained to prevent migration of hazardous materials into ground water, surface water, or evaporation into the air.

A.3.7 PESTICIDES

The contractor shall submit an application and procedures for pesticide application and use for government approval prior to bringing any pesticides onto APG.

A.3.8.1 Hazardous Waste

The contractor shall obtain written government approval before storing any hazardous waste on APG. The transport of hazardous waste onto APG by the contractor is forbidden. Upon determination that a waste is hazardous the contractor shall immediately notify the COR in order to determine pick-up, transportation and waste disposition requirements. The contractor shall containerize, label, stage, and manage the waste while awaiting pick-up. In addition, the containerization, labeling, removal, transportation, and disposal of hazardous materials and waste shall be accomplished in accordance with the requirements outlined in State (COMAR Title 26), Federal EPA (40 CFR), DOT (49 CFR), and OSHA (29 CFR). All costs incurred for the disposal of contractor-generated hazardous waste are the responsibility of the contractor.

A.3.8.1.2 Roll-offs

The covered top roll-offs used to store hazardous waste shall be approved for hazardous waste and marked as required by hazardous waste regulations.

A.3.8.2 Non-RCRA/TSCA and Industrial Wastes

The contractor shall submit information on the method of disposal, transporter, and the disposal site through the COR approval. Copies of the shipping manifests and commercial site receipt copies of manifests and/or bill of lading shall be provided to the COR within 20 days of shipment from the Installation.

A.3.8.3 Surety/Suspect Surety media and debris

The contractor shall not dispose, handle or remove any surety items.

A.3.8.4 Mixed Waste (RCRA/TSCA/NRC/etc.)

The contractor shall not transport or dispose any mixed waste.

A.3.8.5 Radiological Waste

The contractor shall not transport, dispose or remove radiological waste/debris.

A.3.8.6 Solid Waste

The contractor shall coordinate all demolition/removal/disposal action(s) of construction/demolition (rubble) wastes with the government. The contractor shall fill out and submit form titled "Solid Waste Tracking" of APGR 200-50, Appendix A along with the trip tickets to the COR. Noted: this form will be provided to the contractor by APG upon award of the contract.

A.3.9 SPECIFIC DISPOSAL METHODS

A.3.9.1. Lead Contaminated Debris

Debris with TCLP lead of 5 ppm (mg/1) or greater is a hazardous waste and will be handled as such. Lead contaminated debris (less than 5 ppm) is an industrial waste. Most rubble fills do not have liners and leachate collection systems. The contractor shall dispose of lead contaminated debris (less than 5 ppm TCLP) in a lined landfill (COMAR 26.04.07.19. reference MDE Lead Paint Hazard Fact Sheet #6).

A.3.9.2 Demolition of Electrical Equipment Containing Polychlorinated Biphenyls (PCB)

Electrical equipment (i.e., transformers, switches, capacitors, ballast, etc.) which contain PCB-contaminated dielectric materials shall be handled as hazardous waste per Toxic Substances Control Act (TSCA) requirements. The contractor shall weigh, containerize, and label all PCB contaminated equipment and debris in accordance with applicable regulations.

A.3.9.3 Demolition of Electrical Equipment Containing Mercury

Electrical items (i.e., switches, thermostats, thermometers, bulbs, fluorescent tubes, and other electrical items) containing toxic characteristic leaching procedure (TCLP) mercury in concentrations of 0.20 ppm (parts-per-million) or greater shall be consolidated, containerized, and labeled by the contractor for final disposition by the Government.

A.3.9.4 Asbestos Disposal

The contractor shall provide a disposal plan, transporter, and disposal site information to the COR for written approval. Completed manifests/bills of lading, and the analytical results of the waste shipped by the approved transporter/disposer shall be returned to the COR within 24 hours of shipment. The signed disposal facility copy shall be returned to the COR within 20 days of shipment.

A.3.9.4.1 Asbestos/Lead Paint Waste/Debris

Waste/debris containing asbestos, and 5 ppm (mg/1) or greater lead determined by the TCLP test, is a mixed RCRA/TSCA waste. It shall only be disposed of at a licensed government approved disposal facility. The contractor shall containerize, mark, and stage the waste for government removal. All containers of lead contaminated debris (5 ppm or greater) shall be packaged and labeled and managed as a hazardous waste in accordance with State and Federal regulations.

A.3.9.5 Demolition of Refrigeration Equipment

The contractor shall not release refrigerants/ozone-depleting substances (ODS) or ozone-depleting chemicals (ODC) to the environment during demolition/up-grade of an existing system. All service personnel shall have the necessary training and certifications to accomplish such removal actions. All recovery equipment shall meet EPA (40 CFR 82.158(b) (1)) and/or Air Conditioning and Refrigeration Institute (ARI) 740-1993 standards and certifications. At the discretion of the government the contractor shall either recover all refrigerant for reuse or turn the recovered refrigerant over to the government for shipment to the DOD Reserve Bank for disposal. The contractor is prohibited from releasing refrigerant to the land, water or air.

A.3.9.6 Contaminated Soil Staging and Disposal

The contractor shall not deposit, spread or dispose of any excavated soils removed from APG contaminated site(s) unless specifically authorized by the government in writing to dispose of such soils at an APG or commercial site. The contractor shall comply with all EPA 40 CFR, RCRA Subtitle C and D requirements while excavating, staging, storing, containerizing, transporting and/or disposing of contaminated soils. If the work is to be performed on or near a CERCLA (Superfund) site the government will advise the contractor of all applicable work requirements and agreements.

A.3.9.7 Contamination Encountered During Construction

If contamination is encountered during excavation or construction, the site must be remediated before the activity can continue. The contractor shall immediately notify the COR if any contamination or suspect contamination is detected or if remediation is required.

A.3.9.8 Industrial Waste

Contractor generated industrial waste shall not be stockpiled on-site.

A.3.9.9 Liquid Stripper Waste

Liquid wastes from activities such as stripping lead paints shall be containerized in compatible containers, marked as hazardous waste and labeled as to the actual contents in accordance with RCRA hazardous waste regulations.

A.3.10 SEWER DISCHARGES

The contractor shall perform analyses to determine the composition of each media proposed for discharge to the sewer system. The contractor shall assure that the discharge is within APG permit parameters. The contractor's laboratory shall meet the requirements of paragraph 3.16 of this specification. As a quality assurance measure the government will randomly verify analytical results through government or contract laboratories. The contractor shall obtain approval in writing through the COR prior to any discharge.

A.3.10.1 Sterilization/Disinfection

Waters with detectable chlorine shall not be discharged to the waters of the State (note the State includes groundwater and surface waters as waters of the State). The contractor shall obtain approval in writing through the COR prior to any discharge.

A.3.11 QUARANTINED AREA BY DEPARTMENT OF AGRICULTURE

The installation is within an area that has been quarantined by the Department of Agriculture to prevent the spread of certain plant pests that may be present in the soil. The contractor shall thoroughly clean all soil residues from all vehicles, construction equipment at the construction site by high-pressure washer or other methods that will assure complete removal. Water use will be restricted to the minimum to clean a vehicle. Non-chlorinated water from washing must stay on site and not be allowed to run-off to waters of the State. Chlorinated wash waters must be diverted to a sanitary sewer. The contractor shall make arrangements and obtain written authorization through the

COR to use wash racks on post. Hand tools shall be thoroughly cleaned by brush or other means to remove all soils. Transporting and disposal of soils and related debris will be in accordance with quarantine requirements.

A.3.12 HISTORICAL SIGNIFICANCE AND UNEARTHING OF ARTIFACTS

Project areas shall be reviewed for impact to cultural resources prior to any ground disturbance. If artifacts or items of significance are unearthed or discovered during construction the contractor shall cease the action and immediately notify the COR. It is a federal offense for unauthorized person(s) to recover artifacts from federal property.

A.3.13 PROHIBITED MATERIALS DURING CONSTRUCTION AND RENOVATIONS, POLLUTION PREVENTION

Materials/items/equipment used for construction and renovations shall not be of a nature that they will cause environmental damage, contribute to future environmental concerns or disposal problems.

A.3.13.1 Electrical Equipment Containing Dielectric Fluid

The contractor shall not install any new electrical equipment (capacitors, lighting, ballasts, etc.) that contains any PCBs. All equipment shall be permanently labeled by the manufacturer as PCB-free.

A.3.13.2 Lighting

Fluorescent Lamps and HID lights when tested for disposal will typically exceed the TCLP limit for mercury, and are hazardous waste (OSWER, EPA, DC, letter dated 7 Dec 1992; and report dated 14 May 1993). All fluorescent lamps, HID lights, and bulbs shall be permanently labeled by the manufacturer as either "Containing Mercury" or "Mercury-Free." Mercury containing items shall be returnable to the manufacturer for regeneration/recycling to the greatest extent possible.

A.3.13.3 Paint (Protective Coating)

All architectural and anti-corrosive paints (interior and exterior) shall meet the APG/EPA/Industry/Green Seal GS-03 Standard. See paragraph 3.5.4 for chemical and packaging restrictions and COMAR 26.11.33 (Air Quality, Architectural Coatings). The contractor is responsible to ensure that all paints are environmentally preferable and are of either low-toxic or nontoxic composition. All paints shall be free of persistent bioaccumlative toxins-PBTs (e.g., lead, mercury).
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A.3.13.4 Asbestos Restrictions

Asbestos containing materials shall not be installed. Where material matching (i.e. roof corrugated sheeting, building siding) is required, equivalent concrete based or other equal substitutes shall be used.

A.3.13.5 Solder and Flux

Solder and flux shall be heavy metal free (i.e., lead, cadmium, silver, etc.) to the greatest extent possible.

A.3.14 RADIATION EMITTING EQUIPMENT

Any radiation emitting equipment, sources, materials, and other similar type items must be properly, registered, licensed, etc. The contractor shall submit an application to the COR for written approval prior to bringing any sources on to APG.

A.3.15 ENVIRONMENTAL PERMITS

The contractor shall not proceed with the construction, renovation, or modifications until all of the required regulatory approval or permits are obtained. Any penalties, fines or costs resulting from stop orders due to actions proceeding without approval/permits shall be assessed against the contractor.

A.3.15.1 Underground Storage Tanks (UST) and Associated System Components

If any work involves the installation, maintenance, or modification to a UST system or fuel lines to underground piping, a Maryland certified installer is required. The certified installer shall be present on site during all installation actions. The connections shall be made in accordance with COMAR and the complete system shall be precision tested after completion with a State approved method.

A.3.15.2 Hazardous Area Work Permits or Site-Specific Health and Safety Plans

Hazardous materials include, but are not limited to: chemical surety materials, hazardous chemicals, carcinogens, asbestos, explosives, radioactive materials, Unexploded Ordnance (UXO) etc. These hazardous materials may be encountered at work sites at APG. Where work sites are in known or suspected to contain hazardous materials, a Hazardous Area Work Permit (HAWP) will be included in the Statement of Work. The contractor shall also develop a Site-Specific Health and Safety Plan prior to initiating work on the site. Similarly, where excavation is required, an excavation permit is required. These permits will indicate the type of hazard and the special requirements to be followed in the work area. Copies of permit(s) shall be posted by the contractor in the full view at the work site. The contractor shall be responsible to inform all its personnel and assure they conform to all special requirements directed by the permit(s). Non-conformance shall result in a work stoppage until the situation is corrected to the satisfaction of the COR, at no expense to the Government. At sites not suspected of containing hazardous materials the possibility still exists of encountering them during the course of work. If during operations hazardous materials, possible contamination or other environmental damage is encountered by contractor personnel they shall immediately discontinue work in that area and notify the COR. Work may resume only after approval is given by the COR.

A.3.16 CONTRACTOR'S SUPPLIED SAMPLING AND ANALYSIS SERVICES

All sampling and/or analysis laboratories shall be EPA and/or State certified and licensed. In some instances, other Federal Agency or national certification may apply. The laboratory shall submit a Quality Assurance and Quality Control plan, Health and Safety Plan, Sampling and Analysis Plan/EPA methods/SOPs, certifications, and accreditation to the COR. The contractor is responsible for assuring that the analysis laboratory is qualified and has the licensing/certification to perform the sampling and/or analysis required.