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SECTION 01 57 20

ENVIRONMENTAL PROTECTION

06/23

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SECTION 01 57 20

ENVIRONMENTAL PROTECTION
06/23

PART 1 GENERAL

1.1 REQUIREMENTS

This specification covers the requirements for environmental protection during all construction and maintenance activities. The contractor shall minimize environmental pollution and damage during the course of the contract. The control of environmental pollution and damage requires consideration of land, water, and air resources. The environmental resources within the project boundaries and those affected outside the work area shall be protected during the entire duration of this contract.

This guidance applies to all contractor activities at Joint Base San Antonio (JBSA). These areas include JBSA Lackland (JBSA-LAK), JBSA Chapman Training Annex (JBSA-CTA), JBSA Port Annex (JBSA-PRT), JBSA Kelly Field Annex (JBSA-KFA), JBSA Randolph (JBSA-RND), JBSA Seguin Auxiliary Field (JBSA-SAF) JBSA Canyon Lake (JBSA-CAN), JBSA Sam Houston (JBSA-SAM), JBSA Medical Center Annex (JBSA-MCA), JBSA Grayson Street Annex (JBSA-GSA) and JBSA Bullis (JBSA-BUL).

The following lists are the general environmental phone numbers for JBSA Environmental point of contacts.

JBSA Environmental contact phone numbers
JBSA-RND/CAN/SAF: 210-652-4668
JBSA-SAM/BUL/MCA/GSA: 210-221-1142
JBSA-LAK/CTA/KFA/PRT: 210-671-4844

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced and constitute only major areas of environmental concern. Contractor shall determine which federal, state, and local environmental regulations apply. The publications are referred to within the text by the basic designation only.

STATE OF TEXAS ADMINISTRATIVE CODE (TAC)

25 TAC 296	Texas Asbestos Health Protection
30 TAC 106	Permits by Rule
30 TAC 116	Control of Air Pollution by Permits for New Construction or Modification
30 TAC 213	Edwards Aquifer
30 TAC 290	Public Drinking Water
30 TAC 330	Municipal Solid Waste
30 TAC 334	Underground and Aboveground Storage Tanks

HSC 382.0518(a)	Preconstruction Permit

U.S. AIR FORCE (USAF)

AFMAN 32-7002	(2020) Environmental Compliance and Pollution Prevention

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1926.62	Lead
40 CFR 745	Lead-Based Paint Poisoning Prevention in Certain Residential Structures
49 CFR SUBCHAPTER C	Hazardous Materials Regulations

1.2.1 TEXAS ADMINISTRATIVE CODE (TAC)

Texas Pollutant Discharge Elimination System (TPDES)Multi-Sector General Permit (CGP)) (Permit No. TXR150000) - contact 802 CES/CEIE https://www.tceq.texas.gov/permitting/stormwater/construction

Stormwater Pollution Prevention Plan (SWP3) - The CGP requires construction site operators to develop and implement a Stormwater Pollution Prevention Plan (SWP3) prior to commencing construction. https://www.tceq.texas.gov/permitting/stormwater/construction

JBSA Stormwater Management Plan (base specific) TPDES Municipal Separate Storm Sewer (MS4) (Permit No. TXR040000) - Contact 802 CES/CEIE

TPDES Multi-Sector General Permit (MSGP) (Permit No. TXR050000) Contact 802 CES/CEI

1.2.2 INSTRUCTIONS AND DIRECTIVES

All JBSA instructions and directives are available through 802 CES/CEIE Environmental Offices and the Enterprise Environmental Information System (provided upon request). It is the contractor's responsibility and requirement to coordinate all communications with the JBSA Environmental Office through the Contracting Officer's Technical Representative.

" Location-specific Spill Prevention Control and Countermeasure (SPCC) Plans

" JBSA-RND and Lackland Facility Response Plan

" JBSA Hazardous Waste Management Plan

" JBSA Integrated Solid Waste Management Plan

" JBSA Asbestos Management and Operations Plan

" JBSA Lead-Based Paint Management Plan

" JBSA Soil Management Plan

" JBSA Installation Restoration Program (IRP) and IRP Management

Action Plan

" JBSA Location Specific, Storm Water Pollution Prevention Plans (SWP3)

" JBSA Location Specific, Storm Water Management Plans (SWMP)

" JBSA Integrated Cultural Resource Management Plan

" JBSA Integrated Natural Resource Management Plan

" 502d Air Base Wing Environmental Management System (EMS) Policy

" JBSA Critical Period Management Plan

1.2.3 USAF INSTRUCTIONS

AFI 32-1001 Chapter 15 Facility Asbestos Management

AFI 32-1001 Chapter 14 Corrosion Control Program

DAFMAN 32-1067 Sect. 4.3 Backflow Prevention Program

AFI 32-7001 Sect. 4.4 Pollution Prevention

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Refer to Section 01 33 00 SUBMITTAL PROCEDURES for requirements when a classification other than "G" or "S" are used. Submittals not having a classification are for information only. Submit the following, when applicable, in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 PRECONSTRUCTION SUBMITTALS

ENVIRONMENTAL PROTECTION PLAN; G

Z Fish and Wildlife Protection Measures; G

Environmental Permit; G

Asbestos Work Plans; G

Asbestos Certifications; G

Asbestos Transporter License; G

Asbestos Medical clearances; G

Asbestos Training Certificates; G

Asbestos TDSHS License; G

Unsigned copy of State Renovation; G

Unsigned Demolition Notifications (15 days prior); G

Edwards Aquifer Protection Plan (As Applicable); G

Lead Work Plans; G

Lead Occupant Protection Plan; G

Texas Department of State Health Services Lead Licenses; G

Lead Notifications; G

Acknowledgement Of Api Std 650; G

Aboveground Piping Systems; G

Stormwater Pollution Prevention Plan; G

Equipment Inventory List; G

Waste Disposal Plan; G

Construction Tpdes Notice Of Intent And Site Notices; G

Construction Site Notice Or Notice Of Intent; G

Hazardous Waste Management Plan; G

Integrated Solid Waste Management Plan; G

Hazardous Material List; G

Emergency Response Plan And/Or Site Specific Spill Prevention Response Plan; G

Summary Transmittal Letter; G

SD-03 Product Data

Safety Data Sheets (SDS) For All Materials; G

SD-06 Test Reports

Commercial Facility Lead Contaminated Waste Shall Be Characterized, Profiled, And Manifested; G

Return Manifests And Weight Tickets; G

Monthly Diversion And Landfill Reports; G

Any Asbestos Inspection Reports That Were Not Included In The Original Assessment Or As A Result To A Change In The Sow Or Found As Unknown And Unforseen Discoveries During Any Phase Of He Project; G

Asbestos Inspection Reports That Have Not Been Provided By The Area Specific Env Office; G

Lead Based Paint Reports -Not Included In Original Assessment Or Results In Change Of Sow; G

Lead Inspection Reports- Not Provided By JBSA Env Office or by

licensed Lead Inspector; G

OSHA Air Monitoring; G

Lead OSHA Negative Exposure Assessment; G

Asbestos Air Monitoring reports; G

(a) Baseline
(b) Aggressive sample reports
(c) All clearances

Lead Air Monitoring reports; G

(a) Air Baseline Survey
(b) Aggressive sample reports
(c) All clearances:
1. Visual Inspection
2. Dust Wipe Samples analyzed by a certified Environmental Lead Laboratory

Analytical Results; G

SD-07 Certificates

Certificate Of Training Asbestos; G

Certificate Lead Training; G

EPA Lead Training Or Lead Awareness Training (Min 8Hr); G

Stormwater Notice Of Change (for NPDES coverage under the general permit for construction activities); G

SD-11 Closeout Submittals

Notice Of Termination at end of construction; G

1.4 QUALITY ASSURANCE

Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily reports problems in complying with laws, regulations, permit requirements, ordinances, and corrective action taken. The Contractor shall immediately inform the Contracting Officer of any environmental problem.

The prime Contractor will have the sole responsibility to ensure all the subcontractors comply with all environmental protection requirements in this specification.

1.5 CONTRACTOR COMPLIANCE

1.5.1 Permits

The contractor shall ensure that all local, state, and federal environmental permits (to include notifications and authorizations for the remainder of this document) for this contract are obtained prior to start of construction and/or installing or operating any equipment or disturbing

or clearing any land area. The contractor shall immediately notify 802 CES/CEIE of any conditions which may conflict with approved permits.

1.5.1.1 Permit Coordination

The contractor shall coordinate required permits with 802 CES/CEIE.

1.5.1.2 Permit Operations

The contractor shall be responsible for operating within permit limits and abiding by all permit conditions. Failure to comply with permit requirements, to include permits held by JBSA and/or any subsequent fines resulting from such failure are the sole responsibility of the contractor. 802 CES/CEIE shall be notified immediately of instance that exceeds the limits of the permit or a violation of permit conditions.

1.5.1.3 Permit Certifications

Certifications required by permits shall be the responsibility of the contractor. Copies of permits and certifications shall be submitted to the 802 CES/CEIE. The contractor shall maintain and have readily available a copy of required permits. The Contractor shall ensure personnel read, understand, and abide by all conditions and requirements of the environmental permits.

1.5.2 Wastewater

Contractors shall submit a summary transmittal letter to the 802 CES/CEIE Environmental to obtain approval from the Texas Commission on Environmental Quality (TCEQ) Wastewater Design Team, provide a copy to 802 CES/CEIE Environmental for projects that include work or modification of lift stations, treatment plants, and/or collection system lines. It is the contractor's responsibility and requirement to coordinate all communications and submittals of plans and documents with 802 CES/ CEMP Project Managers and Contracting Representative.

No Discharges to JBSA sanitary sewers are allowed unless prior approval by 802 CES/CEIE. Contractors shall not discharge any waste that will violate JBSA specific area wastewater discharge permits. A Request shall be submitted in writing along with documentation of waste to be discharged, i.e., Safety Data Sheets (SDS) or sample analysis results, to include chain-of-custody and QA/QC data.

The JBSA-RND sanitary sewer is owned by the San Antonio River Authority (SARA). It is the responsibility of the PM and contractor to ensure that any work dealing with installation or removal of sanitary sewer lines is done in coordination with and, if necessary, the approval of SARA. http://www.sara-tx.org

1.5.3 Public Water Systems

In accordance with 30 TAC 290 section 39, changes or additions to previously approved plans and specifications, existing systems, or supplies shall have approval from the TCEQ executive director prior to commencing construction or supporting activities. All applicable Pre-Construction Submittal documentation shall be submitted to 802 CES/CEIE for review. Construction shall not commence prior to written approval from the TCEQ executive director for each project, or partial section. TCEQ requires plans be submitted at least 30 days prior to the

time that approval, comments, and recommendations are desired. For phased projects, TCEQ approval can be obtained for each phase by submitting a certification of completion package for each phase as a partial completion of the entire project. All associated documentation (Certification of Completion Form, as-built drawings, bacteriological analysis, pressure test results, etc.) shall be submitted to 802 CES/CEIE and Bioenvironmental for review. The Base Utility Supervisor shall be provided a copy of the TCEQ clearance for each project or partial section before activating or reactivating the public water system to that area.

Disinfection and bacteriological testing of water system components shall be conducted in accordance with TCEQ regulations and American Water Works Association (AWWA)standards. Bioenvironmental and the Base Utility office shall be notified of all disinfection and bacteriological testing activities. New or repaired portions of the public water system shall not be placed into service until coordination with Bioenvironmental and bacteriological testing are complete. Contractors shall not obstruct drinking water sample collection specified points throughout distribution.

Contractors shall coordinate with installation Water Quality Program Manager for permitting requirements associated with any water well projects. Water system projects require review and approval by the 802 CES/CEIE.

1.5.4 Storm Water Pollution Prevention

Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP) (Permit No. TXR150000) coverage shall be obtained, by the contractor, at least 7 days prior to commencing construction or construction support activities for projects disturbing one acre or greater of land, including equipment/material storage yards or temporary access roads. The contractor is responsible for submitting documentation (Notice of Intent (NOI), small/large construction site notice (CSN), inspection records, Notice of Termination (NOT), etc.), providing notifications, and paying applicable fees to local (MS4 Operator - 802 CES/CEIE), state, and federal authorities, as applicable.

Contract operators disturbing greater than 1 acre of land shall maintain compliance with applicable CGP conditions for Small or Large Construction Sites (defined in the CGP). Contract operators disturbing less than 1 acre of land shall implement best management practices (BMPs) to prevent the discharge of pollutants into the MS4.
https://www.tceq.texas.gov/permitting/stormwater/construction/index

The contract operators shall ensure Stormwater Pollution Prevention Plan (SWP3) is designed, implemented, and maintained in compliance with the CGP for the duration of the project (final stabilization and submittal of NOT to MS4 Operator - 802 CES/CEIE). The SWP3 and required documentation shall be maintained on site and made available for review upon request by local, state, and federal authorities.

1.5.5 Edwards Aquifer Recharge and Contributing Zones

Portions of JBSA-BUL are located in the Edwards Aquifer recharge and contributing zones. The TCEQ has developed specific requirements for construction within these areas in an effort to protect Edwards Aquifer groundwater. The contractor shall comply with all requirements listed in 30 TAC 213 relating to the Edwards Aquifer. Construction in the Edwards Aquifer Recharge Zone requires approval from the TCEQ and development of

an Edwards Aquifer Abatement Plan. Construction which disturbs 5 acres or greater in the Edwards Aquifer Contributing Zone requires TCEQ approval and the development of a Contributing Zone Plan. The contractor shall be responsible for all compliance costs associated with 30 TAC 213. The Contractor shall submit all Recharge and Contributing Zone Plans developed for construction activities at Camp Bullis to 802 CES/CEIE for review.

1.6 ENVIRONMENTAL PROTECTION PLAN

The Contractor shall submit an Environmental Protection Plan within 15 days after receipt of the notice to proceed. Approval of the Contractor's plan will not relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures. The contractor shall obtain approval from the Contracting Officer prior to the start of construction, modification, or demolition for all
project facilities and/or equipment. The plan shall include, but shall not be limited to, the following:

a. Environmental protection procedures to be implemented to provide the required environmental protection of features to be protected within the work area (e.g., trees, grasses, air and water quality, historical, and cultural resources, etc.). All projects that take place over the Edwards Aquifer Recharge or contributing zones will require a specific Edwards Aquifer Protection Plan.

b. Drawings showing locations of any proposed BMPs, temporary excavations or embankments for haul roads, stream crossings, material and/or waste storage areas, structures, sanitary facilities, and temporary stockpiles of excess or spoil materials shall be included.

c. Solid Waste Management Plan and summary of solid waste generated, in accordance with paragraph INTEGRATED SOLID WASTE MANAGEMENT (NON-HAZARDOUS WASTE AND RECYCLING).

d. Emergency Response and Spill Prevention Plan, IAW paragraph 3.12 EMERGENCY RESPONSE, SPILL PROCEDURES, FUEL TANKS and paragraph 3.16 Explosive Ordnance.

e. Hazardous Material List, IAW paragraph 3.10.3 Coordination.

f. Prior to start of construction, a site-specific certified Storm Water Pollution Prevention Plan shall be developed for projects over 1 acre and shall be made available for review by 802 CES/CEIE Environmental throughout the duration of the project. For construction projects disturbing greater than 1 acre, contractor shall provide a copy of the Notice of Intent (NOI) and/or Construction Site Notice(s), as applicable, to the 802 CES/CEIE, IAW paragraph 3.3 Water Quality and Texas Pollutant Discharge Elimination System Construction General Permit (TPDES CGP). (NOI copy shall be maintained on site at all times).

g. Notice of Termination documents shall be submitted to the TCEQ when the site meets final stabilization and temporary BMPs have been removed, and a copy shall be submitted to the 802 CES/CEIE, IAW the TPDES CGP and JBSA Storm Water Management Plan (SWMP)as a Close Out Requirement.

h. Hazardous Waste Management Plan, that addresses all the applicable

items in paragraph 3.8 Hazardous Waste. Contractor should have Department of Transportation (DOT) and HAZWOPER trained personnel.

i. Green Procurement Purchases, IAW paragraph 3.6.1 Executive Order 14057, Catalyzing Clean Energy and Jobs Through Federal Sustainability.

j. Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

k. Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws may be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

1.7 MEETINGS

1.7.1 Environmental Brief

Attend an environmental brief to be included in the PRECONSTRUCTION CONFERENCE. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the installation; and types and quantities of wastes/wastewater that may be generated during the Contract. Discuss the current results of the Preconstruction Survey. Prior to initiating any work on site, meet with the Contracting Officer, the 802 CES/CEPM Project Managers and installation Environmental Office to discuss the proposed Environmental Protection Plan (EPP). Develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural and cultural resources, required reports, required permits, permit requirements (such as mitigation measures), waste management plans and practices, how waste diversion requirements will be met, and other measures to be taken. The requirements of this meeting may be fulfilled during the coordination and mutual Understanding meeting outlined in Section 01 45 00 QUALITY CONTROL.

1.7.2 Integrated Solid Waste Management

Discuss integrated solid waste and recycling management at contractor's regular meetings. Request attendance of 802 CES/CEIE personnel as appropriate to address waste management issues and ensure compliance with the approved EPP. It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative. The requirements of these discussions may be fulfilled during Pre-construction meetings, regular site or quality control meetings. At a minimum, discuss and document waste management goals (as applicable) at following meetings:

a. Pre-demolition meeting
b. Regular progress meetings meetings

c. Work safety meeting (if applicable)

1.8 PRECONSTRUCTION CONFERENCE

After award of this contract but prior to commencement of any work at the site, the contractor shall meet with the contracting officer, 802 CES/CEPM project manager and 802 CES/CEIE environmental office to discuss and develop a mutual understanding relative to the administration of the contract, preparation of the schedule, contractor's general intent on direction of execution, submittals, scheduling, programming, prosecution of the work, and the submittals process review. Principles of any major 1st tier subcontractors who will engage in the work shall also attend.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 NATURAL RESOURCES

3.1.1 Environmental Resources

The environmental resources within the project boundaries and those affected outside the limits of work under this contract shall be protected during the entire period of this contract. The Contractor shall confine activities to areas defined by the drawings and specifications and provide adequate maps depicting the project area. All contractors shall comply with JBSA Integrated Natural Resources Management Plan (INRMP), DAFMAN 32-7003, Environmental Conservation, Endangered Species Act, Clean Water Act, and Migratory Bird Treaty Act. Environmental protection measures shall be as stated in the following subparagraphs.

3.1.1.1 Land Resources

Prior to work, the Contractor shall identify the Natural Resources within the boundaries of the project. The Contractor shall not remove, cut, deface, injure, dredge, fill, disturb soil or destroy land resources including trees, shrubs, vines, grasses, topsoil, floodplains, wetlands, and landforms without prior coordination with Natural Resources Management.

3.1.1.2 Tree Trimming and Removal

Prior to trimming or removal of trees, contractor shall coordinate with Natural Resources Management office. Approved removal or trimming of trees, shrubs, or other vegetation, shall be conducted between 15 SEP - 28 FEB. Oak species trimmed or accidentally damaged during construction, shall be painted with pruning paint immediately, to include damaged roots.

3.1.1.3 Protection of Vegetation

Trees, shrubs, and other vegetation not identified for removal shall be protected against removal, injury, defacing, and scarring. No ropes, cables, or guys shall be fastened to or attached to trees for anchorage unless specifically authorized. Where such emergency use is approved, the Contractor shall provide effective protection for land and vegetation resources at all times.

Trees, shrubs, and other vegetation to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved technique.

3.1.1.4 Best Management Practices (BMPs)

Per requirements of the JBSA Integrated Natural Resource Management Plan (INRMP), the Contractor shall follow the BMPs for tree protection to ensure prevention of oak wilt compliance and to ensure vegetation removal will not affect protected species.

3.1.1.5 Parking

The Contractor shall not park vehicles or equipment within the drip line of trees. The Contractor shall coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.1.1.6 Contractor Facilities

The Contractor's field offices, staging areas, storage, and temporary buildings shall be placed in areas designated on approved project design drawings or as directed by the Contracting Officer. Submittals are required with siting approval from the facility board prior to any action related to staging, fencing, or installation of temporary facilities or equipment, temporary movement or relocation of Contractor facilities shall be made only when approved through coordination with 802 CES/CEIE. Borrow and/or spoil areas shall be managed and controlled to limit spoil intrusion into designated areas, minimize erosion and to prevent soil or sediment from entering nearby waters or storm drains. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment.

3.1.1.7 Fish And Wildlife Protection

The Contractor shall minimize interference and disturbance to, and damage of, fish and wildlife. Species that require specific attention along with measures for their protection shall be coordinated with 802 CES/CEIE prior during the planning process and prior to beginning construction operations.

If contract activities risk destroying or disrupting migratory birds or bird nests, prior coordination with 802 CES/CEIE is required. Immediately halt all activities and contact the Contracting Officer and Project Manager.

3.2 CULTURAL RESOURCES

3.2.1 Historical, Archaeological and Cultural Resources

Existing historical, archaeological, and cultural resources within the Contractor's work area will be so designated by the Contracting Officer if any have been identified. The Contractor shall take precautions to preserve all such resources as they existed at the time they were first identified. If during construction activities previously unidentified or unanticipated resources are discovered or found, the Contractor shall stop work immediately and notify the Contracting Officer and the 802d Cultural Resources Media team for consultation. The Contractor shall provide and install protection measures for these resources and be responsible for

their preservation during the life of the contract. Protection measures will be provided by 802 CES/CEIE after consultation with the State Historic Preservation Officer on a case-by-case basis. All communications with the SHPO shall be conducted by the Federal Agency Official or their appointed representative and shall not be contacted by the Contractor.

3.2.2 Artifacts

If during excavation or other construction activities previously unidentified or unanticipated resources are discovered or found, the Contractor shall stop work immediately and notify the Contracting Officer and the 802 CES/CEPM Project Manager as simultaneously as possible, who will in-turn notify the 802d Cultural Resources Media team for consultation. It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative. Resources covered by this paragraph include but are not limited to any human skeletal remains or burials; artifacts; shell, bone, charcoal, or other deposits; rocks or coral alignments, paving, walls, or other constructed features, and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately stop work and notify the Contracting Officer and the 802 CES/CEPM Project Manager, as simultaneously as possible. The CEPM will in-turn notify the 802 CES Cultural Resources Media Team.

3.3 WATER QUALITY

3.3.1 Pollution Prevention

The Contractor shall keep construction activities under surveillance, management, and control to prevent pollutants from entering the MS4 (roads, ditches, and similar means of collecting and conveying stormwater), surface and ground waters of the state. Toxic and/or hazardous chemicals shall not be applied to soil or vegetation when such application may cause contamination. All de-watering shall be in accordance with the requirements of local, state, and federal regulations and the TCEQ CGP. Monitoring of land and water impacted by construction and supporting activities shall be the Contractor's responsibility.

3.3.2 Potable Water

Contractors shall be certified and licensed within the State of Texas for the installation of all potable water lines and backflow prevention devices. Accessibility to potable water must be requested and coordinated with Bioenvironmental, fire and emergency services and CEO utility offices prior to temporary connections and hookups from any fire hydrants. Fire hydrant temporary connections shall meet state mandated backflow prevention requirements or approved air gaps on lines. Backflow devices shall be tested and certified immediately after installation on fire hydrant. Testing certifications shall be submitted to 502 CES/CEO Plumbing Shop upon installation of devices for incorporation into Backflow Program records. Requests must include usage quantities and be approved prior to proceeding with any connections to fire hydrants. Hose bib use from facilities is authorized if coordinated through the utilities office, and appropriate backflow devices are used when required. The use of hose bibs from housing residents is not authorized for contractor use.

Installation or repair of water mains must be coordinated with

Bioenvironmental and utility office prior to start of work. The contractor shall follow TCEQ regulations and American Water Works Association (AWWA) standards for water main disinfection. The water main shall not be placed into service until bacteriological samples are collected and results are negative.

JBSA-LAK/CTA/KFA/PRT, JBSA-SAM/BUL/MCA/GSA Bioenvironmental: 210-671-7061
JBSA-RND/CAN/SAF Bioenvironmental: 210-652-3256

Water Conservation is in effect all year on Joint Base San Antonio and each stage of water conservation is highly emphasized. Use of reclaimed/recycled water for irrigation is encouraged at JBSA and is available at most locations. The contractor shall comply with TCEQ requirements established in 30 TAC 210 when utilizing reclaimed water.

3.3.2.1 Backflow Preventers Certificate

Certificate of Full Approval from FCCCHR List, University of Southern California, Manual of Cross-Connection Control Tenth Edition. A manufacturer's certificate attesting that the design, size and make of each backflow preventer has satisfactorily passed the complete sequence of performance testing and evaluation for the respective level of approval. Certificate of Provisional Approval will not be acceptable.

3.3.2.2 Backflow Assembly Tester License

Prior to testing, submit to the Contracting Officer a copy of the Texas licensed Backflow Assembly Tester's license. Tester must not be affiliated with any company participating in any other phase of this Contract. The local Utility is American Water. The AHJ for the purpose of water and water testing is the CEPM. Typical deliverables are:

SD-06 Test Reports
Backflow Preventer Tests
SD-07 Certificates
Backflow Tester License
Backflow Preventers Certificate of Full Approval

3.3.3 Storm Water

The contractor shall use proper control and management techniques to ensure storm water criteria are met in accordance with federal, state, and local storm water regulations. Runoff from the construction site or from storms shall be controlled, retarded, and diverted as indicated on the drawings to protect drainage courses by means of diversion ditches, benches, berms, sediment basins, inlet protection devices, stabilization, and by any measures required by area-wide plans under the Clean Water Act. Prior to any project that disturbs greater than one acre, the contractor must follow permit coverage requirements as stated in paragraph 1.5.1. Contractors are required to incorporate Low Impact Development design techniques into sites which develop or redevelop areas greater than 5000 square feet IAW the Energy Independence and Security Act (EISA) Section 438. Contractors are encouraged to incorporate Low Impact Development design techniques into all projects as referenced in UFC 3-210-10. Low Impact Development (LID) is a storm water management strategy designed to maintain site hydrology and mitigate the adverse impacts of storm water runoff and nonpoint source pollution. The San Antonio River Authority has published a LID Technical Guidance Manual for the implementation of LID in the San Antonio River Basin. This manual is available for download at:

https://www.sariverauthority.org/resources/san-antonio-river-basin-low-impact-developm

3.3.3.1 Sediment Control

Temporary sediment and erosion controls shall be adequate to prevent potential pollutants discharging from the site, installed as per manufacturer's specifications, and maintained in effective operating condition. Temporary sediment control devices will remain in place and be properly maintained until the site meets the final stabilization requirements defined in the TPDES Construction General Permit.

3.3.3.2 Severe Erosion

In some cases where severe erosion results in waters becoming turbid despite control measures, regular turbidity monitoring and documentation shall be necessary. Any such documentation shall be forwarded to 802 CES/CEIE for review via the contracting officer and 802 CES/CEPM using AF3000 Material Approval Submittal Form, which can be obtained on the Department of the Air Force E-Publishing site.

3.3.3.3 Stream Crossings

Stream crossings shall allow movement of materials or equipment without violating federal, state, or local government water pollution control standards or impeding waters of the state regulations. **Contractor shall check the AF Project Form 813 report to verify if any environmental impact is foreseen and any mitigation is needed. It is the contractor's responsibility and requirement obtain this form through the 802 CES/CEPM Project Managers and Contracting Representative.**

3.3.3.4 Sewage Holding Tanks

Contractor is not authorized sewage-holding tanks on base and shall procure a portable toilet service contract with the exception of job site trailers and temporary swing space. All temporary swing space includes either plumbing to existing nearby sanitary sewer lines or the use of black water tanks that are professionally pumped out weekly. The portable toilet contract shall include the correct removal of sewage and removal of the portable toilet upon completion of the project by a TCEQ licensed septic waste hauler.

3.3.3.5 Equipment Maintenance

Maintenance of Contractor vehicles and heavy equipment (including oil changing, lubrication, and vehicle washing) is not authorized on JBSA properties.

3.3.3.6 Concrete Washout

Contractor shall provide concrete truck washout facilities to contain wash water and material generated from truck washout. The concrete washout shall be maintained to prevent the discharge of pollutants and materials disposed of in accordance with solid waste rules and regulations. Concrete trucks are not authorized to be washed out onto the ground.

3.3.3.7 Best Management Practices (BMPs)

JBSA Regulatory Guidance (RG-348) on storm water BMPs can be found in the

TCEQ guidance manual "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices." This guidance can be found at:

https://www.tceq.texas.gov/downloads/publications/rg/complying-with-the-edwards-aquife
Guidance on Low Impact Development BMPs can be found in the SARA technical manual at:

https://www.sariverauthority.org/resources/san-antonio-river-basin-low-impact-developm

3.3.3.8 Documentation

Contractor shall provide engineering plans, technical/product specifications, and Operation and Maintenance manuals for all storm-water management structures (Structural BMPs, detention structures, conveyance structures, permeable pavements, bio retention structures, etc.) to the Contracting representative and the 802 CES/CEPM via the AF3000 process. The CEPM will provide 502 CES/CEO-Operations, CEIE-Environmental Management, and CEN-GeoBase offices. The Contractor shall allow a minimum 20 days for review.

3.4 PETROLEUM, OILS & LUBRICANTS (POL)/ STORAGE TANKS AND EQUIPMENT

POL Usage: Contractor is not authorized to set up aboveground storage tanks for fuel at any JBSA installation. Fuel for vehicles shall be brought to the installation, as needed. Storage of small amounts of POL as well as fueling and lubrication of equipment must be conducted in a manner that affords the maximum protection against spill and evaporation. Manage and store equipment fuel and POL in approved containers for flammable and combustible products in accordance with all Federal, State, and Local requirements. Store on secondary containment pallets, covered impermeable surfaces or in approved storage containers with appropriately sized (110% of largest container) secondary containment and keep liquids away from storm water sewers, grids, channels, and waterways. Fire extinguishers and spill kits must be available, and no smoking signs posted. Prior approval and coordination through 802 CES Environmental office is required for any fuel/POL storage containers greater than 50 gallons and contractor shall submit a plan for such storage 30 days prior to bring fuel onto the installation. It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative. Contractor must ensure compliance with the JBSA facility specific Spill Prevention, Control, and Countermeasures (SPCC) Plans.

3.4.1 Vehicle and Equipment Refueling

Use of fuel and POL in greater than 50-gallon containers are not allowed on JBSA properties, without prior approval from the 802 CES Environmental offices. It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative. Aboveground Storage Tanks for fuel and POL are not authorized on any JBSA installation. Fuel must be brought to the site each day that work is performed, or as needed. Contractor personnel obtaining fuels from refuelers agree to follow all 30 TAC 334 requirements and the following list of Air Force Technical Orders to ensure compliance: AFTO 37-1-1 Department of the Air Force, General Operation and Inspection of Installed Fuel Storage and Dispensing System, AFTO 37A-1-101 General Instructions,

USAF Fuel, Water, and Lubricant Dispensing Equipment, AFTO 42B-1-1 Quality Control of Fuels and Lubricants, and Compressed Gas Association Pamphlet CGA P-1 Safe Handling of Compressed Gases. Used lubricants and used oil to be discarded must be stored in marked corrosion-resistant containers and recycled or disposed of off-site in accordance with 40 CFR 279.

3.4.2 Tank Installation/Modifications

POL Tank/Equipment prior to tank installation: Tanks and equipment must be installed in accordance with all Federal, state, and local laws and regulations. At least ***60 days prior to installation***, 802 CES/CEIE must be notified of all planned tank/equipment specifications, including location, installation date, product to be stored, quantity of product, volume of tank, material of construction, containment type, Stage I Vapor recovery, and tank dimensions and any additional required information to comply with State tank regulations 30 TAC 334. Any planned tank installation, to include emergency generator belly tanks, that are 1,100 gallons or larger requires registration with the State. Contractor ***must notify*** the 802 CES Environmental Office as soon as known, prior to installation, for the tank to be registered with the State. All notifications to the TCEQ on tank installations/registrations will be made by 802 CES/CEIE Environmental Office with contractor provided information. It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative. Installation of underground storage tanks and/or vaulted aboveground storage tanks are not authorized on any JBSA properties.

Modification to Existing Tanks/Equipment: The Contractor must notify 802 CES Environmental at least 60 days prior to beginning any removal or repair/modification to existing tank/equipment as the state may be required to be notified in advance with a Construction Notification. If confined space entry into an existing tank is required, then a confined space permit must be coordinated with JBSA Safety, Fire Department and 802 CES/CEIE Environmental office. The Contractor shall provide 802 CES/CEIE Environmental Office with a description of work being performed prior to beginning work. It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.For work on underground and aboveground storage tanks, the Contractor must be licensed and registered in accordance with 30 TAC 334 section 401.

3.5 EROSION CONTROLS

The Contractor shall construct or install temporary and permanent erosion and sedimentation control features as indicated on the drawings prior to start of construction. Berms, dikes, drains, sedimentation basins, grassing, and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative. **Reference the JBSA Storm Water Management Plan (SWMP) and contact 802 CES/CEIE Water Quality Team. The Contractor shall coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.**

3.6 EARTHWORK

Earth work shall be planned and conducted IAW this specification and the JBSA Soil Management Plan to minimize length of exposure time for

unprotected soils. Side and back slopes shall be protected as soon as practicable upon completion of rough grading. Earthwork brought to final grade shall be finished as indicated by approved project design specification.

3.6.1 Waste Characterization of Waste Materials

Excavated spoils shall either be reused on site or removed from the installation throughout the project or must ensure it is removed from the installation at the completion of the project. No permanent stockpiling of soil whatsoever is authorized on JBSA. Refer to the JBSA Soil Management Plan for excavated spoils.

3.6.1.1 Waste Determination

Based on review of required analytics data, the 802 CES/CEIE will make a Hazardous/Non-hazardous determination delineating soil in accordance with TCEQ guidance (30 TAC Chapter 335 Subchapter R sections 335-501-508)

3.6.1.2 Excess Waste Material

All excess soil/waste materials shall be properly manifested/transported to an TCEQ-permitted landfill (Covel Gardens or Tessman Rd Landfill are locally available) and approved by 802 CES/CEIE.

3.6.1.3 Waste Generator

All manifests will list JBSA 802 CES/CEIE as the Generator and returned to JBSA 802 CES/CEIE by the final receiving facility, along with weight tickets, when fully executed.

3.6.1.4 Lead Waste Manifest

All Waste Manifests for Lead-containing materials shall be signed (approved) by JBSA area specific Environmental Office, without exception.

3.6.1.5 Return Manifests

Contractor provided return manifests and weight tickets are required for the development of Annual Waste Summary totals.

3.6.1.6 Required Testing

Prior to waste removal, the contractor's qualified sampler, who has the requisite training required by the Department of Transportation (DOT) and the Environmental Protection Agency's Resource Conservation and Recovery Act (RCRA)shall perform the following test methods and analytical parameters for every 200 CY of soil/waste materials that are to be removed from JBSA:

a. RCRA 11 metals (method SW 7000 series, TCLP extraction)

b. Organochlorine Pesticides/Polychlorinated Biphenyl (PCBs) (method SW 8081a/8080, TCLP extraction)

c. Semi-Volatile Organic Compounds (SVOCs) (method SW 8270, TCLP extraction)

d. Volatile Organic Compounds (VOCs) (method SW 8260 TCLP extraction)

to include BTEX

e. Total Petroleum Hydrocarbons (TPH) (TCEQ method 1005)

f. Non-halogenated Organics (SW 8015, TCLP extraction)

g. Reactivity, Corrosivity, Ignitibility (RCI)

Note: Contact 802 CES/CEIE for guidance on which TCEQ certified Labs offer all the above methods.

Additional sampling may be necessary based on JBSA historic information or additional landfill requirements.

Contractor shall submit all analytical results to 802 CES/CEIE for review prior to removal of waste from area specific location.

For Questions regarding Hazardous/Non-hazardous determinations, contact HazWaste Program Manager at 210-652-6204/210-452-8929.

It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.7 LANDSCAPING

All new landscaping must follow the JBSA INRMP requirements. All new landscape plant species must be regionally native and follow the JBSA Critical Management Plan for current watering restrictions. Compliance with the JBSA Critical Period Management Plan is mandatory. **No planting of new turf or plants in Stage III water restrictions is authorized unless absolutely necessary. Coordinate with the JBSA Natural Resource Manager for help determining if your project is absolutely essential. In Stage IV and V, the installation of new turf and plants is prohibited.** It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.8 AIR QUALITY

3.8.1 National Ambient Air Quality Standards

Equipment operation and activities or processes performed by the Contractor in accomplishing the specified construction shall be in accordance with all federal and state air emission regulations and performance standards. Contractor shall ensure that the National Ambient Air Quality Standards (NAAQS) set by the Environmental Protection Agency are maintained and modeled if needed. New construction, renovation, or modification to a facility that will impact air quality emissions will require a New Source Review (NSR) permitting process PRIOR to any construction beginning. In addition, an Air Conformity Applicability Model (ACAM) questionnaire must be completed (for all new construction, renovation, and modification projects) and submitted to the JBSA Air Team. For an electronic copy of the questionnaire, please contact the JBSA Air Team. It is the contractor's responsibility and requirement to coordinate all communications with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative. All equipment to be installed within any facility (i.e., Boilers, chillers, stationary generators, etc.) are subject to this permitting

process.

Title V of the Clean Air Act requires major sources of air pollutants, and certain other sources, to obtain and operate in compliance with an operating permit. Sources with these "Title V permits" are required by the Act to certify compliance with the applicable requirements of their permits at least annually. The Title V permit only applies to JBSA-LAK.

3.8.2 Equipment Inventory Requirements

The contractor shall provide the 802 CES/CEIE Air Quality Media Team and 502 CONS (or the respective contracting agency of the Proponent) a list of proposed equipment which may have an impact on JBSA Air Emissions or Air Quality and comply with the Clean Air Act when conducting construction or other work at JBSA. Inventory data, in the form of a picture of all emission source ID data plates, shall be submitted to the Air Program Manager for all air emission sources, including but not limited to: Water Heater(s), Boiler(s), Generator(s), A/C Unit(s), and Water-Cooling Tower(s).

It is the contractor's responsibility and requirement to coordinate all communications and documentation with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.8.2.1 State Permitting

Prior to construction, per 30 TAC 116 section 110 any person who plans to construct any new facility that will emit or modify any existing facility which may emit air contaminants into the air shall take one of these steps BEFORE any actual work on the facility begins:

a. Obtain a state air permit by following the general application process described in 30 TAC Section 116.111

b. Satisfy the conditions for a standard permit described in 30 TAC 116 Subchapter F, 30 TAC 321 Subchapter B, 30 TAC 332, or 30 TAC 330 Subchapter N

c. Satisfy the conditions for a flexible permit described in 30 TAC 116 Subchapter G

d. Satisfy the conditions for all relevant permits by rule (PBR) described in 30 TAC 106

e. Ensure that the criteria for a de minimums facility or source stated in 30 TAC 116 section 119 are satisfied

In accordance with the HSC 382.0518(a) (relating to preconstruction authorization), "Before work is begun on the construction of a new facility or modification of an existing facility that may emit air contaminants, the person planning the construction or modification must obtain a permit from the TCEQ."

The TCEQ has issued guidelines that anything other than site clearance or site preparation is considered "start of construction."

All work such as excavation, form erection, or steel laying pertaining to foundations upon which permit units will rest shall be considered construction. For permit units not requiring a concrete foundation, the

erection or construction of associated items like earthen dams, placement of piling, soil stabilization, storage tank fills, or retaining structures shall be considered construction, and will NOT be allowed without prior receipt of the required construction permit.

Land clearing, soil load bearing tests, leveling of the area, sewer and utility lines, road building, power line installation, fencing, construction shack building, etc., are considered "site clearance / preparation." However, once the soil and site are ready for foundations, the first excavation into the readied soil is considered "start of construction."

Note: After an application has been submitted for a permit, construction may not begin until JBSA receives a copy of the Pre-Construction Authorization (PCA) from TCEQ.

For JBSA permitting requirements, contractor shall provide to 502 CONS or the respective contracting agency of the Proponent and the installation Air Quality Media Team any and all data related to processes to be conducted in a facility to include, but not limited to, any process or procedure which might entail or include anodizing, brushing, blasting, electroplating, evaporation, exhausting, misting, splashing, smoking, spraying, welding, melting, smelting, reacting, (forms from resins), vaporizing, or otherwise releases Volatile Organic Compounds (VOCs), Particulates, or other air emissions into the air. Equipment that requires permitting by the TCEQ must be approved before being utilized. If any doubt exists, please contact the Air Quality Media Team at the general contact numbers in paragraph 1.1, Requirements, Contact information. The 802 CES/CEIE will perform the permitting paperwork for projects, provided all supporting documents and emissions calculations are certified and supplied to the Air Quality Program Manager in a timely manner, at least 180 days PRIOR to the land clearing.

It is the contractor's responsibility and requirement to coordinate all communications and documentation with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.8.3 Ozone-Depleting Substance

The contractor shall adhere to Air Force and JBSA policies regarding halons and chlorofluorocarbons (CFCs). The contractor shall not introduce any Class I Ozone-Depleting Substances (ODS) to JBSA during the course of this contract. The contractor shall be responsible for the recovery and recycling of all Class II ODS, including any necessary sampling, marking, labeling, and disposal. All ODSs recovered are the property of the US Government and must be turned in to the JBSA Refrigerant Management Shop. The contractor may refer to AFMAN 32-7002 Environmental Compliance and Pollution Prevention Chapter 3 paragraphs 2.15 and 3.3.5 for further guidance. The contractor shall remain ultimately responsible for any ODS work related to these tasks. Contractors shall follow paragraph 3.10.4 when submitting their hazardous materials listing for use on the installation to the Hazardous Material & Air Program Managers to determine if material will be tracked for environmental purposes.

3.8.4 Control Of Emissions

The contractor shall ensure prevention of dust, air pollution and odors.

3.8.4.1 Particulate Control

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials shall be controlled at all times. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards to be exceeded or which would cause a hazard or a nuisance. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. Such emissions of airborne particulate matter shall not exceed 20% opacity as defined in 40 CFR 60.11 Appendix A, method 9. Approved practices for control are as follows:

a. Watering: Apply water by means of trucks and/or hoses during construction activities.

b. Chemical Stabilizers: During periods of high winds apply chemical stabilizers per manufacturer's directions and prior to any forecasted or expected wind events. Apply water as necessary, and prior to expected wind events. If chemical stabilizers are to be used, contractor shall contact the JBSA Water Quality Team prior to use.

It is the contractor's responsibility and requirement to coordinate all communications and documentation with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

c. Pre-grading planning: Grade each phase and apply chemical stabilizers or ground cover to graded areas where construction is scheduled to begin.

d. Wind fencing: Provide three-to-five-foot barriers with 50% or less porosity, adjacent to roadways or urban areas. Normally, used in conjunction with watering or chemical stabilization. Use trees and shrubs for long-term sites.

e. Material coverage: For hauling vehicles cover entire surface of hauled material once vehicle is full. Do not overload haul vehicle. Freeboard should not be less than 3 inches.

f. Mix material with water prior to loading, and/or to entire surface of material after loading. Apply water as necessary during loading operation.

g. Empty loader slowly and keep bucket close to the truck while dumping.

h. Altering loading and unloading procedures. Confine loading and unloading procedures to the downwind side of storage piles. Loading activities may require wind fencing.

i. Coverings: Tarps, plastic, or other materials can be used as a temporary covering. When used, coverings must be anchored to prevent movement of coverings from wind.

j. Vegetation: Establish as quickly as possible when active operations have ceased.

k. Prevent Access: Install fencing around the perimeter of property. Install "No trespassing" signs.

l. Paving or chip sealing: Requires routine street sweeping if subject to material accumulation.

m. Gravel/Recycled Asphalt: Maintain milling activities to a size and depth effective in controlling dust.

o. Eliminate unnecessary travel and restrict access to reduce vehicle trips.

p. Locate haul roads as far from existing housing as possible.

q. Stay on established routes.

r. Stop work activities temporarily if required.

s. Properly maintain equipment to reduce pollutant emissions.

t. Wheel Washers: Wheel washers shall be placed where vehicles exit unpaved areas onto paved areas.

3.8.4.2 Vehicles

All vehicles used to haul materials of any kind shall have their receptacle covered at all times when materials are not being accessed. Additionally, vehicles are authorized an idling period no more than 15 minutes on JBSA properties before they must be shut off.

3.8.4.3 Site Access

Install a gravel pad or stabilized entrance at the access point to the construction site and designate a single entrance and exit. Stay on established routes.

3.8.4.4 Roadways

Sweep/Clean roadways. Sweeping of roadways on a regular basis shall be used to prevent dust/particulate build-up. Do not clean streets or roadways with water. Do not discharge water or debris into the Storm Drain.

3.9 INTEGRATED SOLID WASTE MANAGEMENT (NON-HAZARDOUS WASTE AND RECYCLING)

Numerous Executive Orders direct all federal activities to develop and implement a mandatory recycling program. Recycling across JBSA is focused on the elimination of recyclable materials from the trash and burial in a landfill. DOD mandates diversion of 60% of all non-hazardous solid waste generated by Construction, Demolition, and Renovation projects through recycling or reuse. The ISWMP shall include the contractor's plan(s) for a minimum 60 percent diversion rate or justification for not meeting this goal due to time and/or cost constraints.

Contractors shall be responsible for properly recycling or disposing of all solid waste generated by their activities. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste. (1) Practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all

reasonable means to divert construction waste and demolition debris/waste from landfills and incinerators and to facilitate the recycling or reuse of excess construction materials.

3.9.1 Points of Contact

- Qualified Recycling Program (QRP) Manager - 210-671-5371/4844
- Concrete, Asphalt, Asphalt Milling Materials recycling - 210-671-0331/4844
- Pollution Prevention (P2) Program Manager - 210-671-8015/4844

It is the contractor's responsibility and requirement to coordinate all communications and documentation with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.9.2 Meetings

3.9.2.1 Design/Planning

Project designers and planners shall meet with environmental management staff during the planning phase of the project to identify possible pollution prevention and solid waste diversion opportunities. If this is a contract to construct or renovate a facility, discuss opportunities to add dedicated recycling areas for use by future occupants.

3.9.2.2 Pre-Construction

After award of the Contract and prior to commencement of work, schedule and conduct a meeting, IAW Section (Meetings), with the Contracting Officer, 802 CES/CEPM and 802 CES/CEIE to discuss the proposed EPP and ISWMP and to develop a mutual understanding relative to the management of the project wastes and how waste diversion requirements will be met.

It is the contractor's responsibility and requirement to coordinate all communications and documentation with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.9.2.3 Regular Project Meetings

Discuss integrated solid waste and recycling management at regular meetings, IAW Section 1.7 MEETINGS.

3.9.3 Definitions

3.9.3.1 Co-Mingle

The practice of placing unrelated materials together in a single container, usually for benefits of convenience and speed.

3.9.3.2 Construction Waste

Waste generated by construction activities, such as scrap materials, damaged or spoiled materials, temporary and expendable construction materials, and other waste generated by the workforce during construction activities.

3.9.3.3 Demolition Debris/Waste

Waste generated from demolition activities, including minor incidental

demolition waste materials generated as a result of Intentional dismantling of all or portions of a building, to include clearing of building contents that have been destroyed or damaged.

3.9.3.4 Disposal

Depositing waste in a solid waste disposal facility, usually a managed landfill or incinerator, regulated in the US under the Resource Conservation and Recovery Act (RCRA).

3.9.3.5 Diversion

The practice of diverting waste from disposal in a landfill or incinerator, by means of eliminating or minimizing waste, recycling, or reuse of materials.

3.9.3.6 Green waste

Materials that can be composted or used as mulch, including plant materials (trees, shrubs, limbs, brush, leaves), sawdust, raw lumber (not treated, painted, pressed, or particleboard), and certain food scraps.

3.9.3.7 Recycling

The series of activities, including collection, separation, and processing, by which products or other materials are diverted from the solid waste stream for use in the form of raw materials in the manufacture of new products sold or distributed in commerce, or the reuse of such materials as substitutes for goods made of virgin materials, other than fuel.

3.9.3.8 Reuse

The use of a product or materials again for the same purpose, in its original form or with little enhancement or change.

3.9.3.9 Salvage

Usable, salable, salvageable items derived from buildings undergoing demolition or deconstruction, parts from vehicles, machinery, other equipment, or other components.

3.9.3.10 Source Separation

The practice of administering and implementing a management strategy to identify and segregate unrelated waste at the first opportunity.

3.9.4 Integrated Solid Waste Management

Implement an Integrated Solid Waste Management Program (Construction Waste Management Program) for the project. Take a pro-active, responsible role in the management of construction waste, recycling processes, disposal of demolition debris/waste, and require all subcontractors, vendors, and suppliers to participate in the Integrated Solid Waste Management Program. Establish a process for clear tracking and documentation of construction waste and demolition debris/waste.

3.9.4.1 Implementation of Integrated Solid Waste Management Program

Develop and document how the Integrated Solid Waste Management Program will be implemented in an Integrated Solid Waste Management Plan. Submit an Integrated Solid Waste Management Plan to the Contracting Officer, 802 CES/CEPM and the 802 CES/CEIE for approval, IAW Section 1.6 ENVIRONMENTAL PROTECTION PLAN.

It is the contractor's responsibility and requirement to coordinate all communications and documentation with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

Construction waste and demolition debris/waste materials include un-used construction materials not incorporated in the final work, as well as demolition debris/waste materials from demolition activities or deconstruction activities. In the management of waste, consider the availability of viable markets, the condition of materials, the ability to provide material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates.

3.9.4.2 Special Programs

Implement special programs involving rebates or similar incentives related to recycling of construction waste and demolition debris/waste materials. Contractor may retain revenue or savings from salvaged or recycling, unless otherwise directed. Contractor is encouraged to utilize the JBSA Qualified Recycling Program (QRP) for recycling of metals and other items accepted by the QRP; the QRP will retain revenues from these recycled materials; contact the QRP POC listed above for information and coordination. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations and are approved for use by the 802 CES/CEIE.

3.9.4.3 Special Instructions

Provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the projects. Designation of single source separating or commingling will be clearly marked on the containers.

3.9.5 Integrated Solid Waste Management Plan

The contractor shall develop an Integrated Solid Waste Management Plan (ISWMP). This plan shall be in lieu of the Construction Waste Management Plan required by 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL and shall address all materials addressed in 01 74 19. The ISWMP shall be submitted with the Environmental Protection Plan IAW Section 1.6 ENVIRONMENTAL PROTECTION PLAN. The ISWMP shall be revised and resubmitted as required to obtain approval from the 802 CES/CEIE. Manage demolition debris/waste or deconstruction materials in accordance with the approved ISWMP.
It is the contractor's responsibility and requirement to coordinate all communications and documentation with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

An approved ISWMP will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project

cumulative waste diversion requirement. Ensure all subcontractors receive a copy of the approved ISWMP. The plan demonstrates how to meet the project waste diversion requirement.

The ISWMP shall include, but not be limited to, the following:

a. Names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the project.

b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.

c. Description of the regular meetings to be held to address waste management.

d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of materials.

e. Description and estimated quantities of the proposed job-site waste, including recyclable materials, salvable materials, and construction and demolition debris (C&D debris) to be generated. This includes waste that is separated for re-use, salvage, recycling, or disposal. Manage all waste streams associated with the project. Indicate whether materials will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, recycled, or disposed. Typical waste streams are listed below. Include additional waste and recycling streams not listed.

JBSA expects materials with an asterisk (*) to be recycled to the maximum extent practicable.

1. *Asphalt and asphalt milling materials
2. Carpet
3. Ceiling Tiles
4. *Clean air conditioning units, refrigerators, and freezers - after refrigerant removal (See Section 3.6.3 regarding removal of refrigerants)
5. *Clean concrete, and concrete with rebar
6. *Corrugated cardboard
7. Glass
8. Gypsum
9. *Ink and toner (printer) cartridges
10. Insulation
11. Land Clearing Debris
12. *Masonry and Concrete Masonry Units (CMU)
13. *Non-hazardous paint and paint cans
14. Paper, including newspapers, magazines, books, phone books, envelopes
15. Plastics (PET, HDPE,PVC,LDPE,PP,PS, Other)
16. *Tanks and vessels - only if triple-rinsed, if necessary, and cut open
17. Trash (lunch wastes, miscellaneous municipal solid waste items)
18. *Used oils
19. Wood, including pallets

20. *Ferrous and non-ferrous Metals (includes, but is not limited to: banding, aluminum, aluminum tracks from partitions, boilers, bronze, cable, chillers, copper, copper wire, door and window frames, ductwork, galvanized, gutters and flashing, iron, metal doors, metal framing, metal roofing, metal shelving, other trim, pipes, piping, plumbing fixtures/fittings/faucets, rebar, roofing, sheet metal, stainless steel, steel, steel from decking, steel handrails and stairs, stud trim, transformers, zinc)

f. Identification of the recycling facilities to be used by name, address, and phone number. Transfer stations are not acceptable recycling or disposal facilities.

g. Identification of local and regional re-use programs to be used by name, location, and phone number (non-profit organizations, local housing agencies, material exchange networks, resale stores).

h. Identification of landfill(s) where solid waste will be disposed, applicable landfill tipping fee(s), and the projected cost of disposing of all project waste in the landfill(s). (Only Waste Management Covel Gardens landfill & Republic Services Tessman Road landfill are approved by TCEQ and JBSA. (Transfer Stations are not acceptable recycling or disposal facilities.)

i. Projected cost of disposing of all project waste in the landfill(s). Actual costs and cost savings will be reported to 802 CES/CEIE monthly.

j. Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the Contracting Officer.

k. Description of how materials identified in item (e) above will be protected from contamination.

l. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site).

m. Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.

n. Facilities or subcontractors offering construction waste transport on-site or off-site must ensure that proper shipping orders, bills of lading, manifests, or other shipping documents containing waste diversion information meet requirements of 40 CFR 273 Universal Waste Management, 49 CFR 173 Shippers - General Requirements for Shipments and Packagings, and 49 CFR 178 Specifications for Packaging. Only appropriately appointed and trained 802 CES/CEIE personnel will sign manifests.

o. List of supplier(s) who delivers construction materials in bulk, or packages products in returnable containers or returnable packaging, or has take-back programs. List each program and the applicable material to actively monitor and track to assist in meeting waste diversion requirements on the project.

p. For projects requiring Third Party Certification, also include:

1. Identification of at least 5 construction or demolition material streams for diversion.

2. Detailed plan and distribution of waste diversion between buildings when project is a part of a campus

3.9.6 ISWMP Implementation

The Contractor Shall:

a. Designate an on-site party (or parties) responsible for instructing workers and overseeing and documenting results of the ISWMP for the project

b. Distribute copies of the ISWMP to key personnel and submit the plan to the Contracting Officer and 802 CES/CEIE as part of the Environmental Protection Plan required per Section 1.3 Submittals and Section 1.6 Environmental Protection Plan.

c. Provide on-site instruction of appropriate separation, handling, and recycling, salvage, re-use, and return methods to be used by all parties.

d. Lay out and label a specific area to facilitate separation of materials for potential recycling, salvage, re-use, and return. Recycling and waste bin areas are to be kept neat and clean and clearly marked to avoid contamination of materials. Reduce the amount of solid waste generated through procurement of products with less or reusable packaging, buying only the amounts needed, investigating new recycling/re-use opportunities, and altering operations to reduce wastes (e.g., using double-sided copies).

e. Ensure safe and effective solid waste management through the proper storage of solid waste and recyclables.

f. Coordinate with 802 CES/CEIE on all matters involving solid waste management and recycling, to include sampling, lab analysis, and characterization of waste streams as required by the 802 CES/CEIE.

g. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations, and are approved for use by the 802 CES/CEIE. Provide a copy of the permit or license to the 802 CES/CEIE if requested.

h. Ensure no wastes from the project are placed in trash dumpsters or roll-off containers on JBSA that are not associated with the project's waste management plan without express written approval of the 802 CES/CEIE and the Contracting Officer.

3.9.7 Specific Materials

a. Universal wastes (lamps, ballasts, mercury-containing equipment, batteries, paint and paint-related waste, aerosol cans) will be properly manifested and managed IAW the JBSA Hazardous Waste Management Plan. Refer to Section 3.8 HAZARDOUS WASTE.

b. Recyclable metal that has tested positive for lead-based paint will be managed IAW the JBSA Lead-Based Paint Management Plan and will require a waste manifest, weight ticket, and certificate of disposal from the selected recycling facility. Refer to Section 3.10 TOXIC SUBSTANCES.

c. Asbestos-containing C&D Debris will be properly profiled, manifested, and managed IAW the JBSA Asbestos Management and Operations Plan. Refer to Section 3.10 TOXIC SUBSTANCES.

d. Compressed gas and liquid fuel cylinders MUST NEVER be placed into any containers, recycling bins in buildings, scrap metal dumpsters, or base refuse and trash dumpsters. Contact the Hazardous Waste Manager at 210-652-6204/210-671-4844 for specific guidance on disposal of these items.

e. Scrap metal recycling may be coordinated through the JBSA Qualified Recycling Program. Proceeds from these scrap metal sales will be retained by the QRP. Contact the QRP POC listed above for information and coordination. Trip tickets and weight tickets for all recycled metal shall be submitted to 802 CES/CEIE monthly.

f. Other recyclable items accepted by the JBSA QRP may be given to the QRP for recycling, including paper, cardboard, certain plastics, aluminum cans, ink & toner cartridges, and wood pallets. Contact the QRP or P2 POC listed above for a current list of accepted items. Items must be separated by type before transport to a JBSA Recycle Center. Proceeds from sales of these items will be retained by the QRP.

g. Used oil - manage IAW 40 CFR Parts 260-278, Hazardous Waste and Used Oil Management

3.9.8 Manifesting Requirements

a. All manifests will list JBSA 802 CES/CEIE as the Generator and will be returned to JBSA 802 CES/CEIE by the final receiving facility, along with weight tickets, when fully executed. Only appropriately appointed 802 CES/CEIE personnel will sign manifests.

b. Concrete, asphalt, and asphalt milling materials to be recycled will be manifested and delivered directly to the recycling facility. All manifests will be generated and signed only by appropriately appointed 802 CES/CEIE personnel. Contact Concrete, Asphalt, Asphalt Milling Materials POC listed above for procedures.

c. C&D debris to be landfilled and/or recycled will be characterized, sampled as required by 802 CES/CEIE, manifested, and delivered directly to a TCEQ-permitted landfill approved by 802 CES/CEIE. All landfill profiles and manifests will be signed only by appropriately appointed 802 CES/CEIE personnel. Refer to Section 3.8.2 Disposal and contact 802 CES/CEIE POC listed above for profile sheet and manifest procedures, including identification of any sampling requirements. Transfer stations are not acceptable recycling or disposal facilities.

d. Facilities or subcontractors offering construction waste transport on-site or off-site must ensure that proper shipping orders, bills of lading, manifests, or other shipping documents containing waste diversion information meet requirements of 40 CFR 273 Universal

Waste Management, 49 CFR 173 Shippers - General Requirements for Shipments and Packagings, and 49 CFR 178 Specifications for Packaging. Only appropriately appointed 802 CES/CEIE personnel will sign manifests.

3.9.9 Collection

Collect, store, protect, and handle reusable and recyclable materials at the site in a manner which prevents contamination, and provides protection from the elements to preserve their usefulness and monetary value. Provide receptacles and storage areas designated specifically for recyclable and reusable materials and label them clearly and appropriately to prevent contamination from other waste materials. Keep receptacles or storage areas neat and clean.

Train subcontractors and other service providers to either separate waste streams or use the co-mingling method as described in the ISWMP. Handle hazardous waste and hazardous materials in accordance with applicable regulations, other Sections within this ENVIRONMENTAL SPECIFICATION, and Section 02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS. Separate materials by one of the following methods described herein:

3.9.9.1 Source Separation Method

Separate waste products and materials that are recyclable from trash and sort into appropriately marked separate containers and then transport to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the category types as defined in the ISWMP.

3.9.9.2 Co-Mingled Method

Place waste products and recyclable materials into a single container and then transport to an authorized recycling facility, which meets all applicable requirements to accept and dispose of recyclable materials in accordance with all applicable local, state and federal regulations. The Co-mingled materials must be sorted and processed in accordance with the approved ISWMP. Transfer stations are not acceptable recycling or disposal facilities.

3.9.9.3 JBSA Qualified Recycling Program

Source separated recyclable materials, of the types accepted by the QRP, may be delivered to a JBSA Recycle Center. Contact the QRP POC listed above for locations, hours, and accepted materials list. Scrap metals, including large equipment items, may be recycled through the Installation QRP. Contact the QRP POC listed above for delivery instructions or coordination with the QRP and a local metal recycler for collection/delivery.

3.9.9.4 Other Methods

Other methods proposed by the Contractor may be used when approved by the 802 CES/CEIE and the Contracting Officer.

3.9.10 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures as described in the ISWMP. Except as otherwise specified in other sections of the specifications, dispose of in accordance with the following:

3.9.10.1 Reuse

Give first consideration to reusing construction and demolition materials as a disposition strategy. Recover for reuse materials, products, and components as described in the approved ISWMP. Coordinate with the Contracting Officer and the 802 CES/CEIE to identify onsite reuse opportunities or material sales or donation available through Government resale or donation programs. Sale of recovered materials is not allowed on the Installation. Consider the use of surplus industrial supply broker services, who match entities with reusable or repurpose industrial materials with entities with need of such materials.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.9.10.2 Recycle

Recycle non-hazardous construction and demolition/debris materials that are not suitable for reuse. Track rejection of contaminated recyclable materials by the recycling facility. Rejected recyclables materials will not be counted as a percentage of diversion calculation. Recycle all fluorescent lamps, HID lamps, mercury (Hg)-containing thermostats and ampoules, and PCB-containing ballasts and electrical components as directed by the Contracting Officer and the JBSA Hazardous Waste Program Manager. Do not crush lamps on site as this creates a hazardous waste stream with additional handling requirements.

3.9.10.3 Compost / Green Waste

Consider separating items that can be composted or mulched (trees, limbs, brush, raw lumber, sawdust, etc.) and deliver these materials to off-base compost or mulch facilities. Ensure materials meet or exceed the compost or mulch facility requirements for material type, size, and contamination level. Track rejection of materials by the compost or mulch facility and document reason(s) for rejection. Rejected materials will not be counted as a percentage of diversion calculation.

3.9.10.4 Waste

Dispose by landfill or incineration only those waste materials with no practical use, economic benefit, or recycling opportunity, IAW the approved ISWMP.

3.9.11 Records (Documentation)

3.9.11.1 General

Maintain records to document the types and quantities of waste generated and diverted though re-use, recycling, and sale to third parties or

through disposal to a landfill or incinerator facility. Provide explanations for materials not recycled, reused, or sold. Collect and retain manifests, weight tickets, sales receipts, and invoices specifically identifying diverted project waste materials or disposed materials.

3.9.11.2 Accumulated

Maintain a running record of materials generated and diverted from landfill disposal, including accumulated diversion rates for the project. Make records available to the Contracting Officer during construction or incidental demolition activities. Provide a copy of the diversion records to the Contracting Officer upon completion of the construction, incidental demolitions, or minor deconstruction activities.

3.9.12 Reports

3.9.12.1 General

Maintain current integrated solid waste (construction waste) diversion information on site for periodic inspection by the Contracting Officer. It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

Include in the monthly reports, annual reports, and final reports: the project name; contract information; information for waste generated, diverted, and disposed of for the current reporting period and show cumulative totals for the project. Reports must identify material types, weights, disposal costs, recycling costs, and estimated cost savings for all materials salvaged, reused/donated, recycled, and disposed. Also include in each report supporting documentation to include manifests, weigh tickets, receipts, and invoices specifically identifying the project and waste material type and weighted sum. This requirement is mandatory on all projects. All material donated, recycled, or disposed of from across JBSA shall be documented and tracked to meet Environmental Reporting requirements.

Also include proof of reclamation of oil from compressors and other equipment prior to recycling or disposal and documentation of proper disposal of the used oil.

3.9.12.2 Monthly Diversion and Landfill Report

Provide cumulative reports at the end of each month to the 802 CES/CEIE. Reports may be submitted with monthly waste disposal reports required by other Sections herein.

3.9.12.3 Annual Diversion and Landfill Report

Provide a cumulative diversion and landfill report annually. Submit annual report not later than 30 calendar days after the preceding fiscal year has ended.

3.9.12.4 Final Diversion and Landfill Report

A Final Diversion and Landfill Report is required at the end of the project. Provide Final Diversion and Landfill Report 60 days prior to the Beneficial Occupancy Date (BOD).

3.10 HAZARDOUS WASTE

JBSA is the primary generator, and the Contractor shall be considered the primary co-generator for all hazardous wastes (includes Universal Waste) generated throughout the duration of the contract. The Contractor shall follow guidelines established in the JBSA Hazardous Waste Management Plan. All hazardous waste management activities shall be coordinated through and approved by 802 CES/CEIE. Under no circumstances may hazardous, special, or universal waste be disposed of in municipal waste dumpsters.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.10.1 Regulations

The contractor shall be familiar with and have immediate access to the following regulations: 40 CFR Parts 260-278, Hazardous Waste and Used Oil Management, 48 CFR, Parts 171-177, and the JBSA Hazardous Waste Management Plan for Hazardous and Special Waste (including Universal Waste).

3.10.2 Disposal

All construction debris, hazardous waste, and non-hazardous waste, to include all construction recycling and construction soils, shall be characterized by the lab analysis defined in paragraph 3.1.4.1, profiled, reviewed by the JBSA Hazardous Waste Media Team, manifested as required and signed by appropriately appointed 802 CES/CEIE personnel before leaving any JBSA properties.

All integrated solid waste, C&D waste and Recycling Shall be sampled, characterized, and manifested per section 3.7 Integrated Solid Waste Management (Non-Hazardous Waste and Recycling)

All Asbestos and Lead-contaminated materials, PCBs and Mercury Shall be sampled, characterized and manifested per section 3.10 Toxic Substances

In order to obtain manifests from State-permitted local landfills, the following must be accomplished:

1) The Contractor must inform Environmental Waste Management Team of the type and quantity of waste requiring disposal.

2) The Environmental Waste Management Team will identify the number of samples to be taken and if any additional testing is required.

3) The Contractor shall collect and transport the samples to a State of Texas accredited laboratory for analysis.

4) Upon receipt of the analytical report, the Contractor shall forward the report to the Environmental Waste Management Team for waste characterization.

5) The Environmental Waste Management Team shall characterization the waste as hazardous or non-hazardous and inform the Contractor of approved State-permitted local landfills eligible to receive the waste.

6) The Contractor must request and complete the State-permitted landfill's Waste Profile Sheet.

7) The Contractor shall provide a copy of the completed Waste Profile Sheet for review and prior to any electronic submissions. Non-electronic submission shall require a completed Waste Profile Sheet sent to the Environmental Waste Management Team for QA/QC review and signature approval. **JBSA 802 CES/CEIE will be listed as the Generator on all profiles.**

8) The Contractor must deliver the signed Waste Profile Sheet and the analytical report to the State-permitted landfill. Electronic waste profiles shall be entered by the Waste Management Team after analytical review, into the appropriate system specific to landfill requirements.

9) If approved by the State-permitted landfill, the permitted landfill will print the required number of shipping waste manifests.

10) The State-permitted landfill will notify the Contractor when the shipping waste manifests are ready for pick-up.

11) The Contractor shall deliver the shipping waste manifests to the Environmental Waste Management Team for signature.

12) The Environmental Waste Management Team will notify the Contractor when the shipping waste manifests are signed and ready for pick-up.

Please note that all waste classification is performed by the State-permitted landfill in accordance with TCEQ regulations. JBSA Environmental personnel are not authorized to, or responsible for, classifying waste.

Instructions on how to fill out Waste Manifests are as follows:

1. One (1) manifest per truck.
2. Write in block 1 & 11 the amount of waste being hauled off.
3. Write in block 12 the unit of measurement (i.e., CY = cubic yards).
4. 802 CEI/CEIEC personnel will date and sign block 15 for the Generator, prior to the Transporter receiving waste.
5. Have the Transporter driver print, sign and date in block 17 for Transporter.
6. Remove the last copy of the manifest (Generator's Copy) and provide to Hazardous Waste Program Personnel at the end of each workday.
7. The driver takes all remaining copies to the landfill.
8. Landfill personnel will print, sign and date in block 20 for the Facility receipt of waste.
8. Landfill personnel will provide the driver the Transporter's Copy of the Manifest.
10. Landfill personnel will mail the original manifest to Hazardous Waste Program Personnel within 45 days.

The contractor shall be responsible for all actions and expenses associated with disposal of wastes generated by their project(s) at each JBSA location. The contractor shall have only DOT and HAZWOPER trained personnel to manage all waste.

Disposal shall be accomplished in compliance with all local, state, and

federal rules and instructions, including mandated recycling requirements. This responsibility also includes preparation, packaging, marking, and labeling of wastes in accordance with 49 CFR SUBCHAPTER C. The contractor shall not sign any manifests. All manifests, regardless of waste classification, will be signed only by appropriately appointed 802 CES/CEIE personnel. This includes manifests for all recyclable materials or construction debris.

3.10.3 Light Bulbs

Lamps shall not be disposed of in municipal dumpsters or managed as municipal solid waste. All lights shall be checked for mercury containing lamps. If the lamp is a sodium vapor, fluorescent, or metal halide bulb, the bulbs shall be shipped as Universal Waste or recycled at an approved EPA recycling center. Universal Waste manifests shall be signed by appropriately appointed 802 CES/CEIE personnel before leaving JBSA properties.

The contractor shall prove that the recycler is an EPA approved recycling facility. A non-hazardous waste manifest shall be used for shipping. Copies of shipment manifests and associated weight tickets shall be provided to the 802 CES/CEIE personnel to enable tracking of shipments from cradle to grave.

3.10.4 Light Ballasts

When fluorescent and mercury vapor fixtures are removed, the ballast must be examined for PCB labeling. Ballast is presumed to contain PCBs unless clearly labeled "NO PCBs". Suspected ballast must be removed and recycled through a licensed recycling center for PCBs. All PCB ballasts will be manifested before leaving the borders of any contiguous JBSA location. See paragraph 3.8.2 Disposal for instructions.

3.11 HAZARDOUS AND/OR TOXIC MATERIALS

3.11.1 Regulations

Hazardous Materials used shall be used IAW FAR 52.223-3 and AFMAN 32-7002 Environmental Compliance and Pollution Prevention.

3.11.2 Safety Data Sheets

Hazardous Materials shall be used IAW AFMAN 32-7002 Environmental Compliance and Pollution Prevention and the following Federal Acquisition Regulation (FAR) Clauses:

52.223-3	Hazardous Materials and Material Safety Data Sheets
52.223-5	Pollution Prevention (P2) and EPCRA
52.223-11	Ozone Depleting Substances
52.223-14	Toxic Release Reporting

3.11.3 Coordination

All hazardous materials to be used in the project by the contractor and its subcontractors shall be coordinated through the JBSA Contracting Office. A current copy of all manufacturer-specific SDSs shall be submitted to the Contracting Officer a minimum of 9 calendar days prior to the delivery of the materials via an AF Form 3000. The Contracting Office will transmit the contractor submittal to the respective JBSA Project

Manager for processing IAW AFMAN 32-7002. Additionally, the size and/or weight of each container must be provided with the SDS. The Hazardous Materials Manager is responsible for the approval of all hazardous materials proposed in the project.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

This requirement is mandatory on all projects, as all hazardous materials used across JBSA shall be documented and tracked to meet Environmental Reporting requirements. Also, due to Bexar County being designated as Non-Attainment by the U.S. Environmental Protection Agency (US EPA), contractor can only use materials with Low Volatile Organic Compounds (VOCs) which include, but not limited to:

a. Paints
b. Adhesives
c. Primers
d. Sealants
e. Specialty Coatings
f. Solvents

3.11.3.1 Refrigerants

During renovations or modifications performed on a building HVAC or Chiller unit, if the refrigerant is to be evacuated/removed, contractor is required, by AFMAN 32-7002 Environmental Compliance and Pollution Prevention, to turn over the evacuated refrigerant to the Government. Contact the CE Refrigerant Shop at JBSA-LAK (210)671-4738, JBSA-SAM (210)808-913/6032 and JBSA-RND (210)652-3202.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with JBSA installation offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.11.3.2 Halons

3.11.3.2.1 New Construction

During the construction of a new facility which specifies the installation of Halon for fire suppression contact the JBSA Hazardous Materials Office **PRIOR** to installation via the 802 CES/CEPM Project Managers and Contracting Representative. Halon systems are no longer allowed on DoD installations.

3.11.4 Hazardous Material Tracking

Once all SDSs have been reviewed, an inventory listing will be provided to the Contracting Officer who in-turn will provide copies to the area specific HAZMAT manager for tracking, consumption and reporting purposes. The inventory list will include the stock number, nomenclature (trade name/part number), manufacturer, container size, quantity usage, contract number, contract quality assessment evaluator's name or government point of contact, and contract performance period. Any contract that is less than one month in duration will be reported at the end of the contract period, and any contract over a month in duration will be reported by the 5th day of each month.

3.11.5 Hazardous Material Storage

Hazardous material brought on base by contractors shall be stored IAW manufacturer recommendation per SDS and references listed in the 29 CFR 199.1200 regulations. All flammable materials shall be stored in approved flammable containers and storage areas comply with references listed in subpart REGULATIONS. Careful consideration shall be taken when storing chemicals that may have an adverse reaction to each other. All necessary precautions shall be taken to ensure the safe storage of these materials and to protect from contaminating the environment. Site-specific spill plans shall be revised as necessary to reflect current hazardous material storage and usage per paragraph 3.11 Emergency Response, Spill Procedures, Fuel Tanks of this document. All hazardous materials storage areas are subject to inspections by the Installation Hazardous Materials Manager for compliance.

3.12 Sub TOXIC SUBSTANCES (ASBESTOS, PCBS, MERCURY, AND LEAD-BASED PAINT)

3.12.1 National Emission Standards For Asbestos Containing Materials

3.12.1.1 Abatement Activities

All abatement activities must follow 25 TAC 296, and the National Emission Standards for Hazardous Air Pollutants 40 CFR 61, Subpart M (NESHAP). The 25 TAC 296 for Asbestos is enforced at each JBSA specific location, since these rules are the most restrictive. In addition to the NESHAP, 40 CFR 61.145 Standards for Demolition and Renovation, the JBSA Asbestos Management Plan, and the JBSA Asbestos Operations Plan shall also be adhered to.

3.12.1.2 Renovation/Demolition Notifications

An asbestos inspection report is required prior to any disturbance of Asbestos Containing Materials regardless of construction date. All notifications shall be coordinated with the JBSA area specific Environmental Office through the area specific Contracting Officer and Project Manager. The Environmental Office will submit all Notifications and amendments through the DSHS electronic notification system and provide a copy to the contracting officer for distribution to all interested parties. All asbestos activities meeting the below requirements are required to have a Renovation/Demolition notification submitted to the Texas Department of State Health Services (TDSHS), Notification Section at the minimum of 14 working days prior to any abatement related activities. This authority will not be delegated to the contractor at any time. If the location specific environmental office is not available, the project manager for the contract may contact the Asbestos Program Officers. See paragraph 1.1 Requirements for a list of contacts.

Any concerns for any JBSA location may be addressed to the Toxic's Team Lead at JBSA-RND, government cell 210-540-0226.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

a. If a facility is scheduled for demolition, TDSHS must be notified through the TDSHS electronic notification system even if a facility doesn't contain asbestos.

b. If a facility is required to have 160 SF, or 260 LF of Asbestos Containing Materials removed from any component, then a State Renovation/Demolition Notification is required.

c. An amendment to a Notification is required when the amount of asbestos affected changes by 20%.

d. An amendment to the electronic notification is required for any changes in Start and Stop Dates. This amendment must be posted 24 hours prior to the change. This includes demolition activities without any asbestos.

e. In no circumstance shall an asbestos related activity for a renovation or demolition take place prior to the Start Date as stated in the notification. This rule also includes any demolition activity that doesn't contain Asbestos Containing Materials.

3.12.1.3 Electronic Notifications

The contractor or sub-contractor responsible for abatement shall pay all TDSHS invoice costs associated with asbestos abatement, renovation, demolition activities, and/or disposal activities.

The following information is required for all notifications:

a. An indication of whether the notification is the original or an amendment.

b. Name, address, and telephone number of both the facility owner and operator and the asbestos removal contractor owner or operator. The facility owner for asbestos activities shall always be the area specific Environmental Office.

c. Type of activity; demolition/renovation, demolition without ACM; or renovation.

d. Description of the facility or affected part of the facility including the size in square feet and number of floors and age.

e. Procedures, including analytical methods, employed to detect the presence of all Asbestos Containing Material (ACM) and Category I and Category II non-friable ACM.

f. Estimate of the approximate amount of ACM to be removed from the facility in terms of length of pipe in linear feet, surface area in square feet on other facility components, or volume in cubic feet if off the facility components.

g. Physical location and street address, including building number or name and floor or room number as appropriate. city, county, and state where the facility is being demolished or renovated.

h. The scheduled starting and completion dates of asbestos removal work or any other activity, such as site preparation that would break up,
dislodge, or similarly disturb asbestos material in a demolition or renovation project.

i. The scheduled starting and completion dates of demolition.

j. Description of planned demolition or renovation work to be performed and methods to be employed, including demolition or renovation techniques to be used and description of affected facility components.

k. Description of work practices and engineering controls to be used to comply with the requirements of National Emission Standard for Hazardous Air Pollutant, Renovation and Demolition rules including asbestos removal and waste-handling emission control procedures.

l. Name and location of the waste disposal site where the asbestos-containing waste material will be deposited.

m. For Emergency Renovations and Demolition Notifications, the following information shall be provided; the date and hour that the emergency occurred, a description of the sudden unexpected event, and an explanation of how the event caused an unsafe condition or would cause equipment damage or an unreasonable financial burden. The location specific Environmental Office will initiate an electronic notification. to TDSHS prior to the submission of an Emergency Notification. The Contractor shall submit a request for emergency action to the Contracting Officer; if a financial burden results, then proof containing cost burden shall be included in the request. All requests submitted due to non-emergency action may be subject to penaltyfrom TDSHS. At no time will abatement activities proceed without the Emergency Notification number. Not meeting the 10-day Notification requirement loss or increase in funding are not valid justifications for an Emergency. The final determination for granting an Emergency Notification is at the discretion of the area specific Environmental Manager after discussion with TDSHS representatives.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative and to build in additional time as needed to comply with deadlines and timelines provided with environmental requirements.

n. Description of procedures to be followed if unexpected ACM is found or Category II non-friable ACM becomes crumbled, pulverized, or reduced to powder.

o. Name, address, and telephone number of the waste transporter.

p. The abatement contractor will be responsible for entering as much of the known information into the written notification prior to submitting the notification through the JBSA area specific Contracting Office. The Environmental Asbestos Program Office will fill in the missing information. JBSA Environmental Office will submit the notification through the TDSHS Electronic Notification System and provide a copy of the completed electronic notification to the area specific Contracting Officer for distribution to all interested parties.

Any notifications submitted with phased abatement activities must include the TDSHS phased schedule form. Any phased activity must not have a break in any abatement activity which exceeds 30 days. The Renovation/Demolition Notification forms and the Scheduled Activity forms are available at the TDSHS web site:

http://www.dshs.texas.gov/asbestos/forms.aspx

q. Emergency Notification Procedures for Unforeseen Site Conditions. These procedures are only to be used when a situation arises where asbestos materials are disturbed in an inaccessible area that could not be accessed to conduct a thorough assessment. In the event that asbestos materials are disturbed, an Emergency Notification would be required dependent on the total amount of Asbestos Containing Materials. To initiate an Emergency Notification, stop all work and contact the appropriate Contracting representative (CO or PM) and explain the circumstance. The contracting representative (CO or PM) will then contact the appropriate 802d Environmental. An amendment to the existing notification shall be submitted to the State by the 802d Environmental. If a notification does not exist, an emergency notification shall be submitted with the appropriate justification.

3.12.1.4 ACM Emission Control Procedures

Each owner or operator of a demolition or renovation activity to whom this paragraph applies, shall comply with the following procedures:

a. Remove all ACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. All ACM shall be removed during demolition. A potential for non-friable ACM to become friable during processing of the construction debris is likely to occur.

b. If it is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition.

c. If it was not accessible for testing and was therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed ACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wet at all times until disposed of. This statement applies to facilities that are structurally damaged/unsound where an asbestos inspection is not possible due to safety concerns.

d. When a facility component that contains or is covered with, or coated with ACM which is being taken out of the facility as a unit or in sections:

1. Adequately wet all ACM exposed during cutting or disjoining operations.

2. Carefully lower each unit or section to the floor and to ground level, not dropping, throwing, sliding, or otherwise damaging or disturbing the ACM.

3. When ACM is stripped from a facility component while it remains in place in the facility, adequately wet the ACM during the stripping operation.

3.12.1.5 Wet Methods

In renovation or demolition operations, wet methods are not required if:

a. The owner or operator has obtained prior written approval from DSHS based on a written application that wetting materials to comply with this paragraph would unavoidably damage equipment or present a safety hazard; and;

b. The owner or operator will use an appropriate emission control method:

1. A local exhaust ventilation and collection system is designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in 40 CFR 61.152.

2. A glove-bag system is designed and operated to contain the particulate asbestos material produced by the stripping of the asbestos materials.

3. Leak-tight wrapping shall be used to contain all ACM prior to dismantlement.

c. In renovation operations, where wet methods would result in equipment damage or a safety hazard, and the methods allowed in paragraph 3.10.1.4(d) of this section cannot be used, another method may be used after obtaining written approval from the Administrator based upon a determination that it is equivalent to wetting in controlling emissions or to the methods allowed in paragraph 3.10.1.5(b) of this section.

1. A copy of the DSHS written approval shall be kept at the worksite and made available for inspection and a copy provided to the Contracting Officer for Environmental review. Any changes to wet methods shall be written by a DSHS-licensed asbestos consultant.

2. After a facility component is covered with, coated with, or contains ACM has been taken out of the facility as a unit or in sections pursuant to paragraph 3.10.1.4(d) of this section, it shall be stripped or contained in leak-tight wrapping.

3.12.1.6 Adequately wet the ACM during stripping or:

Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in 40 CFR 61.152(b). For large facility components such as reactor vessels, large tanks, and steam generators, but not beams (which must be handled in accordance with paragraphs 3.10.1.4(b) and (d) of this section), the ACM is not required to be stripped if the following requirements are met:

1. The component is removed, transported, stored, disposed of, or reused without disturbing or damaging the ACM.

2. The component is encased in a leak-tight wrapping.

3. The leak-tight wrapping is labeled according to 40 CFR 61.149(d)(1)(i), (ii), and (iii) during all loading and unloading operations and during storage.

3.12.1.7 For all RACM, including material that has been removed or stripped:

a. Adequately wet the material and ensure that it remains wet until collected and contained or treated in preparation for disposal in accordance with 40 CFR 61.150; and:

b. Carefully lower the material to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material.

c. Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than 50 feet above ground level and was not removed as units or in sections.

d. ACM contained in leak-tight wrapping that has been removed in accordance with paragraphs 3.10.1.5 (c) Wet Methods,(2)and 3.10.1.5 (b)(3) Wet Methods of this section need not be wetted.

3.12.1.8 When the temperature at the point of wetting is below 0 °C (32 °F):

a. The owner or operator need not comply with paragraph 3.10.1.4(d)1 and the wetting provisions of paragraph (3.10.1.5(c)2 of this section.

b. The owner or operator shall remove facility components containing, coated with, or covered with ACM as units or in sections to the maximum extent possible.

c. During periods when wetting operations are suspended due to freezing temperatures, the owner or operator must record the temperature in the area containing the facility components at the beginning, middle, and end of each workday and keep daily temperature records available for inspection by the Administrator during normal business hours at the demolition or renovation site. The owner or operator shall retain the temperature records for at least 2 years.

3.12.1.9 Handling of ACM

No ACM shall be stripped, removed, or otherwise handled or disturbed at a facility regulated by this section unless at least one on-site representative, such as a foreman or management-level person or other authorized representative, trained in the provisions of this regulation and the means of complying with them, is present. Every year, the trained on-site individual shall receive refresher training in the provisions of this regulation. The required training shall include as a minimum: applicability; notifications; material identification; control procedures for removals including, at least, wetting, local exhaust ventilation, negative pressure enclosures, glove-bag procedures, and High Efficiency Particulate Air (HEPA) filters; waste disposal work practices; reporting and record keeping; and asbestos hazards and worker protection. Evidence that the required training has been completed shall be posted and made available for inspection by the Administrator or the location specific

Asbestos Program Manager at the demolition or renovation site.

3.12.1.10 Resilient Floor Covering Institute (RFCI) Procedures

The RFCI procedures are not authorized at any JBSA area locations.

3.12.2 Roofing Materials

Asbestos abatement for roofing materials is regulated as an Occupational Safety Health Administration (OSHA) Class II, asbestos activity. The abatement of asbestos containing roofing materials requires at a minimum, an 8-hour OSHA training course. A copy of all abatement workers training must be provided electronically to 802 CES/CEIE through 502 CONS prior to any asbestos removal of roofing materials. All asbestos roofing materials will be manifested as asbestos waste. During the removal of roofing materials containing asbestos, a competent supervisor trained in the EPA Model Accreditation course must be on-site at all times and an OSHA Negative Exposure Assessment shall be accomplished.

3.12.2.1 Roof Area/NESHAP

If the asbestos containing roof area undergoing renovation is less than 160 SF, National Emission Standards for Hazardous Air Pollutants (NESHAP) does not apply, regardless of the removal method to be used, the type of material (Category I or II), or its condition (friable versus non-friable). 40 CFR 61.145(a)(4). Category I non-friable asbestos-containing roofing material, any project that is 5580 sqft or greater is subject to the NESHAP; conversely, it is EPA's interpretation that when an RB roof cutter or equipment that similarly damages the roofing material is used to remove Category I non-friable asbestos-containing roofing material in a roof removal project that is less than 5580 sqft, the project is not subject to the NESHAP, except that notification is always required for demolitions.

3.12.2.2 Asbestos Cement (Transite) Roof Shingles

For asbestos cement (A/C - Transite) shingles (or other Category II roofing material), if the area of the roofing material to be removed is at least 160 sqft and the removal methods will crumble, pulverize, reduce to powder, or contaminate with ACM (from other ACM that has been crumbled, pulverized or reduced to powder) 160 sqft or more of such roofing material, the removal is subject to the NESHAP. Notification is required if the material exceeds 160 sqft and must be abated by a certified asbestos abatement team.

3.12.2.3 Roofing Material

To determine if a removal operation that meets or exceeds the coverage threshold is subject to the NESHAP, any suspect roofing material (i.e. roofing material that may be ACM) should be tested for asbestos. If any such roofing material is equal to or greater than one percent asbestos and the removal operation is covered by the NESHAP, then DSHS must be notified and the work practices in Sec. 61.145(c) must be followed. In EPA's view, if a removal operation involves at least the threshold level of suspect material, a roofing contractor may choose not to test for asbestos if the contractor follows the notification and work practice requirements of the NESHAP.

3.12.3 Shingle Removal (Category II ACM Removal)

A/C shingles, which are Category II non-friable ACM, become regulated ACM if the material has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations per 40 CFR 61.141. However, merely breaking an A/C shingle (or any other category II ACM) that is not friable may not necessarily cause the material to become ACM. A/C shingles are typically nailed to buildings on which they are attached. EPA believes that the extent of breakage that will normally result from carefully removing A/C shingles and lowering the shingles to the ground will not result in crumbling, pulverizing or reducing the shingles to powder. Conversely, the extent of breakage that will normally occur if the A/C shingles are dropped from a building or scraped off of a building with heavy machinery would cause the shingles to become ACM. EPA therefore construes the NESHAP to mean that the removal of A/C shingles that are not friable, using methods that do not crumble, pulverize, or reduce the A/C shingles to powder (such as pry bars, spud bars and shovels to carefully pry the material), is not subject to the NESHAP provided that the A/C shingles are properly handled during and after removal, as discussed in this paragraph and the asbestos NESHAP. This interpretation also applies to other Category II non-friable asbestos-containing roofing materials.

3.12.4 Lead-Based Paint

All Lead-Based Paint work must be accomplished in accordance with federal, state, and local laws and the JBSA Lead-Based Paint Management Plan. No paint containing lead shall be used during the course of this contract. The Occupational Health and Safety Act (OSHA) Lead in Construction Standard,
29 CFR 1926.62 is in effect whenever materials are disturbed that contain any amount of lead. This will require contractors disturbing lead-based paint to institute medical surveillance, training, engineering controls, worker protection measures, and employee monitoring until monitoring results per the lead paint standard demonstrate that employee exposure is below the action level and permissible exposure limit. The contractor on site must maintain all documentation regarding lead exposure by either historical data or project data.

3.12.4.1 Disposal Activities

The contractor shall be responsible for the collection, sampling, and disposal of all lead paint chips and lead paint-contaminated materials IAW the JBSA Hazardous Waste Management Plan. All necessary accumulation, disposal activities, and documentation shall be coordinated with the location specific Environmental Office. All analysis and disposal costs associated with Lead Based Paints is the responsibility of the contractor.

3.12.4.2 Waste Manifests

All Waste Manifests for Lead-containing materials shall be signed (approved) by JBSA area specific Environmental office without exception. All Lead manifests will require a Waste Profile Sheet which is the responsibility of the abatement contractor. This profile sheet will establish and generate the waste manifest and the Land Disposal Restriction as required. The Waste Profile Sheet will be coordinated with the area specific Environmental Office through the Contracting Officer and the Project Manager. All waste profile sheets will be signed by JBSA

Environmental Staff. The waste manifest will be signed by a JBSA Environmental Staff member prior to removal of material or components from each JBSA specific location. All Hazardous Waste, Lead disposals must include a Land Disposal Restriction prior to leaving JBSA.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.12.4.3 Toxic Characteristic Leaching Procedure (TCLP)

Any lead waste in an industrial or administrative facility will require a Toxic Characteristic Leaching Procedure (TCLP) analysis to determine proper disposal procedures. All copies of lab results will be provided to JBSA Environmental prior to disposal of such material. All analysis will be accomplished by an approved TCEQ National Environmental Laboratory Accreditation Conference (NELAC), synonymous with the National Environmental Laboratory Accreditation Program (NELAP) laboratory.

3.12.4.4 Residential Facilities

Lead-contaminated waste in residential housing may be disposed of as Household Waste.

3.12.4.5 Child Occupied Facility

Lead abatement in a target or child-occupied facility requires notification to the Texas Department of State Health Services seven working days prior to abatement activities by the Lead Certified firm. All notification costs and penalties are the responsibility of the Lead firm. A copy of the notification and any amendments shall be provided to the JBSA Contracting Office, Project Manager and JBSA Environmental.

3.12.4.6 Pre-Submittals Required

Submittals required for review prior to Lead Based Paint Activities. The following documents will be reviewed prior to any renovation in a target or child occupied facilities:

a. Lead Work Plans

b. Lead Occupant Protection Plan.

c. Texas Department of State Health Services Lead Licenses

d. Lead Notifications

e. Lead Training Certificates

f. Lead Inspection reports that have not been provided by the area specific Environmental Office. Any inspection reports done by a licensed Lead Inspector or Lead Risk Assessor.

g. Lead Based Paint Reports that were not included in the original assessment or results to a change in the scope of work.

3.12.4.7 TCLP Analysis

Submittal required after OSHA Lead Based Paint removal or preparation

activities. TCLP analysis is required for all lead dust, paint chips, equipment and supplies to determine proper disposal requirements. Analysis must be done by an approved TCEQ Laboratory for the specific media. RCRA 10 metals are the minimum requirement for all regulated facilities excluding target and child-occupied facilities. These facilities are exempt from Hazardous Waste rules: any lead from target and child-occupied facilities is handled as household waste.

3.12.4.8 Clearance Certification

A clearance certification will be required prior to occupants reoccupying the area where lead abatement activities are accomplished. Visual and Wet Wipe samples will be conducted in all Temporary Lodging Facilities (TLF) or Child Care Facilities built before 1978 and has the potential residency of a child under the age of 6 or an expectant female. The facility must pass the minimum lead criteria in 40 CFR, part 745.227. The use of clearance verification cards will not be used in JBSA facilities. All clearances will be conducted by a Texas Licensed Lead Risk Assessor.

3.12.5 Exit Lamp

Any demolition of a facility will require the inspection of exit lamps to ensure that they do not contain tritium. Lamps found to contain tritium will be disposed of IAW the appropriate federal regulations. Tritium Exit signs must still comply with Nuclear Regulatory Commission Radio-Active Regulations. If Tritium is found contact 802 CES/CEIEC prior to any removal activities to determine disposal and manifesting requirements.

3.12.6 Abrasive Media

Any paint removal operations that require the use of abrasive media, whether it's water, sand, or any other blast media to include water, will require a containment to hold all abrasive media within the blasting area. Note that any properties/projects falling within the jurisdiction of the NPS, SHPO, or under Cultural Resources consultation, abrasive media or water pressure shall not be used. Appropriate methods must follow the NPS Preservation briefs related to the abrasive media being used. See NPS Preservation briefs 1, 6, 7, 10, 22, 27,37,38, 42 available at NPS.gov. All drains, vents or any other openings will be masked or covered with a suitable material to prevent any breaches of media from the containment area. All media must be kept dry from the start of the contract until the material has been disposed of. The contractor will be responsible for disposing of the spent media in accordance with all Department of Transportation, Texas Commission on Environmental Quality, and Resource Conservation and Recovery Act requirements. Any breaches will be repaired immediately before continuing the blast operation process. All abrasive blasting procedures must be in accordance with 29 CFR 1910.94 and all other local, state and federal regulations applicable to Abrasive Blasting Operations. All material leaving JBSA locations for disposal must be manifested and signed by the specific Environmental Office staff.

Dry Abrasive Cleaning is permitted by rule PBR 30 TAC 106.452. See PBR for enclosed and abrasive cleaning and outside blast cleaning rules. Logs must be turned in to the 802 CES/CEIE Air Quality Media Team annotating number of hours actual blasting took place and pounds of waste media removed.

3.12.6.1 Blasting/Lead in Construction Rules

If the blasting is in an area where LBP has been identified, all OSHA 29 CFR 1926.62, Lead in Construction Rules, will apply. The media will have a TCLP analysis accomplished by a Texas Certified NELAC/ NELAP laboratory to determine characteristics of the waste stream for proper landfill disposal. All non-approved laboratory results will be disapproved, and the test will be re-accomplished at no cost to the government Approved laboratories may be found on the Texas Commission on Environmental Quality website at:

https://www.tceq.texas.gov/assets/public/compliance/compliance_support/qa/txnelap_lab

3.12.7 Residential Property Renovation

Residential property renovation includes Child Care Centers, Temporary Lodging Facilities, etc. and applies to all renovations performed for compensation. Child-occupied facility means a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any week (Sunday through Saturday period), provided that each day's visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day care centers, preschools and kindergarten classrooms. Child-occupied facilities may be located in target housing or in public or commercial buildings. With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age six.

3.12.7.1 Certified Renovators

The Repair, Renovate, and Painting rules only apply to Target and Child Occupied facilities. This training and certification does not meet the Occupational Safety and Health Administration training requirements to conduct Lead work in other facilities, therefore, this type of certification will not be accepted for Commercial or Industrial Facility LBP projects. Renovations shall be directed by renovators certified by an authorized EPA training provider and performed by certified renovators or individuals trained by a certified renovator (training records must be available on site) in target housing or child-occupied facilities.

3.12.7.2 General Contractors

All general contractors and hired lead firms that conduct any lead-based paint renovation or repair procedures, not to include lead abatement activities, shall both be certified as an EPA Renovation, Repair, and Painting firm and have received the Renovation, Repair and Painting 8-hour training course from an EPA-certified provider. A copy of the EPA application and a copy of the renovator training certification shall be provided to the 802 CES/CEIE for review through the contracting office prior to the Notice to Proceed. The general contractor and the lead firm

shall provide a copy of both the EPA training certification and the EPA firm certification.

Pressure Washing is not authorized on any facility containing Lead painted surfaces. This process could cause cross contamination of the soils and surrounding areas instituting additional clean-up procedures and additional costs that will be the sole responsibility of the contractor to comply. No detergents are authorized to be used on any facility as this could result in contamination of our local waterways both on and off the installation.

3.12.7.3 Distribution of the EPA Pamphlets

The Lead Safe Certified Guide to Renovate Right will be provided to the facility manager IAW 40 CFR 745 Subpart E any time a Child Occupied or Target facility is being renovated that contains Lead-Based Paint. Proof of distribution will be provided to 802 CES/CEIE through the base Contracting Office. If renovation is to be done in an occupied TLF, then the pamphlet will be provided to the occupant and to any additional facility occupant that has a child under the age of 6 or an expectant female in or adjacent to the target or Child Occupied facility. If the facility is not occupied, then the pamphlet will be provided to the facility manager to validate proof of pamphlet acceptance in accordance with the EPA rules.

3.12.7.4 Occupant Protection

To ensure occupant protection, firms must post signs clearly defining the work area and warning occupants and other persons not involved in renovation activities to remain outside of the work area. To the extent practicable, these signs must be in the primary language of the occupants. These signs must be posted in English and Spanish before beginning the renovation and must remain in place and readable until the renovation and the third-party clearances have been completed. If warning signs have been posted in accordance with 24 CFR 35.1345(b)(2) or 29 CFR 1926.62(m), additional signs are not required.

3.12.7.5 Work Area Isolation

Contractor shall contain the work area. Before beginning the renovation, the firm must isolate the work area so that no dust or debris leaves the work area while the renovation is being performed. In addition, the firm must maintain the integrity of the containment by ensuring that any plastic or other impermeable materials are not torn or displaced and taking any other steps necessary to ensure that no dust or debris leaves the work area while the renovation is being performed. The firm must also ensure that containment is installed in such a manner that it does not interfere with occupant and worker egress in an emergency.

3.12.7.6 Work Area Preparation-Interior

For interior renovations, the firm must:

a. Remove all objects from the work area, including furniture, rugs, and window coverings, or cover them with plastic sheeting or other impermeable material with all seams and edges taped or otherwise sealed.

b. Close and cover all ducts opening in the work area with

taped-down plastic sheeting or other impermeable material.

c. Close windows and doors in the work area. Doors must be covered with plastic sheeting or other impermeable material. Doors used as an entrance to the work area must be covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.

d. Cover the floor surface, including installed carpet, with taped-down plastic sheeting or other impermeable material in the work area 6 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to contain the dust, whichever is greater.

e. Use precautions to ensure that all personnel, tools, and other items, including the exteriors of containers of waste, are free of dust and debris before leaving the work area.

3.12.7.7 Work Area Preparation-Exterior

For exterior renovations, the firm must:

a. Close all doors and windows within 20 feet of the renovation. On multi-story buildings, close all doors and windows within 20 feet of the renovation on the same floor as the renovation, and close all doors and windows on all floors below that are the same horizontal distance from the renovation.

b. Ensure that doors within the work area that will be used while the job is being performed are covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.

c. Cover the ground with plastic sheeting or other disposable impermeable material extending 10 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to collect falling paint debris, whichever is greater, unless the property line prevents 10 feet of such ground covering.

d. In certain situations, the renovation firm must take extra precautions in containing the work area to ensure that dust and debris from the renovation does not contaminate other buildings or other areas of the property or migrate to adjacent properties.

3.12.7.8 Prohibited or Restricted Work

The work listed below shall be prohibited or restricted during a renovation as follows:

a. Open-flame burning or torching of lead-based paint is prohibited.

b. The use of machines that remove lead-based paint through high-speed operation such as sanding, grinding, power planning, needle gun, pressure washing, abrasive blasting, or sandblasting, is prohibited unless such machines are used with HEPA exhaust control.

c. Operating a heat gun on lead-based paint is permitted only at temperatures below 1000 degrees Fahrenheit.

3.12.7.9 Renovation Waste

Waste from renovation activities must be properly managed.

a. Waste must be contained to prevent releases of dust and debris before the waste is removed from the work area for storage or disposal. If a chute is used to remove waste from the work area, it must be covered.

b. At the conclusion of each workday and at the conclusion of the renovation, waste that has been collected from renovation activities must be stored under containment, in an enclosure, or behind a barrier that prevents release of dust and debris out of the work area and prevents access to dust and debris.

c. When the firm transports waste from renovation activities, the firm must contain the waste to prevent release of dust and debris.

3.12.7.10 Cleaning the work area

After the renovation has been completed, the firm must clean the work area until no dust, debris or residue remains.

3.12.7.11 Interior and Exterior Renovations

The firm must:

a. Collect all paint chips and debris and without dispersing any of it, seal this material in a heavy-duty bag.

b. Remove the protective sheeting. Mist the sheeting before folding it, fold the dirty side inward, and either tape shut to seal or seal in heavy-duty bags. Sheeting used to isolate contaminated rooms from non-contaminated rooms must remain in place until after the cleaning and removal of other sheeting. Dispose of the sheeting as waste.

3.12.7.12 Additional Cleaning

Additional cleaning for interior renovations. The firm must clean all objects and surfaces in the work area and within 2 feet of the work area in the following manner, cleaning from higher to lower:

a. Walls; clean walls starting at the ceiling and working down to the floor by either vacuuming with a HEPA vacuum or wiping with a damp cloth.

b. Remaining surfaces. Thoroughly vacuum all remaining surfaces and objects in the work area, including furniture and fixtures, with a HEPA vacuum. The HEPA vacuum must be equipped with a beater bar when vacuuming carpets and rugs.

c. Wipe all remaining surfaces and objects in the work area, except for carpeted or upholstered surfaces, with a damp cloth. Mop uncarpeted floors thoroughly, using a mopping method that keeps the wash water separate from the rinse water, such as the 2-bucket mopping method, or using a wet mopping system.

3.12.7.13 Post Cleaning Verification

Standards for post-renovation cleaning verification:

a. Interiors: A certified renovator must perform a visual inspection to determine whether dust, debris or residue is still present. If dust, debris or residue is present, these conditions must be removed by re-cleaning and another visual inspection must be performed.

b. All Target or Child Occupied facilities clearances will be done by a certified Inspector, Risk Assessor or a dust sampling technician. Verification procedure will not be authorized.

c. The renovation firm is required to re-clean the work area until the dust clearance sample results are below the clearance standards in 745.227(e)(8).
https://www.govregs.com/regulations/40/745.227

3.13 EMERGENCY RESPONSE, SPILL PROCEDURES, FUEL TANKS

3.13.1 Spills

All fuel, oil, and chemical spills/releases that pose a threat to Occupational Health & Safety or the environment must be immediately reported to the installation Fire Emergency Services utilizing 911. If contacting 911 via cell phone, request that the city dispatcher transfer you to the specific JBSA installation's Fire Emergency Services

The contractor is required to train his/her personnel on spill procedures, fire-suppression systems, and Safety Data Sheets for all materials used and/or stored on the project site. Immediately after notifying the location specific Fire Emergency Services of a release, the contractor shall notify the Contracting Officer and 802 CES/CEIE Environmental at JBSA-LAK (210) 671-4844, JBSA-RND (210)652-4668 and JBSA-SAM/BUL (210) 221-1142. A verbal report must be made to 802 CES/CEIE within one hour of discovery followed by a detailed written notification within 11-15 hours. Cleanup and all associated costs due to spills are the responsibility of the contractor, and the contractor shall reimburse any government cost upon receipt of invoice. The 802 CES/CEIE shall make all required spill notifications to federal, state and local regulatory agencies.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.13.2 Spill Kits and Clean Up Equipment

The contractor shall provide and maintain spill clean-up equipment, sufficient in both type and quantity, at all sites involving the storage, and handling of fuel, POL, hazardous materials and/or hazardous wastes. The type of equipment and quantity required will be identified in the contractor's site-specific contingency plans. Contractor shall train employees in the use of the spill kits and clean up equipment and document the training. If a spill occurs, the contractor shall initiate containment, control, and clean-up actions. Notify the 802 CES/CEIE Environmental office immediately if release extends off-site or enters the natural environment. The contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing and shall collect waste in suitable containers observing chemical

compatibility requirements.

3.13.3 Emergency Response Plan

The Emergency Response Plan as required per Section 1.3 Submittals, shall include, but not be limited to the following:

3.13.3.1 Training

Contractor shall provide for review by the Contracting Officer documentation to demonstrate that the contractor has sufficient knowledge and training to address potential spills at the work site. The contractor should have appropriate DOT and HAZWOPER trained personnel to manage all spill response.

3.13.3.2 Site Specific Spill Prevention/Response Plan

A "Site Specific Spill Prevention/Response Plan" shall be prepared that addresses all locations where the contractor handles chemicals, hazardous materials or petroleum products. Site-specific spill plans shall be revised as necessary to reflect current hazardous material storage and usage. The plan shall detail the contractor representative and alternate who will be contacted in the event of an emergency. The plan will identify equipment such as Spill Kits, that will be used to contain and clean up spills. Revisions to the plan shall be coordinated with 802 CES/CEIE through the Contracting Officer.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.13.4 Storage Tanks

802 CES/CEIE does not allow the use of storage tanks (fixed or portable) and must approve the use of drums (55-gallons or greater) on JBSA properties, and the contractor must ensure that adequate spill containment and spill materials (spill kits) are readily available. The contractor must have written spill procedures for all hazardous materials, tanks, and heavy equipment they use on the installation detailed in the site-specific Spill Prevention/Response Plan.

3.14 POST-CONSTRUCTION CLEANUP

3.14.1 Area Restoration

The Contractor shall clean up all areas affected by construction and restore them back to their original condition to include landscaping, silt fences, planting of trees, grass, and shrubs damaged by construction; plus raking and disposal of debris such as roof shingles, paper, nails, glass, sheet metal, bricks, and waste concrete. All temporary best management practices (i.e., silt fences, geotextile), inert material, and erosion and sediment controls shall be removed by the contractor after site has reached final stabilization.

3.14.2 Backfilled Areas

Backfilled areas shall be compacted and landscaped as required by the 502 CES general construction requirements/Contract Specification.

3.15 JBSA ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

JBSA is committed to conducting its mission in a safe and environmentally responsible manner. Each contractor shall be aware that JBSA has an environmental policy to Stop pollution, Obey laws, Always improve, and Reduce waste (SOAR).

The environmental policy is found in eDASH at the following link and is available from 802 CES/CEIE by request:

https://usaf.dps.mil/teams/10625/JBSA/Shared%20Documents/EMS/01.%20Scope%20and%20Commi

Each contractor shall be aware that JBSA has an EMS and that there is a commitment for everyone on these installations to protect human health, natural resources, and the environment. All contractors and contractor employees who work on JBSA, must complete General EMS training and maintain certificates of completion, to be provided upon request.

General EMS Awareness training is located on the Air Force Learning Portal TEACH at https://usaf.learningbuilder.com/

Conformance with the Environmental Management System

Perform work under this contract consistent with the policy and objectives identified in the JBSA Environmental Management System (EMS). Perform work in a manner that conforms to objectives and targets of the environmental programs and operational controls identified by the EMS. Support Government personnel when environmental compliance and EMS audits are conducted by escorting auditors at the Project site, answering questions, and providing proof of records being maintained. Provide monitoring and measurement information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. In the event an EMS nonconformance or environmental noncompliance associated with the contracted services, tasks, or actions occurs, take corrective and preventative actions. In addition, employees must be aware of their roles and responsibilities under the installation EMS and of how these EMS roles and responsibilities affect work performed under the contract. Coordinate with the installation's EMS coordinator to identify training needs associated with environmental aspects and the EMS and arrange training or take other action to meet these needs. Provide training documentation to the Contracting Officer. The JBSA Environmental Office will retain associated environmental compliance records. Make EMS Awareness training completion certificates available to Government auditors during EMS audits and include the certificates in the Employee Training Records.

3.16 INSTALLATION RESTORATION MANAGEMENT

3.16.1 Installation Restoration Program (IRP)

The Contractor acknowledges the JBSA Installation Restoration Program (IRP) and the IRP Management Action Plan. The Contractor shall comply with all
aspects of the plan and will utilize the AF Form 103 (Base Civil Engineering Work Clearance Request) Digging Permit process before performing any earthmoving or subsurface work.

3.16.2 Soil and Groundwater Contamination

Contractors awarded construction projects on JBSA should be aware of the potential to encounter soil and/or groundwater contamination throughout many areas of the base properties and that the regulatory agency can halt projects for long periods of time due to the discovery of contamination. Cooperation between the contractor and 802 CES/CEIE will result in expediting the progress of construction with IRP compliance issues.

3.16.3 Environmental Restoration Program (ERP) Sites

The following guidance has been developed to assist in the construction of projects in possibly contaminated areas (ERP sites).

3.16.3.1 Guideline Sets

Guideline Set 1 is the most stringent and involves projects in an area that has known contamination and regulatory land use controls. Guideline Set 2 is general and applies to any area of the installation where contamination has not been confirmed. It is imperative that contractors involve 802 CES/CEIE early and often in the construction process to minimize the impact that contaminated soils and/or groundwater may have on their project.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.16.3.2 Guideline Set 1

Projects located on a site with known soil and/or groundwater contamination with land use controls. All restrictions will be coordinated with the
802 CES/CEIE and the Environmental Restoration Program Manager.

a. Contractor shall educate workers on potential to encounter contamination and to assure workers are adequately protected with personal protective equipment.

b. If unusual soil or groundwater color or odor is encountered, contact 802 CES/CEIE immediately, non-duty hours, contact EMCS at Joint Base Randolph 652-3143 and Lackland at 210-671-2288.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

3.16.3.3 Guideline Set 2

Sites without land use control and not in close proximity to known contamination or an ERP site:

a. If unusual soil or groundwater color or odor is encountered during subsurface construction work, contact 802 CES/CEIE during regular duty hours and EMCS after hours.

b. Contractor shall educate workers on potential to encounter contamination and to assure workers are adequately protected with personal protective equipment.

3.17 EXPLOSIVE ORDNANCE

The Contractor is hereby notified that the site may have Un-exploded Ordinance (UXO) and shall perform a UXO survey/clearance for the site, to include access & utility routes, a minimum of a 15' wide clear zone beyond grading operations. Should UXO be encountered during progress of the Work, the Contractor shall cease work immediately and contact 802 CES Environmental for immediate direction and assistance. Do not, under any circumstances, attempt excavation and handling of hazardous material UXO. Coordinate with the Contracting Officer for procedures and approvals required by JBSA.

It is the contractor's responsibility and requirement to coordinate all communications and submittals with 802 CES/CEIE Environmental Offices through the 802 CES/CEPM Project Managers and Contracting Representative.

Include in the ENVIRONMENTAL PROTECTION PLAN measures to:

a. Immediately stop operations in the affected area.

b. Notify onsite personnel of the UXO hazard and evacuate the immediate area of the UXO.

c. Restrict access to the area.

d. Notify the 802 CES Environmental Office and the Contracting Officer immediately.

-- End of Section --